

Development Pack
National Occupational Standards
for
Accessing Operations and Rigging

**Lightning Protective Engineering, and
Lightning Protective Systems Inspection
and Testing**

Project 2019 / 2020

**COSVR250, COSVR252, COSVR254, COSVR255, COSVR256,
COSVR257, COSVR263, COSVR325, COSVR412**

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COSVR250

Erect and dismantle access/working platforms

Overview

This standard is about

- 1 interpreting information
- 2 adopting safe and healthy working practices
- 3 selecting materials, components and equipment
- 4 erecting and dismantling access equipment suitable for the work operations

COSVR250

Erect and dismantle access/working platforms

Performance criteria

- You must be able to:*
- P1 interpret the given information relating to the work and resources to confirm its relevance
 - P2 comply with the given, relevant legislation and official guidance to carry out your work and maintain safe work practices
 - P3 select the required quantity and quality of resources for the methods of work
 - P4 comply with organisational procedures to minimise the risk of damage to the work and surrounding area
 - P5 comply with the given contract information to carry out the work efficiently to the required specification
 - P6 complete the work within the allocated time, in accordance with the programme of work

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

Safe work practices

You need to know and understand:

- K4 the level of understanding operatives must have of **information** for relevant, current **legislation and official guidance** and how it is applied
- K5 how **emergencies** should be responded to and who should respond
- K6 the organisational **security procedures** for tools, equipment and personal belongings
- K7 what the accident reporting procedures are and who is responsible for making the report
- K8 why, when and how **personal protective equipment (PPE)** should be used

Performance Criteria 3

Selection of resources

You need to know and understand:

- K9 the characteristics, quality, uses, sustainability, limitations and defects associated with the **resources** and how defects should be rectified
- K10 how the **resources** should be used and how any **problems** associated with the **resources** are reported
- K11 the organisational procedures to select **resources**, why they have been developed and how they are used
- K12 the **hazards** associated with the **resources** and **methods of work** and how they are overcome

COSVR250

Erect and dismantle access/working platforms

Performance Criteria 4

Minimise the risk of damage

You need to know and understand:

K13 how to **protect work** from damage and the purpose of protection

K14 why **disposal of waste** should be carried out safely and how it is achieved

Performance Criteria 5

Meet the contract specification

You need to know and understand:

K15 how **methods of work**, to meet the specification, are carried out and **problems** reported

K16 how **maintenance** of tools and equipment is carried out

Performance Criteria 6

Allocated time

You need to know and understand:

K17 what the **programme** is for the work to be carried out in the estimated, allocated time and why deadlines should be kept

Additional Information

Scope/range related to performance criteria

Performance Criteria 1

- 1 interpretation of method statements, risk assessments, specifications and manufacturers' information related to the work to be carried out

Performance Criteria 2

- 2 avoidance of risk by complying with the given information relating to the following

- 2.1 methods of work
- 2.2 safe use of personal protective equipment (PPE)
- 2.3 safe use of access equipment
- 2.4 safe use and storage of materials, tools and equipment

Performance Criteria 3

- 3 selection of resources associated with own work

- 3.1 materials and components
- 3.2 tools and equipment

Performance Criteria 4

- 4 protection of the work and its surrounding area from damage

- 5 minimise damage and maintain a clean work space

Performance Criteria 5

- 6 demonstration of work skills to move, position/erect, secure, check, dismantle and remove

- 7 use and maintain hand tools and ancillary equipment

- 8 erect, dismantle and store at least two of the following access equipment to given access regulations

- 8.1 ladders/crawler boards
- 8.2 stepladders/platform steps
- 8.3 proprietary towers
- 8.4 trestle platforms
- 8.5 mobile scaffold towers
- 8.6 proprietary staging/podiums

Performance Criteria 6

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

Erect and dismantle access/working platforms

Scope/range related to knowledge and understanding

Emergencies

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

Hazards

- 2 those identified by risk assessment, method of work, manufacturers' technical information, statutory regulations and official guidance

Information

- 3 specifications, method statements, risk assessments, current legislation and manufacturers' information

Legislation and official guidance

- 4 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

- 5 operative care of hand tools and ancillary equipment

Methods of work

- 6 application of knowledge for safe work practices, procedures and skills relating to the method/area of work and materials used to:
 - 6.1 provide protection to the work area
 - 6.2 establish a base for equipment
 - 6.3 erect proprietary access equipment to manufacturer's instructions suitable for the work
 - 6.4 erect non-proprietary access equipment suitable for the work
 - 6.5 place protective screens and notices
 - 6.6 check/monitor equipment during the period of use
 - 6.7 dismantle and store access equipment
 - 6.8 use tools and equipment
 - 6.9 work at height
 - 6.10 use access equipment
- 7 team work and communication
- 8 needs of other occupations associated with erecting and dismantling access/working platforms

COSVR250

Erect and dismantle access/working platforms

Personal protective equipment (PPE)

9 occupational use, types, purpose of each type and work situations

Problems

10 those arising from information, resources and methods of work

10.1 own authority to rectify

10.2 organisational reporting procedures

Programme

11 types of progress charts, timetables and estimated times

12 organisational procedures for reporting circumstances which will affect the work programme

Protect work

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

Resources

14 materials, components and equipment relating to types, quantity, quality, sizes and the sustainability of standard and/or specialist:

14.1 ladders/crawler boards

14.2 stepladders/platform steps

14.3 trestles

14.4 proprietary staging/podiums

14.5 proprietary towers

14.6 mobile scaffold towers

14.7 protection equipment and notices

14.8 tools and ancillary equipment

15 methods of calculating quantity of equipment required for the method/procedure to erect and dismantle access/working platforms

Security procedures

16 site, workplace, company and operative

COSVR250

Erect and dismantle access/working platforms

Developed by	ConstructionSkills
Version number	2
Date approved	January 2010
Indicative review date	April 2014
Validity	Current
Status	Original
Originating organisation	ConstructionSkills
Original URN	VR250
Relevant occupations	Scaffolders, Stagers and Riggers; Construction and Building Trades nec
Suite	Accessing Operations and Rigging (Construction); Associated Industrial Services (Construction); Building Maintenance Multi-trade Repair and Refurbishment Operations; Chimney Engineering (Construction); Construction Operations and Civil Engineering Services; Decorative Finishing and Industrial Painting Occupations (Construction); Demolition; Industrial Building Systems (Construction); Innovative/Modern Methods of Construction; Insulation and Building Treatments (Construction); Removal of Hazardous and Non-hazardous Waste (Construction); Roofing Occupations (Construction); Site Logistics (Construction); Specialist Concrete Occupations (Construction); Specialist Installation Occupations (Construction); Super-structure Work Occupations (Construction); Thermal Insulation (Construction); Fencing; Treework
Key words	Erecting access-platforms; Dismantling access-platforms; Scaffolding; Access-platforms; Ladders; Working-platforms; Step-ladders; Proprietary-towers; Trestle-platforms; Mobile-towers; Protective-screens

COSVR252

Utilise provision of fall protection systems

Overview

This standard is about

- 5 interpreting information
- 6 adopting safe and healthy working practices
- 7 selecting materials, components and equipment
- 8 preparing and utilising provision of fall protection systems

COSVR252

Utilise provision of fall protection systems

Performance criteria

- You must be able to:*
- P7 interpret the given information relating to the work and resources to confirm its relevance
 - P8 comply with the given, relevant legislation and official guidance to carry out your work and maintain safe work practices
 - P9 select the required quantity and quality of resources for the methods of work
 - P10 comply with organisational procedures to minimise the risk of damage to the work and surrounding area
 - P11 comply with the given contract information to carry out the work efficiently to the required specification
 - P12 complete the work within the allocated time, in accordance with the programme of work

Knowledge and understanding

You need to know and understand:

Performance Criteria 1

Interpretation of information

- K18 the organisational procedures developed to report and rectify inappropriate **information** and unsuitable **resources**, and how they are implemented
- K19 the types of **information**, their source and how they are interpreted
- K20 the organisational procedures to solve **problems** with the **information** and why it is important they are followed

Performance Criteria 2

Safe work practices

You need to know and understand:

- K21 the level of understanding operatives must have of **information** for relevant, current **legislation and official guidance** and how it is applied
- K22 how **emergencies** should be responded to and who should respond
- K23 the organisational **security procedures** for tools, equipment and personal belongings
- K24 what the accident reporting procedures are and who is responsible for making the report
- K25 why, when and how **personal protective equipment (PPE)** should be used

Performance Criteria 3

Selection of resources

You need to know and understand:

- K26 the characteristics, quality, uses, sustainability, limitations and defects associated with the **resources** and how defects should be rectified
- K27 how the **resources** should be used and how any **problems** associated with the **resources** are reported
- K28 the organisational procedures to select **resources**, why they have been developed and how they are used
- K29 the **hazards** associated with the **resources** and **methods of work** and how they are overcome

COSVR252

Utilise provision of fall protection systems

Performance Criteria 4

Minimise the risk of damage

You need to know and understand:

K30 how to **protect work** from damage and the purpose of protection

K31 why **disposal of waste** should be carried out safely and how it is achieved

Performance Criteria 5

Meet the contract specification

You need to know and understand:

K32 how **methods of work**, to meet the specification, are carried out and **problems** reported

K33 how **maintenance** of tools and equipment is carried out

Performance Criteria 6

Allocated time

You need to know and understand:

K34 what the **programme** is for the work to be carried out in the estimated, allocated time and why deadlines should be kept

Additional Information

Scope/range related to performance criteria

Performance Criteria 1

10 interpretation of drawings, specifications, schedules, method statements, risk assessments and manufacturers' information related to the work to be carried out

Performance Criteria 2

11 avoidance of risk by complying with the given information relating to the following

11.1 methods of work

11.2 safe use of personal protective equipment (PPE)

11.3 safe use of access equipment

11.4 safe use and storage of materials, tools and equipment

Performance Criteria 3

12 selection of resources associated with own work

12.1 materials and components

12.2 tools and equipment

Performance Criteria 4

13 protection of the work and its surrounding area from damage

14 minimise damage and maintain a clean work space

15 disposal of waste in accordance with current legislation

Performance Criteria 5

16 demonstration of work skills to wear, attach, set out, position, secure, check and remove

17 use and maintain hand tools and fall protection systems and equipment

18 employ and utilise fall protection systems and/or equipment to given working instructions, using recognised anchor points, for at least two of the following

18.1 scaffold/rigging

18.2 secured steelwork structures

18.3 wire and rope systems

18.4 permanently installed anchorage points

18.5 temporary anchorage points

18.6 track systems

18.7 proprietary systems

Performance Criteria 6

19 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**

Disposal of waste

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

Emergencies

18 operative's response to situations in accordance with organisational authorisation and personal skills when involved with

18.1 fires, spillages, injuries

18.2 emergencies relating to occupational activities

Hazards

19 those identified by risk assessment, method of work, manufacturers' technical information, statutory regulations and official guidance

Information

20 drawings, specifications, schedules, method statements, risk assessments, manufacturers' information, regulations and official guidance associated with the provision of fall protection systems

Legislation and official guidance

21 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

22 operative care of hand tools and fall protection systems and equipment

Utilise provision of fall protection systems

Methods of work

- 23 application of knowledge for safe work practices, procedures and skills relating to the method/area of work and materials used to:
 - 23.1 locate and position fall protection systems
 - 23.2 wear safety harnesses, attach and secure to fall protection system's equipment
 - 23.3 identify the differences between, fall arrest, restraint and access systems and harnesses
 - 23.4 identify the differences between shock absorbent and restraining lanyards
 - 23.5 visually inspect the fall protection system and equipment for security, safety and operational movement
 - 23.6 identify the thorough examination and test criteria for fall protection equipment (inertia reels, eyebolts and anchor points)
 - 23.7 apply hierarchy of control measures for working at height
 - 23.8 detach and remove fall protection attire and equipment
 - 23.9 comply with a rescue plan
 - 23.10 use hand tools
 - 23.11 use access equipment
- 24 team work and communication
- 25 needs of other occupations associated with utilising provision of fall protection systems

Personal protective equipment (PPE)

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

Problems

- 27 those arising from information, resources and methods of work
 - 27.1 own authority to rectify
 - 27.2 organisational reporting procedures

Programme

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

Protect work

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

COSVR252

Utilise provision of fall protection systems

Resources

- 31 materials, components and equipment relating to types, quantity, quality, sizes and the sustainability of standard and/or specialist:
 - 31.1 collective protective equipment
 - 31.2 full body harness
 - 31.3 lanyard with and without shock absorber
 - 31.4 associated hooks, rings and buckles
 - 31.5 tools and equipment
- 32 methods of calculating quantity associated with the method/procedure to utilise provision for fall protection

Security procedures

- 33 site, workplace, company and operative

COSVR252

Utilise provision of fall protection systems

Developed by ConstructionSkills

Version number 2

Date approved January 2010

Indicative review date April 2014

Validity Current

Status Original

Originating organisation ConstructionSkills

Original URN VR252

Relevant occupations Scaffolders, Stagers and Riggers; Construction and Building Trades; Engineering Technicians

Suite Accessing Operations and Rigging (Construction); Roofing Occupations (Construction)

Key words Fall protection; Scaffold; Rigging; Wire and rope; Safety-harness; Lanyard; Rings and buckles; Anchorage-points

Overview

This standard is about

- 9 interpreting information
- 10 adopting safe and healthy working practices
- 11 selecting materials, components and equipment
- 12 preparing, positioning, securing and removing specialist access equipment
(ladders, tower scaffolds and suspended platforms)

COSVR254

Erect and remove specialist access equipment

Performance criteria

You must be able to:

- P13 interpret the given information relating to the work and resources to confirm its relevance
- P14 comply with the given, relevant legislation and official guidance to carry out your work and maintain safe work practices
- P15 select the required quantity and quality of resources for the methods of work
- P16 comply with organisational procedures to minimise the risk of damage to the work and surrounding area
- P17 comply with the given contract information to carry out the work efficiently to the required specification
- P18 complete the work within the allocated time, in accordance with the programme of work

COSVR254

Erect and remove specialist access equipment

Knowledge and understanding

You need to know and understand:

Performance Criteria 1

Interpretation of information

- K35 the organisational procedures developed to report and rectify inappropriate **information** and unsuitable **resources**, and how they are implemented
- K36 the types of **information**, their source and how they are interpreted
- K37 the organisational procedures to solve **problems** with the **information** and why it is important they are followed

Performance Criteria 2

Safe work practices

You need to know and understand:

- K38 the level of understanding operatives must have of **information** for relevant, current **legislation and official guidance** and how it is applied
- K39 how **emergencies** should be responded to and who should respond
- K40 the organisational **security procedures** for tools, equipment and personal belongings
- K41 what the accident reporting procedures are and who is responsible for making the report
- K42 why, when and how **personal protective equipment (PPE)** should be used

Performance Criteria 3

Selection of resources

You need to know and understand:

- K43 the characteristics, quality, uses, sustainability, limitations and defects associated with the **resources** and how defects should be rectified
- K44 how the **resources** should be used and how any **problems** associated with the **resources** are reported
- K45 the organisational procedures to select **resources**, why they have been developed and how they are used
- K46 the **hazards** associated with the **resources** and **methods of work** and how they are overcome

COSVR254

Erect and remove specialist access equipment

Performance Criteria 4

Minimise the risk of damage

You need to know and understand:

K47 how to **protect work** from damage and the purpose of protection

K48 why **disposal of waste** should be carried out safely and how it is achieved

Performance Criteria 5

Meet the contract specification

You need to know and understand:

K49 how **methods of work**, to meet the specification, are carried out and **problems** reported

K50 how **maintenance** of tools and equipment is carried out

Performance Criteria 6

Allocated time

You need to know and understand:

K51 what the **programme** is for the work to be carried out in the estimated, allocated time and why deadlines should be kept

Additional Information

Scope/range related to performance criteria

Performance Criteria 1

20 interpretation of drawings, specifications, schedules, method statements, risk assessments and manufacturers' information related to the work to be carried out

Performance Criteria 2

21 avoidance of risk by complying with the given information relating to the following

21.1 methods of work

21.2 safe use of personal protective equipment (PPE)

21.3 safe use of access equipment

21.4 safe use and storage of materials, tools and equipment

Performance Criteria 3

22 selection of resources associated with own work

22.1 materials, components, fixings/anchors and ties

22.2 tools and equipment

Performance Criteria 4

23 protection of the work and its surrounding area from damage

24 minimise damage and maintain a clean work space

25 disposal of waste in accordance with current legislation

Performance Criteria 5

26 demonstration of work skills to measure, set out, position, assemble, fix, check, secure, dismantle and remove

27 use and maintain hand tools and ancillary equipment

28 erect and remove specialist equipment for accessing to given working instructions for at least one of the following occupational areas and its access equipment

28.1 steeplejacking: vertical ladders and roof ladders

28.2 lightning conductor engineering: roof ladders, tower scaffolds and crawler boards

28.3 rigging – suspended access equipment: suspended platforms

28.4 rigging – structures used in entertainment: vertical ladders, rope ladders and crawler boards

Performance Criteria 6

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

Erect and remove specialist access equipment

Scope/range related to knowledge and understanding

Disposal of waste

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

Emergencies

35 operative's response to situations in accordance with organisational authorisation and personal skills when involved with

35.1 fires, spillages, injuries

35.2 emergencies relating to occupational activities

Hazards

36 those identified by risk assessment, method of work, manufacturers' technical information, statutory regulations and official guidance

Information

37 drawings, specifications, schedules, method statements, risk assessments, manufacturers' information, regulations and official guidance associated with accessing work

Legislation and official guidance

38 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

39 operative care of hand tools and ancillary equipment

Erect and remove specialist access equipment

Methods of work

- 40 application of knowledge for safe and healthy work practices, procedures and skills relating to the method/area of work and materials used to:
 - 40.1 identify the occupational environment
 - 40.2 confirm the type of access equipment (vertical ladders, roof ladders, crawler boards, rope ladders, cradles, bosun's seats, metal sections and suspended platforms)
 - 40.3 check and prepare to erect specialist access equipment
 - 40.4 position, erect and secure the equipment
 - 40.5 dismantle and remove the equipment
 - 40.6 install and test anchors and ties
 - 40.7 identify the inspection criteria for completed specialist access equipment
 - 40.8 visually inspect fall protection equipment
 - 40.9 use hand tools and ancillary equipment
 - 40.10 work at height
 - 40.11 use access equipment
- 41 team work and communication
- 42 needs of other occupations associated with erecting and removing specialised access equipment

Personal protective equipment (PPE)

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

Problems

- 44 those arising from information, resources and methods of work
 - 44.1 own authority to rectify
 - 44.2 organisational reporting procedures

Programme

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

Protect work

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

COSVR254

Erect and remove specialist access equipment

Resources

48 materials, components and equipment relating to types, quantity, quality, sizes and the sustainability of standard and/or specialist:

48.1 vertical ladders

48.2 roof ladders

48.3 crawler boards

48.4 rope ladders

48.5 cradles

48.6 bosun's seats

48.7 decking frames

48.8 associated securing materials (rope, lashings, clamps, anchors, ties)

48.9 hand tools and ancillary equipment

49 methods of calculating quantity and length associated with the method/procedure to erect and remove specialist access equipment

Security procedures

50 site, workplace, company and operative

COSVR254

Erect and remove specialist access equipment

Developed by	ConstructionSkills
Version number	3
Date approved	March 2012
Indicative review date	March 2017
Validity	Current
Status	Original
Originating organisation	ConstructionSkills
Original URN	VR254
Relevant occupations	Scaffolders, Stagers and Riggers
Suite	Accessing Operations and Rigging (Construction)
Key words	Access; Platforms; Ladders; Rigging; Steeplejacking; Rope-ladders; Lashing

COSVR255

Install temporary lifting and suspension apparatus



Overview

This standard is about

- 1 interpreting information
- 2 adopting safe and healthy working practices
- 3 selecting materials, components and equipment
- 4 preparing, installing and removing temporary lifting and suspension apparatus

COSVR255

Install temporary lifting and suspension apparatus

Performance criteria

You must be able to:

- P1 interpret the given information relating to the work and resources to confirm its relevance
- P2 comply with the given, relevant legislation and official guidance to carry out your work and maintain safe work practices
- P3 select the required quantity and quality of resources for the methods of work
- P4 comply with organisational procedures to minimise the risk of damage to the work and surrounding area
- P5 comply with the given contract information to carry out the work efficiently to the required specification
- P6 complete the work within the allocated time, in accordance with the programme of work

COSVR255

Install temporary lifting and suspension apparatus

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

Safe work practices

You need to know and understand:

- K4 the level of understanding operatives must have of **information** for relevant, current **legislation and official guidance** and how it is applied
- K5 how **emergencies** should be responded to and who should respond
- K6 the organisational **security procedures** for tools, equipment and personal belongings
- K7 what the accident reporting procedures are and who is responsible for making the report
- K8 why, when and how **personal protective equipment (PPE)** should be used

Performance Criteria 3

Selection of resources

You need to know and understand:

- K9 the characteristics, quality, uses, limitations and defects associated with the **resources** and how defects should be rectified
- K10 how the **resources** should be used and how any **problems** associated with the **resources** are reported
- K11 the organisational procedures to select **resources**, why they have been developed and how they are used
- K12 the **hazards** associated with the **resources** and **methods of work** and how they are overcome

Performance Criteria 4

Minimise the risk of damage

You need to know and understand:

- K13 how to **protect work** from damage and the purpose of protection
- K14 why **disposal of waste** should be carried out safely and how it is achieved

COSVR255

Install temporary lifting and suspension apparatus

You need to know and understand:

Performance Criteria 5

Meet the contract specification

- K15 how **methods of work**, to meet the specification, are carried out and **problems** reported
- K16 how **maintenance** of tools and equipment is carried out

Performance Criteria 6

Allocated time

You need to know and understand:

- K17 what the **programme** is for the work to be carried out in the estimated, allocated time and why deadlines should be kept

COSVR255

Install temporary lifting and suspension apparatus

Additional Information

Scope/range related to performance criteria

Performance Criteria 1

- 1 interpretation of drawings, method statements, risk assessments specifications, schedules and manufacturers' information related to the work to be carried out

Performance Criteria 2

- 2 avoidance of risk by following the given information relating to the following
 - 2.1 methods of work
 - 2.2 safe use of personal protective equipment (PPE)
 - 2.3 safe use of access equipment
 - 2.4 safe use and storage of materials, tools and equipment

Performance Criteria 3

- 3 selection of resources associated with own work
 - 3.1 materials, components, fixings/anchors and ties
 - 3.2 tools and equipment

Performance Criteria 4

- 4 protection of the work and its surrounding area from damage
- 5 minimise damage and maintain a clean work space
- 6 disposal of waste in accordance with legislation

Performance Criteria 5

- 7 demonstration of work skills to measure, set out, position, check, operate, secure, dismantle and remove
- 8 use and maintain hand tools, access/ancillary equipment
- 9 install and remove temporary lifting and suspension apparatus to given working instructions, relating to at least two of the following
 - 9.1 block and tackle material lifting gear (manual and mechanical)
 - 9.2 cradle suspensions
 - 9.3 rope access equipment
 - 9.4 bosun's seats
 - 9.5 winches
 - 9.6 counterbalance lifting systems
 - 9.7 suspended platforms

Performance Criteria 6

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

COSVR255

Install temporary lifting and suspension apparatus

Scope/range related to knowledge and understanding

Disposal of waste

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

Emergencies

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

Hazards

- 3 those identified by risk assessment, method of work, manufacturers' technical information, statutory regulations and official guidance

Information

- 4 drawings, specifications, schedules, method statements, risk assessments, manufacturers' information, standards, regulations and official guidance associated with temporary lifting and suspension work

Legislation and official guidance

- 5 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

- 6 operative care of hand tools, ancillary equipment and access equipment

COSVR255

Install temporary lifting and suspension apparatus

Methods of work

- 7 application of knowledge for safe work practices, procedures and skills, relating to the method/area of work and materials used, to
 - 7.1 identify and confirm the requirement to install temporary lifting and suspension apparatus
 - 7.2 prepare types of lifting and suspension apparatus to conform with the method of installation (manual and mechanical)
 - 7.3 install and remove using: block and tackle material lifting gear (manual and mechanical), cradle suspensions, rope access equipment, bosun's seats, winches, counterbalance systems, suspended platform systems
 - 7.4 position, install, secure, dismantle and remove temporary lifting and suspension apparatus
 - 7.5 erect designed and un-designed scaffold (limitations and formula)
 - 7.6 conduct pre-use checks on manual, electrical and mechanical equipment
 - 7.7 visually inspect fall protection equipment
 - 7.8 install and test anchors and ties
 - 7.9 identify the differences between man-riding and material lifting suspension apparatus
 - 7.10 use hand tools, and ancillary equipment
 - 7.11 work at height
 - 7.12 use access equipment
- 8 team work and communication
- 9 needs of other occupations associated with installing and removing temporary lifting and suspension apparatus

Personal protective equipment (PPE)

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

Problems

- 11 those arising from information, resources and methods of work
 - 11.1 own authority to rectify
 - 11.2 organisational reporting procedures

Programme

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

Protect work

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

COSVR255

Install temporary lifting and suspension apparatus

Resources

- 15 materials, components and equipment relating to types, quantity, quality, sizes and sustainability of standard and/or specialist
 - 15.1 wire and fibre ropes
 - 15.2 chains and slings
 - 15.3 winches and pulley blocks
 - 15.4 counterbalance systems
 - 15.5 decking, planks, rails, boards, bosun's seats
 - 15.6 associated securing materials (lashing, clamps, anchors and ties)
 - 15.7 hand and ancillary equipment
- 16 methods of calculating quantity and length associated with the method/procedure to install and remove temporary lifting and suspension apparatus

Security procedures

- 17 site, workplace, company and operative

COSVR255

Install temporary lifting and suspension apparatus

Developed by ConstructionSkills

Version number 3

Date approved January 2010

Indicative review date April 2014

Validity Current

Status Original

Originating organisation ConstructionSkills

Original URN VR255

Relevant occupations Scaffolders, Stagers and Riggers

Suite Accessing Operations and Rigging (Construction)

Key words Installing; Lifting; Suspension; Rope access; Winches; Block and tackle; Cradle; Bosun's-seats; Slings; Counterbalance lifting

COSVR256

Install lightning conductor systems



Overview

This standard is about

- 1 interpreting information
- 2 adopting safe and healthy working practices
- 3 selecting materials, components and equipment
- 4 preparing and installing lightning conductor systems to the structural fabric

COSVR256

Install lightning conductor systems

Performance criteria

You must be able to:

- P1 interpret the given information relating to the work and resources to confirm its relevance
- P2 comply with the given, relevant legislation and official guidance to carry out your work and maintain safe work practices
- P3 select the required quantity and quality of resources for the methods of work
- P4 comply with organisational procedures to minimise the risk of damage to the work and surrounding area
- P5 comply with the given contract information to carry out the work efficiently to the required specification
- P6 complete the work within the allocated time, in accordance with the programme of work

COSVR256

Install lightning conductor systems

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

Safe work practices

You need to know and understand:

- K4 the level of understanding operatives must have of **information** for relevant, current **legislation and official guidance** and how it is applied
- K5 how **emergencies** should be responded to and who should respond
- K6 the organisational **security procedures** for tools, equipment and personal belongings
- K7 what the accident reporting procedures are and who is responsible for making the report
- K8 why, when and how **personal protective equipment (PPE)** should be used

Performance Criteria 3

Selection of resources

You need to know and understand:

- K9 the characteristics, quality, uses, limitations and defects associated with the **resources** and how defects should be rectified
- K10 how the **resources** should be used and how any **problems** associated with the **resources** are reported
- K11 the organisational procedures to select **resources**, why they have been developed and how they are used
- K12 the **hazards** associated with the **resources** and **methods of work** and how they are overcome

Performance Criteria 4

Minimise the risk of damage

You need to know and understand:

- K13 how to **protect work** from damage and the purpose of protection
- K14 why **disposal of waste** should be carried out safely and how it is achieved

COSVR256

Install lightning conductor systems

Performance Criteria 5

Meet the contract specification

You need to know and understand:

- K15 how **methods of work**, to meet the specification, are carried out and **problems** reported
- K16 how **maintenance** of tools and equipment is carried out

Performance Criteria 6

Allocated time

You need to know and understand:

- K17 what the **programme** is for the work to be carried out in the estimated, allocated time and why deadlines should be kept

COSVR256

Install lightning conductor systems

Additional Information

Scope/range related to performance criteria

Performance Criteria 1

- 1 interpretation of drawings, method statements, risk assessments specifications, schedules and manufacturers' information related to the work to be carried out

Performance Criteria 2

- 2 avoidance of risk by following the given information relating to the following
 - 2.1 methods of work
 - 2.2 safe use of personal protective equipment (PPE)
 - 2.3 safe use of access equipment
 - 2.4 safe use and storage of materials, tools and equipment

Performance Criteria 3

- 3 selection of resources associated with own work
 - 3.1 materials, components and fixings
 - 3.2 tools and equipment

Performance Criteria 4

- 4 protection of the work and its surrounding area from damage
- 5 minimise damage and maintain a clean work space
- 6 disposal of waste in accordance with legislation

Performance Criteria 5

- 7 demonstration of work skills to clean, dress, measure, form, cut, drill, plug, drive, position, clamp, bond, secure, weld and test
- 8 use and maintain hand tools, powered tools, ancillary equipment and access equipment
- 9 install components to the structural fabric to given working instructions, to include
 - 9.1 air terminations
 - 9.2 down conductors
 - 9.3 earthing
 - 9.4 bonding

Performance Criteria 6

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

COSVR256

Install lightning conductor systems

Scope/range related to knowledge and understanding

Disposal of waste

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

Emergencies

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

Hazards

- 3 those identified by risk assessment, method of work, manufacturers' technical information, statutory regulations and official guidance

Information

- 4 drawings, specifications, schedules, method statements, risk assessments, manufacturers' information, standards, regulations and official guidance associated with lightning conductor work

Legislation and official guidance

- 5 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

- 6 operative care of hand tools, powered tools, ancillary equipment and access equipment

Methods of work

- 7 application of knowledge for safe work practices, procedures and skills, relating to the method/area of work and materials used, to
 - 7.1 identify types of structure and the structural fabric
 - 7.2 confirm the means of access to carry out the work
 - 7.3 confirm the type of lightning conductor components and how they are to be installed
 - 7.4 prepare the component parts to be installed
 - 7.5 measure, position, fit and secure the components to specification and requirements
 - 7.6 visually inspect fall protection equipment
 - 7.7 use hand tools, powered tools, test instruments and ancillary equipment
 - 7.8 work at height
 - 7.9 use access equipment
- 8 team work and communication
- 9 needs of other occupations associated with installing lightning conductor systems

COSVR256

Install lightning conductor systems

Personal protective equipment (PPE)

10 occupational use, types, purpose of each type and work situations

Problems

11 those arising from information, resources and methods of work

11.1 own authority to rectify

11.2 organisational reporting procedures

Programme

12 types of progress charts, timetables and estimated times

13 organisational procedures for reporting circumstances which will affect the work programme

Protect work

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

Resources

15 materials, components and equipment relating to types, quantity, quality, sizes and sustainability of standard and/or specialist

15.1 air terminations: stainless metals (plain, sheathed, coated); rods, tapes, cables, clamps, bonds, fixings

15.2 earth terminations: copper and copper clad; rods, tapes, cables, clamps, bonds, fixings, welding materials, riveted joints, earth pits; plastics, adhesives, inhibiting pastes, adhesive tapes, screws, plugs, nuts, bolts

15.3 hand tools, powered tools and ancillary equipment

16 methods of calculating quantity, length, area and wastage associated with the method/procedure to install lightning conductor systems

Security procedures

17 site, workplace, company and operative

COSVR256

Install lightning conductor systems

Developed by ConstructionSkills

Version number 2

Date approved January 2010

Indicative review date April 2014

Validity Current

Status Original

Originating organisation ConstructionSkills

Original URN VR256

Relevant occupations Engineering Technicians

Suite Accessing Operations and Rigging (Construction)

Key words Lightning-conductor; Earthing, Bonding; Down-conductors; Air-terminations; Copper; Cables; Earth-pits

COSVR257

Commission lightning conductor installation systems



Overview

This standard is about

- 1 interpreting information
- 2 adopting safe and healthy working practices
- 3 selecting materials, components and equipment
- 4 preparing and commissioning lightning conductor installations for use

COSVR257

Commission lightning conductor installation systems

Performance criteria

You must be able to:

- P1 interpret the given information relating to the work and resources to confirm its relevance
- P2 comply with the given, relevant legislation and official guidance to carry out your work and maintain safe work practices
- P3 select the required quantity and quality of resources for the methods of work
- P4 comply with organisational procedures to minimise the risk of damage to the work and surrounding area
- P5 comply with the given contract information to carry out the work efficiently to the required specification
- P6 complete the work within the allocated time, in accordance with the programme of work

COSVR257

Commission lightning conductor installation systems

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

Safe work practices

You need to know and understand:

- K4 the level of understanding operatives must have of **information** for relevant, current **legislation and official guidance** and how it is applied
- K5 how **emergencies** should be responded to and who should respond
- K6 the organisational **security procedures** for tools, equipment and personal belongings
- K7 what the accident reporting procedures are and who is responsible for making the report
- K8 why, when and how **personal protective equipment (PPE)** should be used

Performance Criteria 3

Selection of resources

You need to know and understand:

- K9 the characteristics, quality, uses, limitations and defects associated with the **resources** and how defects should be rectified
- K10 how the **resources** should be used and how any **problems** associated with the **resources** are reported
- K11 the organisational procedures to select **resources**, why they have been developed and how they are used
- K12 the **hazards** associated with the **resources** and **methods of work** and how they are overcome

Performance Criteria 4

Minimise the risk of damage

You need to know and understand:

- K13 how to **protect work** from damage and the purpose of protection
- K14 why **disposal of waste** should be carried out safely and how it is achieved

COSVR257

Commission lightning conductor installation systems

Performance Criteria 5

Meet the contract specification

You need to know and understand:

- K15 how **methods of work**, to meet the specification, are carried out and **problems** reported
- K16 how **maintenance** of tools and equipment is carried out

Performance Criteria 6

Allocated time

You need to know and understand:

- K17 what the **programme** is for the work to be carried out in the estimated, allocated time and why deadlines should be kept

COSVR257

Commission lightning conductor installation systems

Additional Information

Scope/range related to performance criteria

Performance Criteria 1

- 1 interpretation of drawings, method statements, risk assessments specifications, schedules and manufacturers' information related to the work to be carried out

Performance Criteria 2

- 2 avoidance of risk by following the given information relating to the following
 - 2.1 methods of work
 - 2.2 safe use of personal protective equipment (PPE)
 - 2.3 safe use of access equipment
 - 2.4 safe use and storage of materials, tools and equipment

Performance Criteria 3

- 3 selection of resources associated with own work
 - 3.1 materials, components and fixings
 - 3.2 tools and equipment

Performance Criteria 4

- 4 protection of the work and its surrounding area from damage
- 5 minimise damage and maintain a clean work space
- 6 disposal of waste in accordance with legislation

Performance Criteria 5

- 7 demonstration of work skills to inspect, test, measure and record
- 8 use and maintain hand tools, test instruments, powered tools and ancillary equipment
- 9 commission lightning conductor installations to given working instructions for the following
 - 9.1 air terminations
 - 9.2 down conductors
 - 9.3 earthing
 - 9.4 bonding

Performance Criteria 6

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

COSVR257

Commission lightning conductor installation systems

Scope/range related to knowledge and understanding

Disposal of waste

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

Emergencies

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

Hazards

- 3 those identified by risk assessment, method of work, manufacturers' technical information, statutory regulations and official guidance

Information

- 4 drawings, specifications, schedules, method statements, risk assessments, manufacturers' information, standards, regulations and official guidance associated with lightning conductor work

Legislation and official guidance

- 5 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

- 6 operative care of hand tools, test instruments, power tools and ancillary equipment

Methods of work

- 7 application of knowledge for safe work practices, procedures and skills, relating to the method/area of work and materials used, to
 - 7.1 identify the lightning conductor installation system (including surge/transient protection)
 - 7.2 confirm the means of access to carry out the work
 - 7.3 survey and carry out visual inspection of the lightning conductor system
 - 7.4 use test instruments and ancillary equipment
 - 7.5 carry out tests for continuity, resistances, impedance
 - 7.6 visually inspect fall protection equipment
 - 7.7 use test instruments
 - 7.8 use hand tools, and ancillary equipment
 - 7.9 work at height
 - 7.10 use access equipment
- 8 team work and communication
- 9 needs of other occupations associated with commissioning lightning conductor installation systems

COSVR257

Commission lightning conductor installation systems

Personal protective equipment (PPE)

10 occupational use, types, purpose of each type and work situations

Problems

11 those arising from information, resources and methods of work

11.1 own authority to rectify

11.2 organisational reporting procedures

Programme

12 types of progress charts, timetables and estimated times

13 organisational procedures for reporting circumstances which will affect the work programme

Protect work

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

Resources

15 materials, components and equipment relating to types, quantity, quality, sizes and sustainability of standard and/or specialist

15.1 test instruments and equipment

15.2 power tools

15.3 hand and ancillary equipment

16 methods of calculating quantity and length associated with the method/procedure to commission lightning conductor installation systems

Security procedures

17 site, workplace, company and operative

COSVR257

Commission lightning conductor installation systems

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Validity Current

Status Original

Originating organisation ConstructionSkills

Original URN VR257

Relevant occupations Engineering Technicians

Suite Accessing Operations and Rigging (Construction)

Key words Lightning-conductor; Commissioning; Air-terminations; Earth-terminations; Continuity; Resistances

COSVR263

Secure and use rope access arrangements



Overview

This standard is about

- 1 interpreting information
- 2 adopting safe and healthy working practices
- 3 selecting materials, components and equipment
- 4 preparing, securing and using rope access arrangements to carry out manoeuvring activities

COSVR263

Secure and use rope access arrangements

Performance criteria

- You must be able to:*
- P1 interpret the given information relating to the work and resources to confirm its relevance
 - P2 comply with the given, relevant legislation and official guidance to carry out your work and maintain safe work practices
 - P3 select the required quantity and quality of resources for the methods of work
 - P4 comply with organisational procedures to minimise the risk of damage to the work and surrounding area
 - P5 comply with the given contract information to carry out the work efficiently to the required specification
 - P6 complete the work within the allocated time, in accordance with the programme of work

COSVR263

Secure and use rope access arrangements

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

Safe work practices

You need to know and understand:

- K4 the level of understanding operatives must have of **information** for relevant, current **legislation and official guidance** and how it is applied
- K5 how **emergencies** should be responded to and who should respond
- K6 the organisational **security procedures** for tools, equipment and personal belongings
- K7 what the accident reporting procedures are and who is responsible for making the report
- K8 why, when and how **personal protective equipment (PPE)** should be used

Performance Criteria 3

Selection of resources

You need to know and understand:

- K9 the characteristics, quality, uses, limitations and defects associated with the **resources** and how defects should be rectified
- K10 how the **resources** should be used and how any **problems** associated with the **resources** are reported
- K11 the organisational procedures to select **resources**, why they have been developed and how they are used
- K12 the **hazards** associated with the **resources** and **methods of work** and how they are overcome

Performance Criteria 4

Minimise the risk of damage

You need to know and understand:

- K13 how to **protect work** from damage and the purpose of protection
- K14 why **disposal of waste** should be carried out safely and how it is achieved

COSVR263

Secure and use rope access arrangements

Performance Criteria 5

Meet the contract specification

You need to know and understand:

- K15 how **methods of work**, to meet the specification, are carried out and **problems** reported
- K16 how **maintenance** of tools and equipment is carried out

Performance Criteria 6

Allocated time

You need to know and understand:

- K17 what the **programme** is for the work to be carried out in the estimated, allocated time and why deadlines should be kept

COSVR263

Secure and use rope access arrangements

Additional Information

Scope/range related to performance criteria

Performance Criteria 1

- 1 interpretation of specifications, method statements, risk assessments schedules and manufacturers' information related to the work to be carried out

Performance Criteria 2

- 2 avoidance of risk by following the given information relating to the following
 - 2.1 methods of work
 - 2.2 safe use of personal protective equipment (PPE)
 - 2.3 safe use of access equipment
 - 2.4 safe use and storage of materials, tools and equipment

Performance Criteria 3

- 3 selection of resources associated with own work
 - 3.1 materials, components, fixings/anchors and ties
 - 3.2 tools and equipment

Performance Criteria 4

- 4 protection of the work and its surrounding area from damage
- 5 minimise damage and maintain a clean work space
- 6 disposal of waste in accordance with legislation

Performance Criteria 5

- 7 demonstration of work skills to measure, set out, position, fix, secure, test and remove
- 8 demonstration of work skills to manoeuvre by descent, ascent, change-over, rope to rope, transfer and passing the knot, re-belay, deviation and aid climbing
- 9 use and maintain ropes and ancillary equipment
- 10 secure and use rope access arrangements to carry out manoeuvres to given working instructions

Performance Criteria 6

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

COSVR263

Secure and use rope access arrangements

Scope/range related to knowledge and understanding

Disposal of waste

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

Emergencies

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

Hazards

- 3 those identified by risk assessment, method of work, manufacturers' technical information, statutory regulations and official guidance

Information

- 4 specifications, schedules, method statements, risk assessments, manufacturers' information and regulations associated with working at height

Legislation and official guidance

- 5 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

- 6 operative care of hand tools, ancillary equipment and access equipment

COSVR263

Secure and use rope access arrangements

Methods of work

- 7 application of knowledge for safe work practices, procedures and skills, relating to the method/area of work and materials used, to
 - 7.1 confirm the method of rope accessing to be arranged and used
 - 7.2 position and set out
 - 7.3 fit, fix and secure
 - 7.4 test and use
 - 7.5 ascend and descend safely and securely using approved techniques and following recognised codes of practice
 - 7.6 take down and remove rope access arrangement
 - 7.7 visually inspect fall protection equipment
 - 7.8 install and test ties and anchors
 - 7.9 identify the test and use criteria for rope access equipment
 - 7.10 apply the hierarchy of control measures for working at height
 - 7.11 apply rescue plans relating to methods of access
 - 7.12 use hand tools, ropes and ancillary equipment
 - 7.13 work at height
 - 7.14 use access equipment
- 8 team work and communication
- 9 needs of other occupations associated with establishing and using rope access arrangements

Personal protective equipment (PPE)

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

Problems

- 11 those arising from information, resources and methods of work
 - 11.1 own authority to rectify
 - 11.2 organisational reporting procedures

Programme

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

Protect work

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

COSVR263

Secure and use rope access arrangements

Resources

- 15 materials, components and equipment relating to types, quantity, quality, sizes and sustainability of standard and/or specialist
 - 15.1 ropes
 - 15.2 fixing and securing components
 - 15.3 anchors and ties
 - 15.4 hand tools
 - 15.5 ancillary equipment
- 16 methods of calculating quantity, length, weight and wastage associated with the method/procedure to establish and use rope access arrangements

Security procedures

- 17 site, workplace, company and operative

COSVR263

Secure and use rope access arrangements

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Date approved January 2010

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Validity Current

Status Original

Originating organisation ConstructionSkills

Original URN VR263

Relevant occupations Scaffolders, Stagers and Riggers

Suite Accessing Operations and Rigging (Construction)

Key words Rope-access; Straight-drop; Double-drop; Ropes; Single-rope; Double-drop

COSVR325

Inspect and test lightning protection systems



Overview

This standard is about

- 13 interpreting information
- 14 adopting safe and healthy working practices
- 15 selecting materials, components and equipment
- 16 preparing for inspecting, testing and reporting on the operational integrity of lightning protection systems

COSVR325

Inspect and test lightning protection systems

Performance criteria

- You must be able to:*
- P19 interpret the given information relating to the work and resources to confirm its relevance
 - P20 comply with the given, relevant legislation and official guidance to carry out your work and maintain safe and healthy work practices
 - P21 select the required quantity and quality of resources for the methods of work
 - P22 comply with organisational procedures to minimise the risk of damage to the work and surrounding area
 - P23 comply with the given contract information to carry out the work efficiently to the required specification
 - P24 complete the work within the allocated time, in accordance with the programme of work

Knowledge and understanding

You need to know and understand:

Performance Criteria 1

Interpretation of information

- K52 the organisational procedures developed to report and rectify inappropriate **information** and unsuitable **resources**, and how they are implemented
- K53 the types of **information**, their source and how they are interpreted
- K54 the organisational procedures to solve **problems** with the **information** and why it is important they are followed

Performance Criteria 2

Safe work practices

You need to know and understand:

- K55 the level of understanding test engineers must have of **information** for relevant, current **legislation and official guidance** and how it is applied
- K56 how **emergencies** should be responded to and who should respond
- K57 the organisational **security procedures** for tools, equipment and personal belongings
- K58 what the accident reporting procedures are and who is responsible for making the report
- K59 why, when and how **health and safety control equipment** should be used

Performance Criteria 3

Selection of resources

You need to know and understand:

- K60 the characteristics, quality, uses, sustainability, limitations and defects associated with the **resources** and how defects should be rectified
- K61 how the **resources** should be used and how any **problems** associated with the **resources** are reported
- K62 the organisational procedures to select **resources**, why they have been developed and how they are used
- K63 the **hazards** associated with the **resources** and **methods of work** and how they are overcome

COSVR325

Inspect and test lightning protection systems

Performance Criteria 4

Minimise the risk of damage

You need to know and understand:

K64 how to **protect work** from damage and the purpose of protection

K65 why **disposal of waste** should be carried out safely and how it is achieved

Performance Criteria 5

Meet the contract specification

You need to know and understand:

K66 how **methods of work**, to meet the specification, are carried out and **problems** reported

K67 how **maintenance** of tools and equipment is carried out

Performance Criteria 6

Allocated time

You need to know and understand:

K68 what the **programme** is for the work to be carried out in the estimated, allocated time and why deadlines should be kept

Additional Information

Scope/range related to performance criteria

Performance Criteria 1

30 interpretation of drawings, specifications, schedules, method statements, risk assessments and manufacturers' information related to the work to be carried out

Performance Criteria 2

31 avoidance of risk by complying with the given information relating to the following

31.1 methods of work

31.2 safe use of health and safety control equipment

31.3 safe use of access equipment

31.4 safe use and storage of materials, tools and test equipment

31.5 specific risks to health

Performance Criteria 3

32 selection of resources associated with own work

32.1 materials, components and fixings/anchors

32.2 tools and equipment

Performance Criteria 4

33 protection of the work and its surrounding area from damage

34 minimise damage and maintain a clean work space

35 disposal of waste in accordance with current legislation

Performance Criteria 5

36 demonstration of work skills to inspect, test, measure, calibrate, calculate, record and report

37 use, check and maintain hand tools, test instruments, powered tools and ancillary equipment

38 inspect the components of lightning protection systems in the following ways to given working instructions

38.1 visual

38.2 detailed

Performance Criteria 6

39 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**

Disposal of waste

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

Emergencies

52 test engineer's response to situations in accordance with organisational authorisation and personal skills when involved with

52.1 fires, spillages, injuries

52.2 emergencies relating to occupational activities

Hazards

53 those identified by risk assessment, method of work, manufacturers' technical information, statutory regulations and official guidance

Health and safety control equipment

54 identified by the principles of protection for occupational use, types and purpose of each type, work situations and general work environment

54.1 collective protective measures

54.2 personal protective equipment (PPE)

54.3 respiratory protective equipment (RPE)

54.4 local exhaust ventilation (LEV)

Information

55 lightning protection system layout drawings, specifications, schedules, method statements, risk assessments, manufacturers' information, earth records, regulations and official guidance associated with lightning conductor work

Legislation and official guidance

56 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

57 test engineer's care of hand tools, test instruments, power tools and ancillary equipment

Inspect and test lightning protection systems

Methods of work

- 58 application of knowledge for safe and healthy work practices, procedures and skills relating to the method/area of work and materials used to:
 - 58.1 identify the lightning protection system (including surge/transient protection)
 - 58.2 liaise with the person responsible for the system
 - 58.3 confirm the means of access to carry out the work
 - 58.4 survey and carry out visual inspection of the lightning protection system
 - 58.5 identify the geology (nature of soil, special earthing arrangements)
 - 58.6 identify type and position of earth electrodes
 - 58.7 use test instruments and ancillary equipment
 - 58.8 carry out tests for continuity, resistances, impedance
 - 58.9 measure earth resistance using recognised test procedures
 - 58.10 identify deterioration and damage
 - 58.11 identify alterations, additions and repairs to the system
 - 58.12 visually inspect fall protection equipment
 - 58.13 ensure test instruments and measuring equipment is calibrated
 - 58.14 use hand tools, power tools and ancillary equipment
 - 58.15 work at height
 - 58.16 use access equipment
 - 58.17 complete and update documentation and log book including earth records and lightning protection system drawings
 - 58.18 write reports
- 59 team work and communication
- 60 needs of other occupations associated with the inspection and testing of lightning protection systems

Problems

- 61 those arising from information, resources and methods of work
 - 61.1 own authority to rectify
 - 61.2 organisational reporting procedures

COSVR325

Inspect and test lightning protection systems

Programme

62 types of progress charts, timetables and estimated times

63 organisational procedures for reporting circumstances which will affect the work programme

Protect work

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

Resources

65 materials, components and equipment relating to types, quantity, quality, sizes and the sustainability of standard and/or specialist:

65.1 test instruments and equipment

65.2 measuring instruments and ancillary equipment

65.3 hand tools, power tools and ancillary equipment

66 methods of calculating quantity, length, area and wastage associated with the method/procedure to inspect and test lightning protection systems

Security procedures

67 site, workplace, company and test engineer

COSVR325

Inspect and test lightning protection systems

Developed by ConstructionSkills

Version number 1

Date approved March 2012

Indicative review date March 2017

Validity Current

Status Original

Originating organisation ConstructionSkills

Original URN COSVR325

Relevant occupations Engineering Technicians

Suite Accessing Operations and Rigging (Construction)

Key words Lightning-conductor; Inspect; Installations; Air-terminations; Earth-terminations; Continuity; Resistances

COSVR412

Install electrical earthing systems



Overview

This standard is about

- 1 interpreting information
- 2 adopting safe and healthy working practices
- 3 selecting materials, components and equipment
- 4 preparing and installing components to the structural fabric for electrical earthing and earthing cable systems

COSVR412

Install electrical earthing systems

Performance criteria

You must be able to:

- P1 interpret the given information relating to the work and resources to confirm its relevance
- P2 comply with the given, relevant legislation and official guidance to carry out your work and maintain safe work practices
- P3 select the required quantity and quality of resources for the methods of work
- P4 comply with organisational procedures to minimise the risk of damage to the work and surrounding area
- P5 comply with the given contract information to carry out the work efficiently to the required specification
- P6 complete the work within the allocated time, in accordance with the programme of work

COSVR412

Install electrical earthing systems

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

Safe work practices

You need to know and understand:

- K4 the level of understanding operatives must have of **information** for relevant, current **legislation and official guidance** and how it is applied
- K5 how **emergencies** should be responded to and who should respond
- K6 the organisational **security procedures** for tools, equipment and personal belongings
- K7 what the accident reporting procedures are and who is responsible for making the report
- K8 why, when and how **personal protective equipment (PPE)** should be used

Performance Criteria 3

Selection of resources

You need to know and understand:

- K9 the characteristics, quality, uses, limitations and defects associated with the **resources** and how defects should be rectified
- K10 how the **resources** should be used and how any **problems** associated with the **resources** are reported
- K11 the organisational procedures to select **resources**, why they have been developed and how they are used
- K12 the **hazards** associated with the **resources** and **methods of work** and how they are overcome

Performance Criteria 4

Minimise the risk of damage

You need to know and understand:

- K13 how to **protect work** from damage and the purpose of protection
- K14 why **disposal of waste** should be carried out safely and how it is achieved

COSVR412

Install electrical earthing systems

You need to know and understand:

Performance Criteria 5

Meet the contract specification

- K15 how **methods of work**, to meet the specification, are carried out and **problems** reported
- K16 how **maintenance** of tools and equipment is carried out

Performance Criteria 6

Allocated time

You need to know and understand:

- K17 what the **programme** is for the work to be carried out in the estimated, allocated time and why deadlines should be kept

COSVR412

Install electrical earthing systems

Additional Information

Scope/range related to performance criteria

Performance Criteria 1

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

Performance Criteria 2

- 2 avoidance of risk by following the given information relating to the following
 - 2.1 methods of work
 - 2.2 safe use of personal protective equipment (PPE)
 - 2.3 safe use of access equipment
 - 2.4 safe use and storage of materials, tools and equipment

Performance Criteria 3

- 3 selection of resources associated with own work
 - 3.1 materials, components, fixings/anchors and ties
 - 3.2 tools and equipment

Performance Criteria 4

- 4 protection of the work and its surrounding area from damage
- 5 minimise damage and maintain a clean work space
- 6 disposal of waste in accordance with legislation

Performance Criteria 5

- 7 demonstration of work skills to clean, dress, measure, form, level, cut, drill, drive, plug, dig, position, clamp, bond, fill, secure and test
- 8 use and maintain hand tools, test instruments, power tools, ancillary equipment and access equipment
- 9 install electrical earthing and earthing cable systems to building structures and commission and test the system to working instructions relating to
 - 9.1 earth bars
 - 9.2 earth rods
 - 9.3 earth pits
 - 9.4 tapes/cables
 - 9.5 lattice earth mats and earth plates
 - 9.6 ground conditioning agents
 - 9.7 exothermic welded joints

Performance Criteria 6

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

COSVR412

Install electrical earthing systems

Scope/range related to knowledge and understanding

Disposal of waste

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

Emergencies

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

Hazards

- 3 those identified by risk assessment, method of work, manufacturers' technical information, statutory regulations and official guidance

Information

- 4 plans, drawings and sketches, specifications, schedules, method statements, risk assessments, manufacturers' information, standards, regulations and official guidance associated with earthing installation work

Legislation and official guidance

- 5 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

- 6 operative care of hand tools, powered tools and ancillary equipment, test instruments and access equipment

COSVR412

Install electrical earthing systems

Methods of work

- 7 application of knowledge for safe work practices, procedures and skills, relating to the method/area of work and materials used, to
 - 7.1 identify various types of structure, the structural fabric and the installation location
 - 7.2 confirm the means of access to carry out the work
 - 7.3 identify and confirm the different types of components and how they are installed
 - 7.4 prepare component parts for installation
 - 7.5 position, fit and secure electrical earthing and earthing cable systems to a given specification and agreed requirements
 - 7.6 commission the system
 - 7.7 visually inspect fall protection equipment
 - 7.8 install and test anchors and ties
 - 7.9 use hand tools, powered tools, test instruments and ancillary equipment
 - 7.10 work at height
 - 7.11 use access equipment
- 8 team work and communication
- 9 needs of other occupations associated with installing components to the building structure for electrical earthing and earthing cable systems

Personal protective equipment (PPE)

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

Problems

- 11 those arising from information, resources and methods of work
 - 11.1 own authority to rectify
 - 11.2 organisational reporting procedures

Programme

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

Protect work

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

COSVR412

Install electrical earthing systems

Resources

- 15 materials, components and equipment relating to types, quantity, quality, sizes and sustainability of standard and/or specialist
 - 15.1 tapes or cables (plain, sheathed, coated, tinned)
 - 15.2 earth bars, earth rods, earth pits
 - 15.3 earth enhancing additives, exothermic welds, clamps, bonds, lugs, clips, screws, plugs, nuts, bolts, rivets, inhibiting paste, petrolatum based anti-corrosion tape, cable ties, cable cleats, markers, labels, cable tiles, trunking and racking
 - 15.4 anchors and ties
 - 15.5 hand tools, powered tools, test instruments, ancillary equipment and access equipment
- 16 methods of calculating quantity, length, area and wastage associated with the method/procedure to install components to the structural fabric for electrical earthing and earthing cable systems

Security procedures

- 17 site, workplace, company and operative

COSVR412

Install electrical earthing systems

Developed by ConstructionSkills

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Originating organisation ConstructionSkills

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