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National Occupational Standards for Offshore Crane Operations

Approved by UKCG January 2003



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Unit PR1 **Contribute to an Efficient and Effective Work Environment**

Unit Guidance

This unit is designed for the candidate to demonstrate competence to contribute to an efficient and effective work environment. It provides the background to operating efficiently. It provides for the exchange of information, the developing and maintaining of effective working relationships with colleagues, associates and visitors. It recognises the importance of organising one's own work to operate effectively, efficiently, to maintain standards in work and, where required, to be complementary with the work of others.

The unit consists of three elements:

- *Contribute to efficiency in the workplace*
- *Develop and maintain effective working relationships*
- *Organise own work and maintain standards*

The assessor must be satisfied that the candidate can provide sufficient practical evidence of performance to demonstrate competence under working conditions to:

- ensure an orderly working environment
- maintain tools and equipment ready for use
- suitably locate and store tools, equipment and materials
- develop and maintain effective working relationships with colleagues and associates
- communicate in an effective manner
- exchange and record information to organisational requirements
- organise own work with other personnel and related activities
- work safely and optimise work time
- carry out work to agreed standards and specification
- prevent accumulation of waste and debris

The types of evidence suited to assessment of the elements in this unit are those relating to the outputs and products of performance, e.g. direct observation in the work environment, written or oral questioning, and witness testimony from authorised personnel. Supplementary evidence will be required in order to satisfy aspects of each element not demonstrated through performance alone. In this unit, additional evidence of knowledge and understanding may therefore be required for each element.

Candidates will be required to demonstrate that they have the aspects of knowledge and understanding specified within the evidence requirements for each element.

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Element 1 : Contribute to Efficiency in the Workplace

Element Summary

This element covers the sorts of contributions that the individual can make to ensure a more efficient workplace.

Standards of Performance

The competent person will:

1. Organise work and the operational area in an orderly way to minimise hazards;
2. Locate and use work materials to meet the needs of the work activity and in line with approved procedures and practices;
3. Maintain tools and equipment when ready for use and store them in designated places when not required;
4. Communicate any restrictions on progress of the work to the appropriate person(s) for appropriate action;
5. Communicate clearly and in accordance with operational, organisational and emergency procedures;
6. Refer problems and conditions outside their responsibility to an authorised person;
7. Maintain records in accordance with operational and organisational requirements;
8. Carry out work to approved procedures and practices and in compliance with statutory requirements.

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Evidence Requirements

The following evidence will be needed for the assessment of competence. It should be drawn from practical performance under working conditions.

- Evidence that the candidate has used both hand tools and equipment.
- Evidence that the candidate can:
 - Ensure an orderly working environment
 - Maintain tools and equipment ready for use
 - Suitably locate and store tools, equipment and materials

Underpinning Knowledge and Understanding

Evidence will be needed in relation to the following essential knowledge and understanding:

- The characteristics of work materials relevant to the work activity.
- The types of tools and equipment used within the operation and work activity.
- What arrangements, designated places and working procedures need to be complied with when storing tools and equipment.
- Relevant methods for the storage of the work materials.
- The relevant means of communication used in the work activity.
- The procedures for reporting problems.
- What the following types of approved procedures and practices require in the context of the operations, the work activity and the workplace environment:
 - organisational
 - regulatory
 - emergency
 - operational
- What the individual's responsibilities are under the Health and Safety and Environment Statutory Requirements. Provision and use of Work Equipment Regulations 1998 (PUWER), Lifting Operations and Lifting Equipment Regulations 1998 (LOLER), and BS 7121 Part Eleven.

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Element 2 : Develop and Maintain Effective Working Relationships

Element Summary

This element covers the development and maintenance of effective working relationships with colleagues and associates.

Standards of Performance

The competent person will:

1. Treat work colleagues and associates in a manner that promotes goodwill and maintains good working practices;
2. Respond positively and willingly to reasonable working requests;
3. Offer or seek appropriate support for colleagues and associates who appear to be in work related difficulties;
4. Communicate clearly in a style and language appropriate to the situation and comply with approved procedures and practices;
5. Carry out all exchanging and recording of information in accordance with organisational procedures;
6. Respond to personnel courteously and in a manner appropriate to the situation;
7. Refer problems and conditions outside their responsibility to an authorised person.

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Evidence Requirements

The following evidence will be needed for the assessment of competence. It should be drawn from practical performance under working conditions.

- Evidence that the candidate has developed and maintained effective working relationships with colleagues and associates who may be occasional or working personnel on a day-to-day basis.
- Evidence that the candidate communicates in an effective manner.
- Evidence that the candidate exchanges and records information in line with organisational requirements.

Underpinning Knowledge and Understanding

Evidence will be needed in relation to the following essential knowledge and understanding

- What the responsibilities are of the following types of work colleagues and associates in relation to the work activity:
 - personnel worked with on a day to day basis
 - occasional
- What the responsibilities of the individual are to work colleagues, associates and visitors in relation to the work activity
- Use of the following types and methods of communication:
 - oral
 - visual
- The procedures involved in exchanging and recording information
- What the following types of approved procedures and practices require in the context of the operations, the work activity and the workplace environment:
 - organisational
 - regulatory
 - emergency
 - operational
- What the individual's responsibilities are under the Health and Safety and Environment Statutory Requirements. Provision and use of Work Equipment Regulations 1998 (PUWER), Lifting Operations and Lifting Equipment Regulations 1998 (LOLER), and BS 7121 Part Eleven.

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Element 3 : Organise Own Work and Maintain Standards

Element Summary

This element covers the organisation of an individual's own work and the maintenance of standards to the agreed specification.

Standards of Performance

The competent person will:

1. Organise their work to comply with instructions and the agreed schedules;
2. Use work methods which comply with approved procedures and practices and optimise the use of time;
3. Coordinate their own work with other relevant personnel and related activities as required;
4. Refer any suggestions for improvements to work methods to an authorised person for confirmation and agreement on the action to be taken;
5. Ensure that work is done to the agreed standards and is in accordance with the specification and the organisational policy;
6. Agree deviations in standard or specification with an authorised person;
7. Refer work that may be detrimental to safety or the environment to the appropriate person(s) in accordance with organisational and operational procedures;
8. Remove and dispose of waste and debris in accordance with approved procedures and practices;
9. Carry out work to approved procedures and practices in compliance with statutory requirements.

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Evidence Requirements

The following evidence will be needed for the assessment of competence. It should be drawn from practical performance under working conditions.

- Evidence that the candidate organises his/her own work activities to instruction and organisational requirements.
- Evidence that the candidate coordinates his/her own work with other personnel and related activities.
- Evidence that the candidate works safely and optimises work time.
- Evidence that the candidate carries work out to agreed standards and specification, covering at least one of the following types of standards:
 - organisational
 - work specified
 - quality and quantity
- Evidence that the candidate prevents the accumulation of waste and debris in relation to his/her own work.

Underpinning Knowledge and Understanding

Evidence will be needed in relation to the following essential knowledge and understanding

- The work requirement and specifications
- The terminology used within the work activity
- Work methods employed in the context of the work activity involved
- The categories and uses of materials in the work activity
- What processes and sequence of events are followed for the work activity
- The following types of standards relative to the work activity and the workplace environment
 - organisational
 - work specified
 - quality and quantity
- What the following types of approved procedures and practices require in the context of the operations, the work activity and the workplace environment:
 - organisational
 - regulatory
 - emergency
 - operational
- What the individual's responsibilities are under the Health and Safety and Environment Statutory Requirements. Provision and use of Work Equipment Regulations 1998 (PUWER), Lifting Operations and Lifting Equipment Regulations 1998 (LOLER), and BS 7121 Part Eleven.



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Unit PR2 **Contribute to Health, Safety and Environment in the Workplace**

Unit Guidance

This unit is designed for the candidate to demonstrate competence to contribute to safety, health and the environment in the workplace. It asks the work operator to be on the look out for hazards and, when identified, deal with them if appropriate, ensuring they are reported for others to become aware of. The work operator must be aware of their responsibilities in respect of practices and procedures that help to maintain the environment, health and safety for themselves and others. The work operator would be expected to have a basic understanding of emergency services and procedures and be able to respond appropriately. Similarly, there would be a requirement to assist with security procedures with regard to trespassing and breaches of security involving damage or theft of plant, equipment, materials and property.

The unit consists of three elements:

- *Operate safely in the workplace*
- *Respond to emergencies*
- *Assist in the security of the workplace*

The assessor must be satisfied that the candidate can provide sufficient practical evidence of performance to demonstrate competence under working conditions to:

- identify and report hazards to the working environment
- select and use protective clothing and equipment appropriate to the work
- work safely to recognised practices and with an awareness for others
- use all tools and equipment correctly and safely
- use appropriate manual handling and lifting techniques
- respond to emergencies (because or the probable lack of actual occurrence, simulation or 'what if' scenarios may be required) which would include procedures for dealing with emergency situations
- organise own work with other personnel and related activities
- maintain security of the crane and within areas affected by crane operations and own level of responsibility

The types of evidence suited to assessment of the elements in this unit are those relating to the outputs and products of performance, e.g. direct observation in the work environment, written or oral questioning, and witness testimony from authorised personnel. Supplementary evidence will be required in order to satisfy aspects of each element not demonstrated through performance alone. In this unit, additional evidence of knowledge and understanding may therefore be required for each element.

Candidates will be required to demonstrate that they have the aspects of knowledge and understanding specified within the evidence requirements for each element.

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Element 1 : Operate Safely in the Workplace

Element Summary

This element covers the ways in which an individual can contribute to safety in the workplace.

Standards of Performance

The competent person will:

1. Carry out their work activities safely so as to avoid creating hazardous situations that may endanger themselves and others;
2. Deal appropriately with hazards and potential hazards identified in the workplace according to their responsibility and capability and promptly report these to the appropriate person(s);
3. Communicate clearly and confirm information and instruction that they have understood given to them;
4. Use all tools and equipment safely in accordance with organisational procedures, manufacturers instructions and relevant statutory regulations;
5. Handle, locate and store work materials and components in accordance with approved procedures and practices;
6. Safely carry out manual handling using appropriate handling techniques;
7. Promptly report accident(s) and incident(s) to an authorised person in accordance with approved procedures and practices;
8. Use appropriate personal protective equipment in compliance with safe working practices;
9. Carry out work to approved procedures and practices and in compliance with statutory requirements.

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Evidence Requirements

The following evidence will be needed for the assessment of competence. It should be drawn from practical performance under working conditions.

- Evidence that the candidate has identified and reported those of the following hazards which arise in their working environment
 - restrictions to access and egress
 - mis-use of tools and equipment
 - faulty equipment
 - hazardous substances
 - interference with and from adjacent activities
 - obstructions and exposed apparatus
 - structures and services
 - weather
- Evidence that the candidate selects and uses protective clothing and equipment appropriate to their work
- Evidence that the candidate works safely to recognised practices and with an awareness for others
- Evidence that the candidate has used both hand tools and equipment
- Evidence that the candidate uses appropriate manual handling and lifting techniques

Underpinning Knowledge and Understanding

Evidence will be needed in relation to the following essential knowledge and understanding:

1. The following types of hazards in the context of the working environment:
 - Restrictions to access and egress
 - Mis-use of tools and equipment
 - Faulty equipment
 - Hazardous substances
 - Interference with and from Adjacent Activities
 - Obstructions and exposed apparatus
 - Structures and services
 - Weather

It will be essential to obtain direct evidence of knowledge of those hazards not covered by performance evidence
2. The procedures for reporting and dealing with hazards
3. The types of tools and equipment to be used relevant to the work
4. The types of materials and substances associated with the work
5. What the following types of approved procedures and practices require in the context of the operations, the work activity and the workplace environment:
 - organisational
 - regulatory
 - emergency
 - operational
6. What the individual's responsibilities are under the Health and Safety and Environment Statutory Requirements. Provision and use of Work Equipment Regulations 1998 (PUWER), Lifting Operations and Lifting Equipment Regulations 1998 (LOLER), and BS 7121 Part Eleven.



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Element 2 : Respond to Emergencies

Element Summary

This element covers the ways in which an individual responds to emergencies

Standards of Performance

The competent person will:

1. In the event of an emergency, promptly and correctly implement procedures in accordance with recognised safe practices and organisational policy;
2. Respond to accident(s) and incident(s) within their responsibility and capability and promptly report them to an authorised person;
3. Use emergency appliances in accordance with approved procedures and practices;
4. Record details of accident(s) and incident(s) in accordance with approved procedures and practices;
5. Refer problems and conditions outside their responsibility to an authorised person

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Evidence Requirements

The following evidence will be needed for the assessment of competence. It should be drawn from practical performance under working conditions.

- Evidence from practical performance under working conditions that the candidate has identified and responded to emergencies which would include procedures for dealing with emergency situations, e.g. GP A, Crane Operation Emergencies. NB Because of the probable lack of actual occurrence, simulation or 'what if' scenarios may be required.

Emergency situations which an individual might be faced with in the context of their working environment and should be prepared for would include: fire, toxic fumes, chemical spillage, accident(s) (others which may need identification as relevant to the working environment could include installation emergencies, hookend on the boat, electrocution, major incidents, dangerous occurrences, explosion, flooding etc, which can be addressed through the assessment).

Underpinning Knowledge and Understanding

Evidence will be needed in relation to the following essential knowledge and understanding

- Fire and emergency precautions and procedures
- Classification of fires and the appropriate extinguishers for dealing with them
- The procedures for reporting and dealing with accident(s) and incident(s)
- The common forms of personnel accidents or health emergencies and the actions to be taken
- What the following types of approved procedures and practices applying to GP A require in the context of the operations, the work activity and the workplace environment:
 - organisational
 - regulatory
 - emergency
 - operational
- Work operator's scope and limitations for dealing with emergencies
- What the individual's responsibilities are under the Health and Safety and Environment Statutory Requirements. Provision and use of Work Equipment Regulations 1998 (PUWER), Lifting Operations and Lifting Equipment Regulations 1998 (LOLER), and BS 7121 Part Eleven.

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Element 3 : Assist in the Security of the Workplace

Element Summary

This element covers the ways in which an individual can assist in the security of the workplace.

Standards of Performance

The competent person will:

1. Deal with unauthorised personnel seen in the vicinity of the crane and the crane workplace in accordance with organisational procedures and advise the appropriate person(s);
2. Observe and maintain arrangements for security in accordance with approved procedures and practices;
3. Promptly report potential risks to security to the appropriate person(s) and take remedial action as necessary in accordance with organisational procedures;
4. Report breaches of security immediately to an authorised person;
5. Refer problems and conditions outside their responsibility to an authorised person.

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Evidence Requirements

The following evidence will be needed for the assessment of competence. It should be drawn from practical performance under working conditions.

Evidence from practical performance under working conditions that the candidate has maintained the security of the crane and areas affected by crane operations within their own level of responsibility

Underpinning Knowledge and Understanding

Evidence will be needed in relation to the following essential knowledge and understanding

- The organisation's security procedures as it applies to crane operators
- The action to take in cases of breaches of security including acts of vandalism and theft
- The potential security risks to personnel, property and the surrounding environment, the operational area, plant and equipment
- Methods of dealing with unauthorised persons
- Approved security procedures and practices in the context of crane operations and the workplace environment in relation to meeting each of the following types of requirement:
 - organisational
 - regulatory
 - emergency
 - operational
 - conflicting activities
- What the individual's responsibilities are under the Health, Safety and Environmental Statutory Requirements

Unit PR3 Operate Specialised Plant and Machinery to Performance Requirements (Lifting and Transferring)

Unit Guidance

This unit is designed to assess the candidate's competence in operating offshore cranes to performance requirements and to interpret instruction and information to carry out operations. It confirms the competence to prepare the plant and machinery to meet the work activity planned and that the equipment is safe, set up and fully operational to carry out the work. It provides for operating offshore cranes in the work activity and places emphasis on the consequences of the activity and the need to ensure safety and security in the work environment, including the need to be aware of others, whether work personnel or members of the public, who may have contact with the activity. Similarly this competence should also be in evidence in respect of property. Concluding the work activity, ensuring plant and machinery is secure and maintained in an operable condition completes the competence of the unit. Throughout the range of activities envisaged there is the need to communicate with others and this too is recognised in the competence of operating the specialised plant and machinery of performance requirements.

The unit consists of three elements:

- *Prepare and set up plant and machinery*
- *Operate plant and machinery to meet work requirements*
- *Shut down and secure plant and machinery*

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The assessor must be satisfied that the candidate can provide sufficient practical evidence of performance to demonstrate competence under working conditions to:

- confirm work requirements and the area for work
- identify hazards and conditions that affect the work activity
- identify equipment to be used in the work activity
- carry out pre-start checks on the equipment, energy and ancillary systems
- start, run and confirm operational performance of equipment and control systems
- carry out preparations and set-up work safely
- maintain records as required
- identify areas of work
- operate, control and maintain performance and safety of equipment
- contribute to a safe working environment
- acknowledge and act upon clear communications
- conclude the work activity to instruction and approved procedure
- shut down equipment safely and correctly
- ensure a correct and secure position for equipment
- carry out post-stop maintenance requirements

The types of evidence suited to assessment of the elements in this unit are those relating to the outputs and products of performance, e.g. direct observation in the work environment, written or oral questioning, and witness testimony from authorised personnel. Supplementary evidence will be required in order to satisfy aspects of each element not demonstrated through performance alone. In this unit, additional evidence of knowledge and understanding may therefore be required for each element.

Candidates will be required to demonstrate that they have the aspects of knowledge and understanding specified within the evidence requirements for each element.

Plant Rationalisation

This standard will apply to operator and driver occupations across several specialised plant and machinery categories, and each category may well have a comprehensive number of differing types and sizes of specialised plant and machinery.

The main categories of plant and machinery associated with 'lifting and transferring' are: Cranes (e.g. Gantry, Mobile, Overhead, Pedestal, Quay, Tower), Lift Trucks (e.g. Industrial, Rough Terrain, Variable Reach) other dedicated Lifting Plant and Machinery e.g. Straddle Carriers).

The types and sizes of specialised plant and machinery will need to be identified on the qualification certificate.

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Element 1 : Prepare and Set up Plant and Machinery

Element Summary

This element covers what an individual should do to prepare and set up plant and machinery for a given work activity.

Standards of Performance

The competence person will:

1. Confirm work requirements as to the extent, method and detail of the work activity to be undertaken with the appropriate person(s);
2. Identify hazards and conditions that affect the work activity and agree actions with the appropriate person(s);
3. Confirm that the equipment to be used is available and applicable to the work activity;
4. Carry out pre-start checks on the equipment and its energy and ancillary supplies in accordance with approved operating procedures and practices;
5. Prepare, set-up and adjust the equipment for the work activity in accordance with instructions, safety and the work requirements;
6. Confirm that the operational performance of the equipment and its associated systems is correct, safe and appropriate to the work activity;
7. Record defects and damage to the equipment and take appropriate action for any correction;
8. Maintain records in accordance with organisational procedures and requirements;
9. Refer problems and conditions outside their responsibility to an authorised person;
10. Carry out work to approved procedures and practices and in compliance with statutory requirements.

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Evidence Requirements

The following evidence will be needed for the assessment of competence. It should be drawn from practical performance under working conditions.

- Evidence that the candidate has confirmed work requirements and the area for work.
- Evidence that the candidate has identified when any of the following types of hazards and conditions affect the work activity:
 - adverse communications affecting plant and machinery stability
 - load stability
 - load security
 - load handling
 - restricted access
 - services apparatus
 - fixed and temporary furnishings and structures
 - neighbouring work and traffic activities
 - encroaching personnel
- Evidence that the candidate identifies the selected specialised plant and machinery to be used in the work activity and the key aspects associated with its operations, including stability arrangements when operational and at rest for jacks and brakes, power and transmission to include travel, traversing, lifting, system controls to include manoeuvring, lifting and safety, lifting and safety, lifting gear and attachments.
- Evidence that the candidate has set up and adjusted the equipment for the work activity.
- Evidence that the candidate has carried out pre-start checks on the equipment, energy and ancillary supplies.
- Evidence that the candidate can start, runs and confirm the operational performance of equipment and control systems.
- Evidence that the candidate carries out preparations and the setting-up of work safely.
- Evidence that the candidate maintains records as required.

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Underpinning Knowledge and Understanding

Evidence will be needed in relation to the following essential knowledge and understanding:

- The following hazards and conditions that affect the work activity:
 - adverse circumstances affecting plant and machinery stability
 - load stability
 - load security
 - load handling
 - restricted access
 - services apparatus
 - fixed and temporary furnishings and structures
 - neighbouring work and traffic activities
 - encroaching personnel
- It will be essential that the candidate provides direct evidence of his/her knowledge of any hazards and conditions which are not covered by the Performance Evidence provided.
- The types of equipment in relation to the work activity
- The setting up of equipment for the work activity
- The methods of adjustment for varying equipment performance
- Pre-start routine checks
- Types of defects in the equipment
- The format and procedures for recording and communicating information
- What the following types of approved procedures and practices require in the context of the operations, the work activity and the workplace environment:
 - organisational
 - regulatory
 - emergency
 - operational
- What the individual's responsibilities are under the Health and Safety and Environment Statutory Requirements. Provision and use of Work Equipment Regulations 1998 (PUWER), Lifting Operations and Lifting Equipment Regulations 1998 (LOLER), and BS 7121 Part Eleven.

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Element 2 : Operate plant and machinery to meet work requirements

Element Summary

This element covers the operation of plant and machinery to meet the specified work requirements.

Standards of Performance

The competent person will:

1. Identify and confirm the area of work in accordance with instructions and to the specified work requirements;
2. Deal with any changes in conditions that impinge on the work and safety, and communicate these to the appropriate person(s);
3. Carry out operations safely in accordance with instructions and operational procedures to meet the specified work requirement;
4. Monitor equipment to maintain safety of performance throughout the work activity;
5. Use methods of communication in accordance with the designated procedure and as agreed with the banksman;
6. Deal promptly and appropriately with any accident(s) and incident(s) during operations, in accordance with approved procedures and practices;
7. Maintain records in accordance with organisational procedures and requirements
8. Refer problems and conditions outside their responsibility to an authorised person;
9. Carry out work to approved procedures and practices and in compliance with statutory requirements

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Evidence Requirements

The following evidence will be needed for the assessment of competence. It should be drawn from practical performance under working conditions.

- Evidence that the candidate identifies the areas of work where the activity is to be carried out.
- Evidence that the candidate operates, controls and maintains performance and safety of equipment to meet work requirements.
- Evidence that the candidate contributes to a safe working environment.
- Evidence that the candidate acknowledges, uses and acts upon clear communications.
- Evidence that the candidate maintains records as required.

Underpinning Knowledge and Understanding

Evidence will be needed in relation to the following essential knowledge and understanding

- The characteristics and capabilities of the equipment being used
- The following hazards and conditions that affect the work activity:
 - adverse circumstances affecting plant and machinery stability
 - load security
 - load handling
 - restricted access
 - fixed and temporary furnishings and structures
 - neighbouring work and traffic activities
 - encroaching personnel
 - load stability
 - services apparatus
- The following types of methods of communication used:
 - visual
 - oral
- The requirements for recording and communicating information (e.g. manifests)
- Accident and incident procedures
- What the following types of approved procedures and practices require in the context of the operations, the work activity and the workplace environment:
 - organisational
 - regulatory
 - emergency
 - operational
- What the individual's responsibilities are under the Health and Safety and Environment Statutory Requirements. Provision and use of Work Equipment Regulations 1998 (PUWER), Lifting Operations and Lifting Equipment Regulations 1998 (LOLER), and BS 7121 Part Eleven.

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Element 3 : Shut Down and Secure Plant and Machinery

Element Summary

This element covers the shutting down and securing of plant and machinery after operation.

Standards of Performance

The competent person will:

1. Conclude the work activity to instruction and in accordance with the specified requirements;
2. Identify and allow for hazards and conditions that affect the shutdown or the equipment's security both:
 - during shutdown
 - on completion of the shutdown
3. Shut down equipment and leave it secure in accordance with approved procedures and practices;
4. Record any defects and damage to equipment and take appropriate action for its correction;
5. Maintain equipment and leave it ready for use in accordance with post-stop maintenance requirements;
6. Maintain records in accordance with organisational procedures and requirements;
7. Refer problems and conditions outside their responsibility to an authorised person;
8. Carry out work to approved procedures and practices and in compliance with statutory requirements.

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Evidence Requirements

The following evidence will be needed for the assessment of competence. It should be drawn from practical performance under working conditions.

- Evidence that the candidate can conclude the work activity to instruction and approved procedure.
- Evidence that the candidate can shut down equipment safely and correctly.
- Evidence that the candidate can ensure that equipment is left in a correct and secure position.
- Evidence that the candidate can carry out the following post-stop maintenance activities:
 - routine checks
 - visual wear and tear inspection
 - energy supplies
 - damage assessment
 - safety checks
- Evidence that the candidate can maintain records as required.

Underpinning Knowledge and Understanding

Evidence will be needed in relation to the following essential knowledge and understanding

- The procedures for concluding work activity
- The hazards and conditions that affect the shutdown or equipment security
- Parking and securing requirements for the equipment
- The post-stop maintenance requirements for the equipment
- What the following types of approved procedures and practices require in the context of the operations, the work activity and the workplace environment:
 - organisational
 - regulatory
 - emergency
 - operational
- What the individual's responsibilities are under the Health and Safety and Environment Statutory Requirements. Provision and use of Work Equipment Regulations 1998 (PUWER), Lifting Operations and Lifting Equipment Regulations 1998 (LOLER), and BS 7121 Part Eleven.

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PR 7 Carry Out Slinging and Signalling for the Movement of Loads

Unit Guidance

This unit is designed to assess the candidate's competence to sling and signal loads for lifting, essentially aimed at those operations where the transfer of a load is carried out using various types of lifting gear. This may be using ropes, special slings or other dedicated equipment where specific attention is given to the lifting points and balancing of the load. Equally important is the safe putting down and unslinging of a load. Therefore, with the lift in the main being operated in a remote situation it is also essential to have good communication and clear signalling; this is clearly recognised in this unit.

The unit consists of two elements:

- *Prepare and sling loads for lifting*
- *Direct and control the movement and placing of loads*

The assessor must be satisfied that the candidate can provide sufficient practical evidence of performance to demonstrate competence under working conditions to:

- select appropriate method and equipment for slinging loads
- demonstrate slinging and unslinging of loads
- work safely when preparing and carrying out slinging procedures
- signal clearly for safe movement of load
- demonstrate signalling and communication procedures
- direct the movement of loads (using appropriate aids where necessary)

The types of evidence suited to assessment of the elements in this unit are those relating to the outputs and products of performance, e.g. direct observation in the work environment, written or oral questioning, and witness testimony from authorised personnel. Supplementary evidence will be required in order to satisfy aspects of each element not demonstrated through performance alone. In this unit, additional evidence of knowledge and understanding may therefore be required for each element.

Candidates will be required to demonstrate that they have the aspects of knowledge and understanding specified within the evidence requirements for each element.

Plant Rationalisation

This standard will apply to general operatives and, as required, by operators and drivers of specialised plant and machinery.

The main categories of plant and machinery associated with 'lifting and transferring' are: Cranes (e.g. Gantry, Mobile, Overhead, Pedestal, Quay, Tower), Lift Trucks (e.g. Industrial, Rough Terrain, Variable Reach) other dedicated Lifting Plant and Machinery e.g. Straddle Carriers).

The types and sizes of specialised plant and machinery will need to be identified on the qualification certificate.

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Element 1 : Prepare and Sling Loads for Lifting

Element Summary

This element covers the preparation and slinging of loads for lifting.

Standards of Performance

The competence person will:

1. Accurately identify loads being moved from relevant information and instruction;
2. Choose slinging techniques to suit the characteristics of the loads, and the intended lift;
3. Identify difficulties in carrying out the slinging and movement of loads and clarify how to deal with them with the appropriate person(s);
4. Select and confirm that slinging equipment is suitable for the load(s) to be lifted;
5. Report defects and faults relating to the slinging equipment to the authorised person;
6. Prepare and sling loads in accordance with the chosen slinging techniques;
7. Confirm that the support and balance of the slung load is satisfactory and secure prior to movement;
8. Carry out work to approved procedures and practices and in compliance with statutory requirements.

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Evidence Requirements

The following evidence will be needed for the assessment of competence. It should be drawn from practical performance under working conditions.

- Evidence that the candidate can select an appropriate method and equipment for slinging loads.
- Evidence that the candidate can sling and unslung loads.
- Evidence that the candidate can work safely when preparing and carrying out slinging procedures.

Underpinning Knowledge and Understanding

Evidence will be needed in relation to the following essential knowledge and understanding:

- Relevant types of information and instruction sources for the work activity including the following:
 - work sheets
 - specifications
 - identification information
- The types of lifting equipment in use within the offshore petroleum industry, including general, specific and specialised lifting gear
- The hazards and conditions that can affect the lifting activity
- Slinging methods in relation to safe working loads and angles of lift
- Load stability, security and weight distribution factors
- Load characteristics (e.g. hazardous/non-hazardous)
- Slinging gear capabilities (e.g. capacities, strengths, weaknesses and limitations)
- The types of defects and faults that are possible with lifting operations
- Lifting equipment discard criteria
- Coding and identification systems for lifting equipment
- What the following types of approved procedures and practices require in the context of the operations, the work activity and the workplace environment:
 - organisational
 - regulatory
 - emergency
 - operational
- What the individual's responsibilities are under the Health and Safety and Environment Statutory Requirements. Provision and use of Work Equipment Regulations 1998 (PUWER), Lifting Operations and Lifting Equipment Regulations 1998 (LOLER), and BS 7121 Part Eleven.

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Element 2 : Direct and control the movement and placing of loads

Element Summary

This element covers the competence required to direct and control the movement and placing of loads.

Standards of Performance

The competent person will:

1. Agree load movement and operations procedures with relevant personnel;
2. Confirm and establish the method of signalling and communication with relevant personnel before starting any movement operations;
3. Signal and communicate clearly and in accordance with approved procedures and practices;
4. Direct the movement of the load to its destination accurately, using the agreed signalling code;
5. Respond to unclear signalling and communication promptly;
6. Clarify what is meant by any unclear signals or communication so as not to endanger personnel or operations;
7. Monitor the stability of the load throughout the movement and on release of the load;
8. Position and set down the load and relax the sling for the removal of the lifting equipment;
9. Carry out work to approved procedures and practices and in compliance with statutory requirements.

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Evidence Requirements

The following evidence will be needed for the assessment of competence. It should be drawn from practical performance under working conditions.

- Evidence that the candidate signals clearly for safe movement of a load.
- Evidence that the candidate is able to demonstrate signalling and communication procedures by way of hand signalling, oral and second person methods as relevant to his/her work context.
- Evidence that the candidate has directed the movement of loads (using appropriate aids where necessary)

Underpinning Knowledge and Understanding

Evidence will be needed in relation to the following essential knowledge and understanding

- The interpretation of instructions for load movement
- Relevant personnel involved with the activity to include:
 - authorised persons
 - personnel involved with the activity
- Use of the following methods for signalling and communication:
 - hand signalling
 - oral
 - second person
- The reasons for wearing clear - visibility clothing
- What the following types of approved procedures and practices require in the context of the operations, the work activity and the workplace environment:
 - organisational
 - regulatory
 - emergency
 - operational
- What the individual's responsibilities are under the Health and Safety and Environment Statutory Requirements. Provision and use of Work Equipment Regulations 1998 (PUWER), Lifting Operations and Lifting Equipment Regulations 1998 (LOLER), and BS 7121 Part Eleven.

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PR 10 Lift, Transfer and Position Loads

Unit Guidance

This unit is designed for the candidate to demonstrate the competence to lift, transfer and position loads. This includes preparing for the movement of loads using specialised equipment, lifting the load and transferring it by mechanical means to a designated location, positioning, setting down and releasing the load safely and securely (this covers general and specific materials handling, e.g. cargo, supplies, goods, equipment).

The unit consists of three elements:

- *Prepare for movement of load*
- *Lift and transfer load to its designated location*
- *Position and set down load*

The assessor must be satisfied that the candidate can provide sufficient practical evidence of performance to demonstrate competence under working conditions to:

- identify load and method of movement
- identify potential hazards of the working area that affect the safety of the operation
- confirm equipment is suitably prepared and set up for movement of load
- check the safety and security of the work area
- maintain records as required
- lift and transfer loads securely and safely
- contribute to maintaining the safety of the working area
- manoeuvre, position and set down load correctly
- carry out operation safely

The types of evidence suited to assessment of the elements in this unit are those relating to the outputs and products of performance, e.g. direct observation in the work environment, written or oral questioning, and witness testimony from authorised personnel. Supplementary evidence will be required in order to satisfy aspects of each element not demonstrated through performance alone. In this unit, additional evidence of knowledge and understanding may therefore be required for each element.

Candidates will be required to demonstrate that they have the aspects of knowledge and understanding specified within the evidence requirements for each element.

Plant Rationalisation

This standard would apply to operators and drivers of specialised plant and machinery being used for the lifting and the transfer of loads.

The main categories of plant and machinery associated with 'lifting and transferring' are: Cranes (e.g. Gantry, Mobile, Overhead, Pedestal, Quay, Tower), Lift Trucks (e.g. Industrial, Rough Terrain, Variable Reach) other dedicated Lifting Plant and Machinery e.g. Straddle Carriers).

The types and sizes of specialised plant and machinery will need to be identified on the qualification certificate.

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Element 1 : Prepare for Movement of Load

Element Summary

This element covers the preparations required for movement of a load.

Standards of Performance

The competent person will:

1. Accurately identify load to be moved, its location and destination from relevant information and instructions;
2. Check the area of work for safety and confirm that it is secure for the movement and transfer of loads;
3. Assess the method of movement and transfer and take appropriate measures to ensure safety of the operation;
4. Identify difficulties in carrying out the movement and transfer and clarify how to deal with them with the appropriate person(s);
5. Accurately identify potential hazards in the work area and take action in accordance with approved procedures and practices;
6. Confirm that the equipment to be used is suitably prepared and set up for the work requirement;
7. Maintain records in accordance with organisation and operational requirements;
8. Refer problems and conditions outside their responsibility to an authorised person;
9. Carry out work to approved procedures and practices and in compliance with statutory requirements.

Evidence Requirements

The following evidence will be needed for the assessment of competence. It should be drawn from practical performance under working conditions.

- Evidence that the candidate can identify a load and the method of movement to be used.
- Evidence that the candidate can identify the following potential hazards in the working area that could affect the safety of the operation:
 - encroaching personnel
 - neighbouring activities
 - obstructions
 - damaged loads
- Evidence that the candidate confirms that equipment is suitably prepared and set up for the movement of a load.
- Evidence that the candidate checks the safety and security of the work area.
- Evidence that the candidate maintains records as required.

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Underpinning Knowledge and Understanding

Evidence will be needed in relation to the following essential knowledge and understanding:

1. The different types of loads, their characteristics and movement requirements
2. The types of equipment used for the movement and transfer of loads in the context of the operations and work activity
3. Preparation and set-up requirements for the specified equipment
4. The methods for lifting and movement of a load relative to the specified equipment and characteristics of the load
5. The following types of workplace hazards encountered and the working practices for dealing with them:
 - encroaching personnel
 - neighbouring activities
 - obstructions
 - damaged loads
6. The organisational and operational requirements for keeping records
7. What the following types of approved procedures and practices require in the context of the operations, the work activity and the workplace environment:
 - organisational
 - regulatory
 - emergency
 - operational
8. What the individual's responsibilities are under the Health and Safety and Environment Statutory Requirements. Provision and use of Work Equipment Regulations 1998 (PUWER), Lifting Operations and Lifting Equipment Regulations 1998 (LOLER), and BS 7121 Part Eleven.

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Element 2 : Lift and Transfer Load to its Designated Location

Element Summary

This element covers the lifting and transferring of a load to its designated location.

Standards of Performance

The competent person will:

1. Select a load and confirm that it is suitable to lift;
2. Carry out lifting and handling of the load safely, taking account of the load's characteristics;
3. Lift and transfer a load to the designated location safely, securely and without loss or damage;
4. Undertake operations in a safe, effective and controlled manner with due regard to the surrounding environment;
5. Report any loss or damage to the load or the surrounding environment to the appropriate person(s) and take action in accordance with approved procedures and practices;
6. Refer problems and conditions outside their responsibility to an authorised person;
7. Carry out work to approved procedures and practices and in compliance with statutory requirements.

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Evidence Requirements

The following evidence will be needed for the assessment of competence. It should be drawn from practical performance under working conditions.

- Evidence that the candidate can lift and transfer loads securely and safely.
- Evidence that the candidate contributes to maintaining the safety of the working area with regard to property, neighbouring activities, the natural and built environment.

Underpinning Knowledge and Understanding

Evidence will be needed in relation to the following essential knowledge and understanding

- The different types of loads, their characteristics and movement requirements
- Types of specified equipment and related operating procedures
- Methods for lifting and transferring of a load relative to the specified equipment and nature of the load
- The procedures for dealing with loss and damage to loads
- What the following types of approved procedures and practices require in the context of the operations, the work activity and the workplace environment:
 - organisational
 - regulatory
 - emergency
 - operational
- What the individual's responsibilities are under the Health and Safety and Environment Statutory Requirements. Provision and use of Work Equipment Regulations 1998 (PUWER), Lifting Operations and Lifting Equipment Regulations 1998 (LOLER), and BS 7121 Part Eleven.

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Element 3 : Position and Set Down Load

Element Summary

This element covers the positioning and setting down of loads.

Standards of Performance

The competent person will:

1. Confirm the location for positioning and setting down of the load in accordance with the information and instruction received from the banksman;
2. Position, set down and release the load in its designated location;
3. Carry out operations safely and meet with the work requirements;
4. Report any loss of or damage to the load or the surrounding environment and take appropriate action in accordance with approved procedures and practices;
5. Report any incident(s) and accident(s) during movement in accordance with approved procedures and practices;
6. Refer problems and conditions outside their responsibility to the authorised person;
7. Maintain records in accordance with organisation and operational requirements;
8. Carry out work to approved procedures and practices and in compliance with statutory requirements.

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Evidence Requirements

The following evidence will be needed for the assessment of competence. It should be drawn from practical performance under working conditions.

- Evidence that the candidate can manoeuvre, position and set down loads correctly.
- Evidence that the candidate can carry out operations safely, avoiding damage to property, neighbouring activities and the surrounding natural and built environment.

Underpinning Knowledge and Understanding

Evidence will be needed in relation to the following essential knowledge and understanding

- The different types of loads and their characteristics
- Types of specified equipment and related operating procedures
- The methods for positioning and setting down of loads relative to the specified equipment
- The action to be taken in the event of incident or accident
- The organisational and operational requirements for keeping records
- What the following types of approved procedures and practices require in the context of the operations, the work activity and the workplace environment:
 - organisational
 - regulatory
 - emergency
 - operational (*e.g. bulk loading*)
- What the individual's responsibilities are under the Health and Safety and Environment Statutory Requirements. Provision and use of Work Equipment Regulations 1998 (PUWER), Lifting Operations and Lifting Equipment Regulations 1998 (LOLER), and BS 7121 Part Eleven