



QCF Unit and Assessment Specification

Unit title	Preparing and Operating Tower Cranes to Lift and Transfer Loads in the Workplace
Ofqual Unit code	L/600/7854
SQA Unit code	FD09 68
SSC Ref	VR 387C

QCF Unit specification

Title:	Preparing and Operating Tower Cranes to Lift and Transfer Loads in the Workplace	
Level:	2	
Credit value:	80	
Learning Outcomes <i>The learner will be able to:</i>	Assessment Criteria <i>The learner can:</i>	
1 Interpret the given information relating to the use of tower cranes to lift, transfer and place loads.	1.1	Interpret and extract information from drawings, specifications, schedules and manufacturers' information.
	1.2	Comply with information and/or instructions derived from risk assessments and method statements.
	1.3	State the organisational procedures developed to report and rectify inappropriate information and unsuitable resources and how they are implemented.
	1.4	Describe different types of information, their source and how they are interpreted in relation to: <ul style="list-style-type: none"> ◆ drawings, specifications, schedules, manufacturers' information, method statements and regulations and guidance applicable to tower crane operations.
2 Organise with others the sequence and operation in which lifting operations using tower cranes are to be carried out.	2.1	Organise the work according to given information or instructions.
	2.2	Describe how to communicate ideas between team members.
	2.3	Organise and communicate with team members and other associated occupations.
	2.4	State how to organise resources prior to and during lifting operations with tower cranes.
3 Know how to comply with relevant legislation and official guidance when carrying out lifting operations.	3.1	Describe their responsibilities under current legislation and official guidance whilst working: <ul style="list-style-type: none"> ◆ in the workplace, below ground Level, at height, in confined spaces, with tools and equipment, with materials and substances, with movement/storage of materials and by manual handling and mechanical lifting.
	3.2	Describe the organisational security procedures for tools, equipment and personal belongings in relation to site, workplace, company and operative.

Learning Outcomes <i>The learner will be able to:</i>	Assessment Criteria <i>The learner can:</i>
	3.3 State what the accident reporting procedures are and who is responsible for making reports.
4 Maintain safe working practices when preparing for and carrying out lifting operations using tower cranes.	4.1 Use personal protective equipment (PPE) to safely carry out the activity in accordance with legislation and organisational requirements during lifting operations. 4.2 Explain why and when personal protective equipment (PPE) should be used, relating to tower crane use, and the types, purpose and limitations of each type. 4.3 State how emergencies should be responded to in accordance with organisational authorisation and personal skills when involved with fires, spillages, injuries and other task-related hazards.
5 Request and select the required quantity and quality of resources to prepare for and carry out lifting operations using tower cranes.	5.1 Describe the characteristics, quality, uses, limitations and defects associated with the resources, and how they should be used correctly, relating to: <ul style="list-style-type: none"> ◆ consumables, lubricants and fuels ◆ attachments and lifting aids ◆ hand tools, ancillary equipment and/or accessories. 5.2 Request and select resources associated with tower cranes in relation to consumables, materials, attachments, tools, accessories and/or ancillary equipment. 5.3 State how the resources should be used correctly, how problems associated with the resources are reported and how the organisational procedures are used. 5.4 Outline potential hazards associated with the resources and method of work. 5.5 Describe how to calculate weight, bearing pressure, length and area associated with the method/procedures to carry out lifting operations with tower cranes.

Learning Outcomes <i>The learner will be able to:</i>	Assessment Criteria <i>The learner can:</i>
6 Minimise the risk of damage to the work and surrounding area when lifting and transferring loads.	6.1 Protect the work and its surrounding area from damage. 6.2 Minimise damage and maintain a clean work space. 6.3 Describe how to protect work from damage and the purpose of protection in relation to general workplace activities, other occupations and adverse weather conditions. 6.4 Dispose of waste in accordance with legislation. 6.5 State why the disposal of waste should be carried out safely in relation to the work.
7 Complete the work within the allocated time when preparing to and lifting and transferring loads.	7.1 Demonstrate completion of the work within the allocated time. 7.2 Shut down and secure tower cranes. 7.3 State the purpose of the work programme and describe why deadlines should be kept in relation to: <ul style="list-style-type: none"> ◆ types of progress charts, timetables and estimated times ◆ organisational procedures for reporting circumstances which will affect the lifting operation.
8 Comply with the given contract information to lift, transfer and place loads using tower cranes to the required specification.	8.1 Demonstrate the following work skills when preparing for, lifting, transferring and placing loads using tower cranes: <ul style="list-style-type: none"> ◆ fitting, attaching, setting up, securing, adjusting, checking, removing, communicating, operating, manoeuvring, positioning, lifting, transferring and setting down. 8.2 Prepare, set up and operate tower cranes to lift, transfer and place a variety of loads in the workplace, to given working instructions. 8.3 Describe how to apply safe work practices, follow procedures, report problems and establish authority needed to rectify, to: <ul style="list-style-type: none"> ◆ identify the characteristics of the crane for the lifting operation ◆ carry out performance checks ◆ prepare, set up and adjust for operational requirements ◆ complete functional checks ◆ carry out pre-operational checks for obstructions, stability, safety and security of the work and surrounding area

Learning Outcomes <i>The learner will be able to:</i>	Assessment Criteria <i>The learner can:</i>
	<ul style="list-style-type: none"> ◆ operate and move (where applicable) the crane ◆ identify characteristics, type, weight and positioning of loads for lifting and transferring ◆ secure and balance loads for lifting ◆ lift, remove and transfer loads ◆ position, place and set down loads ◆ confirm load stability and security ◆ shut down the crane ◆ use hand tools, ancillary equipment and accessories.
	<p>8.4 Safely use and store hand tools and ancillary equipment.</p>
	<p>8.5 State the needs of other occupations and how to communicate within a team when preparing for and lifting and transferring loads.</p>
	<p>8.6 Describe how to maintain the plant, tools and equipment used to lift and transfer loads.</p>

Additional information about this Unit	
Purpose and aim of Unit	The aim of this Unit is to illustrate the skills, knowledge and understanding required to confirm competence in preparing and operating tower cranes to lift and transfer loads in the workplace within the relevant sector of industry.
Unit expiry date	31/10/2014
Details of the relationship between the Unit and relevant national occupational standards or other professional standards or curricula (if appropriate)	This Unit is based on the National Occupational Standards 'Prepare Plant or Machinery for Operational Performance' (VR 386) and 'Operate Plant or Machinery to Lift and Transfer Loads' (VR 387)
Assessment requirements or guidance specified by a sector or regulatory body (if appropriate)	<p>This Unit must be assessed in a work environment and in accordance with:</p> <ul style="list-style-type: none"> ◆ the Additional Requirements for Qualifications using the title NVQ in QCF ◆ the ConstructionSkills' Consolidated Assessment Strategy for Construction and the Built Environment — Craft, Supervisory, Technical, Managerial and Professional Units and Qualifications with NVQ in the Qualification and Credit Framework (QCF) title and SVQs. <p>Assessors for this Unit must use a combination of the following assessment methods:</p> <ul style="list-style-type: none"> ◆ observation of normal work activities within the workplace that clearly confirms the required skills ◆ questioning the learner on knowledge criteria that clearly confirms the required understanding ◆ review other forms of evidence that can clearly confirm industry required skills, knowledge and understanding. <p>Assessors for this Unit must have verifiable, current industry experience and a sufficient depth of occupational expertise and knowledge of preparing and operating tower cranes to lift and transfer loads to be effective and reliable when confirming a learner's competence.</p> <p>Workplace evidence of skills cannot be simulated.</p> <p>This Unit must be assessed against one of the following endorsements:</p> <ul style="list-style-type: none"> ◆ Tower cranes — trolley jib ◆ Tower cranes — luffing jib
Support for the Unit from a sector skills council or other appropriate body (if required)	ConstructionSkills
Location of the Unit within the subject/sector classification system	05.2 Building and Construction

Additional information about this Unit	
Name of the organisation submitting the Unit	ConstructionSkills
Availability for use	Shared Unit
Unit available from	01/11/2009
Unit review date	30/04/2011
Credit value	80
Unit guided learning hours	267

QCF Assessment specification

Assessment (evidence) Requirements

The evidence requirements for this Unit are shown in the main body of the Unit under the section titled 'Assessment requirements or guidance specified by a sector or regulatory body'.

Guidance on Instruments of Assessment

Occupational Skills (OS) Unit

This Unit is designed to assess the skills of learners in the workplace. Observation of learner performance can only be carried out on-the-job and should always be the primary and preferred source of evidence of competent performance.

Collection of supplementary evidence of performance can be used to further substantiate, support and expand the evidence base for competent performance where this is necessary. This may arise in situations where evidence from direct observation of the learners on-the-job is deemed insufficient to fully meet the required standards. Supplementary evidence may include:

- ◆ witness testimony
- ◆ questioning
- ◆ professional discussion
- ◆ product and photographic evidence
- ◆ relevant active documentation, reports, presentations
- ◆ other valid evidence which relates directly to learner performance on-the job

SQA's Guide to Assessment is designed to provide support for everyone who assesses for SQA qualifications. It looks at the principles of assessment, and brings together information on assessment in general as well as on best practice in assessment. The Guide to Assessment can be downloaded free from SQA's website www.sqa.org.uk.