Australian Government

Department of Education, Employment and Workplace Relations

CPCCCA3020A Erect and dismantle jump form formwork

Release: 1

CPCCCA3020A Erect and dismantle jump form formwork

Modification History

Not Applicable

Unit Descriptor

Unit descriptor This unit of competency specifies the outcomes required to erect and dismantle jump form formwork to form wall structures where the formwork process is continuous. It includes curved or straight jump form formwork.

Application of the Unit

Application of the unit This unit of competency supports achievement of skills to erect and take down jump form formwork for placing concrete in a range of construction projects. Jump form formwork requires work as a member of a mixed trades team, including carpenters, riggers, electricians, concreters and steel fixers.

Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Prerequisite units	CPCCOHS2001A Apply OHS requirements, policies and procedures in the construction industry

Employability Skills Information

Employability skills	This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan and prepare.	1.1. Work instructions, including plans, specifications, quality requirements and operational details, are obtained, confirmed and applied from relevant ***information*** for ***planning and preparation*** purposes. 1.2. ***Safety*** (***OHS***) requirements are followed in accordance with safety plans and policies. 1.3. Signage and barricade requirements are identified and implemented. 1.4. Plant, ***tools and equipment*** selected to carry out tasks are consistent with job requirements, checked for serviceability, and any faults are rectified or reported prior to commencement. 1.5. Material quantity requirements are calculated in accordance with plans, specifications and ***quality requirements***. 1.6. ***Materials*** appropriate to the work application are identified, obtained, prepared, safely handled and located ready for use. 1.7. ***Environmental requirements*** are identified for the project in accordance with environmental plans and ***statutory and regulatory authority*** obligations, and are applied.
2. Set out formwork.	2.1. Set out points and lines are located according to engineer's drawings, survey datum points and site plan for ***formwork*** erection. 2.2. ***Jump form formwork*** positioning is located to predetermined set out.
3. Assemble core form system.	3.1. Internal prefabricated system wall form shutters are erected and fixed into location according to engineer's drawings. 3.2. System is fitted to concrete nib walls to heights consistent with engineer's requirements. 3.3. Shear key feet are installed to manufacturer specifications. 3.4. Platforms and assembly are fitted into core to manufacturer specifications. 3.5. Structural steel system grid work and hydraulic hose lines are fitted according to manufacturer specifications. 3.6. Wall form shutters are suspended and system cladding and platforms are fitted and completed

ELEMENT	PERFORMANCE CRITERIA
	according to manufacturer specifications and engineer's requirements.
4. Locate and install penetrations.	4.1. Locations and dimensions of penetrations are set out in accordance with designated tolerance from engineering drawings. 4.2. ***Penetrations***, ***block-outs and cast-in services*** are constructed where required to engineering drawings. 4.3. Penetrations are installed to requirements of engineering drawings.
5. Conduct jump system.	5.1. External prefabricated system wall shutters are erected and fixed to engineer's and manufacturer specifications. 5.2. Shutters are loosened and stripped according to manufacturers' and OHS requirements. 5.3. Rigger is communicated with to activate electrical/hydraulic jacking of the system to the new position. 5.4. Trailing platforms are installed to engineer's specifications. 5.5. Formwork is dismantled in accordance with manufacturer and engineer's specifications.
6. Clean up.	6.1. Work area is cleared and materials disposed of, reused or recycled in accordance with legislation, regulations, codes of practice and job specification. 6.2. Plant, tools and equipment are cleaned, checked, maintained and stored in accordance with manufacturer recommendations and standard work practices.

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

Required skills for this unit are:

- communication skills to:
  - determine requirements

REQUIRED SKILLS AND KNOWLEDGE

- enable clear and direct communication, using questioning to identify and confirm requirements, share information, listen and understand
- follow instructions
- read and interpret:
  - documentation from a variety of sources
  - plans, specifications and drawings
- report faults
- use language and concepts appropriate to cultural differences
- use and interpret non-verbal communication, such as hand signals
- numeracy skills to apply measurements and make calculations
- organisational skills, including the ability to plan and set out work
- teamwork skills to work with others to action tasks and relate to people from a range of cultural and ethnic backgrounds and with varying physical and mental abilities
- technological skills to:
  - use a range of mobile technology, such as two-way radio and mobile phones
  - voice and hand signals to access and understand site-specific instructions.

Required knowledge

Required knowledge for this unit is:

- common formwork faults, problems and suitable rectifications
- concrete characteristics and properties in formwork
- construction terminology
- electrical/hydraulic jacking systems
- formwork materials and techniques
- hydraulic pressures applied to formwork
- job safety analysis (JSA) and safe work method statements
- material safety data sheets (MSDS)
- materials storage and environmentally friendly waste management
- plans, specifications and drawings
- plant, tools and equipment types, characteristics, uses and limitation
- processes for the calculation of material requirements
- quality requirements for jump form formwork
- workplace and equipment safety requirements.

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

This unit of competency could be assessed in the workplace or a close simulation of the workplace environment, provided that simulated or project-based assessment techniques fully replicate construction workplace conditions, materials, activities, responsibilities and procedures.

Critical aspects for assessment and evidence required to demonstrate competency in this unit

A person who demonstrates competency in this unit must be able to provide evidence of the ability to:

- locate, interpret and apply relevant information, standards and specifications
- comply with site safety plan, OHS regulations and state and territory legislation applicable to workplace operations
- comply with organisational policies and procedures, including quality requirements
- safely and effectively use tools, plant and equipment
- communicate and work effectively and safely with others
- complete, as part of a team, the erection and dismantling of jump form formwork for one operation.

Context of and specific resources for assessment

This competency is to be assessed using standard and authorised work practices, safety requirements and environmental constraints.

Assessment of essential underpinning knowledge will usually be conducted in an off-site context.

Assessment is to comply with relevant regulatory or Australian standards' requirements.

Resource implications for assessment include:

- an induction procedure and requirement
- realistic tasks or simulated tasks covering the mandatory task requirements
- relevant specifications and work instructions

EVIDENCE GUIDE

- tools and equipment appropriate to applying safe work practices
- support materials appropriate to activity
- workplace instructions relating to safe work practices and addressing hazards and emergencies
- material safety data sheets
- research resources, including industry related systems information.

Reasonable adjustments for people with disabilities must be made to assessment processes where required. This could include access to modified equipment and other physical resources, and the provision of appropriate assessment support.

Method of assessment

Assessment methods must:

- satisfy the endorsed Assessment Guidelines of the Construction, Plumbing and Services Training Package
- include direct observation of tasks in real or simulated work conditions, with questioning to confirm the ability to consistently identify and correctly interpret the essential underpinning knowledge required for practical application
- reinforce the integration of employability skills with workplace tasks and job roles
- confirm that competency is verified and able to be transferred to other circumstances and environments.

Validity and sufficiency of evidence requires that:

- competency will need to be demonstrated over a period of time reflecting the scope of the role and the practical requirements of the workplace
- where the assessment is part of a structured learning experience the evidence collected must relate to a number of performances assessed at different points in time and separated by further learning and practice, with a decision on competency only taken at the point when the assessor has complete confidence in the person's demonstrated ability

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and applied knowledge
- all assessment that is part of a structured learning experience must include a combination of direct, indirect and supplementary evidence.

Assessment processes and techniques should as far as is practical take into account the language, literacy and numeracy capacity of the candidate in relation to the competency being assessed.

Supplementary evidence of competency may be obtained from relevant authenticated documentation from third parties, such as existing supervisors, team leaders or specialist training staff.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Information includes:

- diagrams or sketches
- instructions issued by authorised organisational or external personnel
- manufacturer specifications and instructions where specified
- memos
- MSDS
- organisation work specifications and requirements
- plans and specifications
- regulatory and legislative requirements pertaining to erecting and dismantling jump form formwork
- relevant Australian standards
- safe work procedures related to erecting and

RANGE STATEMENT

	dismantling jump form formwork • signage • verbal or written and graphical instructions • work bulletins • work schedules.
Planning and preparation include:	• work site inspection • equipment defect identification • assessment of conditions and hazards • determination of work requirements.

Safety (***OHS***) is to be in accordance with state or territory legislation, regulations, codes of practice, organisational safety policies and procedures, and project safety plan and may include:	• emergency procedures, including extinguishing fires, organisational first aid requirements and evacuation
	• handling of materials
	• hazard control
	• hazardous materials and substances
	• safe operating procedures, including the conduct of operational risk assessment and treatments associated with:
	  • earth leakage boxes
	  • lighting
	  • personnel
	  • power cables, including overhead service trays, cables and conduits
	  • restricted access barriers
	  • surrounding structures
	  • traffic control
	  • trip hazards
	  • work site visitors and the public
	  • working at heights
	  • working in confined spaces
	  • working with dangerous materials
	• organisational first aid
	• personal protective clothing and equipment prescribed under legislation, regulations and workplace policies and practices
	• use of firefighting equipment
	• use of tools and equipment
	• workplace environment and safety.

Tools and equipment include:	• air compressors and hoses • chisels

RANGE STATEMENT

	• hammers • levelling equipment • measuring tapes and rules • nail bags • pneumatic wrenches • power drills • power leads • proprietary jump form formwork • spanners • spirit levels.
Quality requirements include relevant regulations, including:	• Australian standards • internal company quality policy and standards • manufacturer specifications, where specified • workplace operations and procedures.
Materials include:	• formwork system components and bolts.
Environmental requirements include:	• clean-up protection • noise and dust • vibration • waste management.
Statutory and regulatory authorities include:	• federal, state and local authorities administering applicable Acts, regulations and codes of practice.
Formwork:	• includes prefabricated or in situ, but is to be rigid to withstand the mass of wet concrete and actions imposed during placement • for construction of formwork it is critical to comply with regulations and specifications for height, level and loadings • includes timber, metal and includes prefabricated components.
Jump form formwork:	• is formwork which is initially erected and then moved (jumped) up to its next position as a whole system • may apply to cores, walls, silos, chimneys or lift shafts.
Penetrations, ***block-outs and cast-in services***:	• make provision for services by other contractors • may be construction of timber, metal, styrene foam or prefabricated.

Unit Sector(s)

Unit sector Construction

Co-requisite units

Co-requisite units Nil

Functional area

Functional area