



Australian Government

Department of Education, Employment and Workplace Relations

ICTTCR2188A Use rigging practices and systems on telecommunications network structures

Release: 1

ICTTCR2188A Use rigging practices and systems on telecommunications network structures

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	<p>This unit describes the performance outcomes, skills and knowledge required to perform rigging work on telecommunications radio structures.</p> <p>A licensed rigger is required for the installation of some rigging equipment.</p> <p>The National Standard for Licensing Persons Performing High Risk Work applies to persons performing dogging and rigging work. Completion of the following units is required for certification at either basic, intermediate or advanced levels.</p> <p>CPCCLDG3001A Licence to perform dogging CPCCLRG3001A Licence to perform rigging basic level CPCCLRG3002A Licence to perform rigging intermediate level CPCCLRG4001A Licence to perform rigging advanced level.</p> <p>If operation of an elevated work platform (EWP) is required, a licence may be required.</p> <p>Users should confirm requirements with the relevant federal, state or territory authority.</p>
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Application of the Unit

Application of the unit	<p>Technical staff who work in rigging and install systems for telecommunications radio structures apply the skills and knowledge in this unit. They may make use of rigging plant and equipment, fall arrest, fall guarding and fall constraint and team communications.</p> <p>This unit applies to standard telecommunications structures.</p>
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Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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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.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare rigging systems	1.1. Prepare for given work according to relevant legislation, codes, regulations and standards 1.2. Arrange access to the site and confirm customer requirements 1.3. Inform appropriate personnel of existing and potential site hazards 1.4. Select tools and safety equipment required for safe rigging practice 1.5. Use rigging systems in a telecommunications environment according to specifications 1.6. Identify the proposed position of equipment to be mounted on telecommunications radio structures according to specifications and industry practice 1.7. Estimate safe working loads for rigging systems and equipment according to specifications 1.8. Select and inspect rigging equipment to ensure that it is fit for purpose according to specifications
2. Set up and carry out rigging work on telecommunications radio structures	2.1. Set up rigging and dogging equipment following safe working practices and procedures according to the occupational health and safety (OHS) Act 2.2. Operate rigging equipment and install telecommunications antenna and associated equipment according to specifications 2.3. Use internationally recognised communication signals and protocols with crane drivers and helicopter crews according to the Crane Association Crane Safety Manual for Operators/Users
3. De-rig and complete documentation	3.1. De-rig and lower rigging equipment according to specifications 3.2. Restore site to customer expectations following completion of installation according to industry practice 3.3. Complete documentation and notify customer for sign off

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

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

REQUIRED SKILLS AND KNOWLEDGE

Required skills

- communication skills to liaise with other personnel, including the use of radio devices
- literacy skills to interpret technical documentation, plans and specifications
- planning and organisational skills to prioritise and monitor own work and OHS responsibilities
- problem solving and contingency management skills to adapt rigging activities and requirements to particular sites and conditions
- safety awareness skills to:
 - apply precautions and required action to minimise, control or eliminate hazards that may exist during work activities
 - apply remote area first aid
 - prevent and treat hypothermia
 - select and use required personal protective equipment for rigging projects to suit different applications and for working at height conforming to industry and OHS standards
 - work systematically with required attention to detail without injury to self or others, or damage to goods or equipment
- technical skills to select and use rigging equipment and practices to suit different applications

Required knowledge

- features and operating requirements of rigging equipment
- hypothermia symptoms and methods of prevention and treatment
- licensing and regulatory issues applying to rigging practices and systems on telecommunications radio structures
- overview knowledge of meteorology and weather prediction
- remote area first aid
- specific knowledge related to:
 - electromagnetic radiation (EMR) safety practices
 - optical fibre cabling and equipment safety practices
 - personal protective equipment for rigging projects
 - requirements of the OHS Act, relevant regulations, and applicable site and company OHS procedures
 - rigging practices and systems to telecommunications radio structures
 - working at heights safety practices

Evidence Guide

EVIDENCE GUIDE	
<p>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.</p>	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>Evidence of the ability to:</p> <ul style="list-style-type: none"> • apply OHS requirements and work practices associated with rigging • carry out basic dogging skills • carry out basic rigging skills • set up a mobile crane • use specialised hand or power tools and equipment normally used in rigging.
Context of, and specific resources for assessment	<p>Assessment must ensure:</p> <ul style="list-style-type: none"> • site on which rigging operations may be conducted • rigging and safety equipment • relevant regulations, standards specifications and manuals.
Methods of assessment	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> • direct observation of the candidate setting up and carrying out rigging work on a telecommunications radio structure • oral or written questioning of the candidate to assess OHS requirements and work practices associated with rigging.
Guidance information for assessment	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:</p> <ul style="list-style-type: none"> • ICTTCR2189A Use operational safety in a telecommunications rigging environment • ICTTCR2190A Use safe rigging practices to climb and perform rescues on telecommunications network structures. <p>Aboriginal people and other people from a non-English speaking background may have second language issues.</p>

EVIDENCE GUIDE

	<p>Access must be provided to appropriate learning and assessment support when required.</p> <p>Assessment processes and techniques must be culturally appropriate, and appropriate to the oral communication skill level, and language and literacy capacity of the candidate and the work being performed.</p> <p>In all cases where practical assessment is used it will be combined with targeted questioning to assess required knowledge. Questioning techniques should not require language, literacy and numeracy skills beyond those required in this unit of competency.</p> <p>Where applicable, physical resources should include equipment modified for people with special needs.</p>
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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.

Relevant legislation, codes, regulations and standards may include:

- Australian Communications Industry Forum (ACIF) standards and codes
- Australian Communications and Media Authority (ACMA) technical standards
- appropriate licences that may be required:
 - crane
 - dogging
 - rigging
 - scaffolding
 - winch
- Australian Radiation Protection and Nuclear Safety Agency (ARPANSA) electromagnetic

RANGE STATEMENT

	<p>radiation (EMR) standard</p> <ul style="list-style-type: none">• AS 1353.1:1997• AS 1353.2:1997• AS 1657:1992• AS 2089:2008• AS 2319:2001• AS 2626: replaced by AS/NZS 1891.4:2000• AS 3775.1:2004 AS 3775.2:2004 Chain AS 3777:2008• AS 4497.2:1997 AS/NZS 1891.1:2007 AS/NZS 1891.4:2000• AS/NZS 4801:2001• AS/NZS ISO 14001:2004 Australian building codes and regulations• Australian standards• CE, American National Standards Institute (ANSI) equipment standards• enterprise standards• environmental protection• equipment certifications:<ul style="list-style-type: none">• NFPA 1983 (2006 edition)• NFPA/UL G-rated (General Use)• equipment standards:<ul style="list-style-type: none">• intrinsically safe lightning protection• site engineering standard• fire regulations• heritage legislation• international standards• local government• OHS• Radcoms Act• related publications• Telecoms Act• WI's, CI's, Business Operating Procedures (BOP), Radiocommunications Assignment and Licensing Instruction (RALI), assignment guidelines.
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RANGE STATEMENT	
<i>Customer requirements</i> may include:	<ul style="list-style-type: none"> • availability of asset owner site personnel • compatibility with rest of network • timelines • type of equipment • type of structure.
<i>Tools</i> may include:	<ul style="list-style-type: none"> • crane • hand • load/tension gauge • mechanical • power.
<i>Safety equipment</i> may include:	<ul style="list-style-type: none"> • aerial safety belts and lines • anchor straps • earmuffs • elevated platform • equipment guards • fall arrest systems • fall constraint systems • fall guarding systems • flashing lights • gloves • guards • helmets • pulleys • rigging plates • rope clamps • safety cages • safety glasses • safety harnesses: <ul style="list-style-type: none"> • basic • full body fall arrest • sit harness • scaffold deck • warning signs and tapes.
<i>Rigging systems</i> may include:	<ul style="list-style-type: none"> • knots • mechanical lifting • ropes and connectors: <ul style="list-style-type: none"> • anchor points • connectors • jointing splices

RANGE STATEMENT	
	<ul style="list-style-type: none">• karabiners• rigging screws• shackles• slings• snatch blocks• strops• synthetic ropes• turn buckles• wire rope grips• wire ropes• safe working loads:<ul style="list-style-type: none">• effort• force• load• reaction• torque• splices:<ul style="list-style-type: none">• back• eye• short.

RANGE STATEMENT	
<p><i>Specifications</i> may relate to:</p>	<ul style="list-style-type: none"> • direction on equipment tensioning: <ul style="list-style-type: none"> • load cells • temporary anchors • terminations: <ul style="list-style-type: none"> • bulldog grips • preformed dead ends • directions on carrying out rigging work • earthing of plant on network structures • installation of equipment on telecommunications radio structures • specification of bolts: <ul style="list-style-type: none"> • high strength • high tensile • mild • stainless • torque limits.
<p><i>Safe working practices and procedures</i> may include:</p>	<ul style="list-style-type: none"> • climbing telecommunications network structures safely • fall arrest: <ul style="list-style-type: none"> • fixed • temporary • identifying electrical hazards for working safely on telecommunications radio structures • identifying hazards associated with wearing a safety harness • lifting methods • load calculation • personal protective equipment • radio frequency (RF) EMR including: <ul style="list-style-type: none"> • methods of detecting and reporting EMR hazards • sources and types of RF EMR and its associated risks • verifying and maintaining the EMR hazard management plan against an on site situation • safety issues in: <ul style="list-style-type: none"> • roof work • fall arrest

RANGE STATEMENT	
	<ul style="list-style-type: none"> • fall guarding • site hazard identification and control measures: <ul style="list-style-type: none"> • potential EMR hazards • potential optical fibre and laser equipment hazards.
<i>Internationally recognised communication signals and protocols</i> may include:	<ul style="list-style-type: none"> • communication and signal methods used to coordinate the load movement with safety and signals • signals given within sight and out of sight of equipment operator.

Unit Sector(s)

Unit sector	Telecommunications
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Co-requisite units

Co-requisite units	

Competency field

Competency field	Telecommunications Rigging Installation
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