



Australian Government

Department of Education, Employment and Workplace Relations

RIIOGD202A Carry out equipment and basic rig maintenance

Release: 1

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Modification History

Not applicable.

Unit Descriptor

This unit covers the carrying out of equipment and basic rig maintenance in the drilling industry. It includes planning and preparing for operations, preparing and painting metal surfaces, assisting in the maintenance of materials handling equipment, and preparing and using solvent solutions and rig washes to clean and maintain work areas in non-slippery conditions. Licensing, legislative, regulatory and certification requirements that apply to this unit can vary between states, territories, and industry sectors. Relevant information must be sourced prior to application of the unit.

Application of the Unit

This unit is appropriate for those working in an operational role at worksites within:

- Drilling

Licensing/Regulatory Information

Refer to Unit Descriptor.

Pre-Requisites

Not applicable.

Employability Skills Information

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.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Plan and prepare for operations	1.1. Access, interpret and apply compliance documentation relevant to the work activity 1.2. Obtain, confirm and apply work instructions for the allocated task 1.3. Clarify difficulties in carrying out the instructions with the relevant personnel 1.4. Identify, manage and report all potential hazards 1.5. Resolve coordination requirements with others at the site prior to commencing and during work activities and ensure briefings/handover details are read/passed on 1.6. Conform to safe working practices and operational requirements 1.7. Confirm availability of necessary auxiliary equipment in accordance with operational requirements
2. Prepare and paint metal surface	2.1. Identify, locate and apply personal protective equipment 2.2. Prepare surface using correct equipment 2.3. Apply rust remover, rust converter and undercoat in accordance with manufacturer's specifications 2.4. Mix epoxy, paracryl or other paints in correct proportions in accordance with manufacturer's specification 2.5. Mask and protect equipment against overspray, where necessary 2.6. Apply finishing coat using brush, roller and spray gun 2.7. Clean equipment in accordance with site requirements
3. Assist in maintenance of materials handling equipment	3.1. Identify faults/potential faults and report immediately 3.2. Identify, record and/or report requirement for repair or maintenance 3.3. Perform periodical maintenance on chain blocks and comealongs (where fitted), ensuring equipment is corrosion free,

	lubricated and operating freely 3.4. Assist with periodical examination of hooks, shackles, slings and strops for defects, correct marking of SWL and ease of operation 3.5. Maintain equipment as directed and in accordance with company and/or manufacturer's specification
4. Prepare and use solvent solutions and rig wash to clean and maintain work areas in non-slippery condition	4.1. Use protective clothing and equipment correctly during handling of solvents 4.2. Apply approved instructions and occupational health and safety requirements on the use of hazardous chemicals for cleaning 4.3. Isolate area being washed or provide warning signs to indicate slippery decks 4.4. Prepare and apply solvent solutions and rig wash in accordance with company and/or manufacturer's specifications to maintain work areas in non-slippery conditions 4.5. Clean equipment correctly and stow on completion 4.6. Clean, preserve and reassess painting equipment in accordance with manufacturer's recommendations

Required Skills and Knowledge

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

Required skills

Specific skills are required to achieve the Performance Criteria of this unit, particularly for its application in the various circumstances in which this unit may be used. This includes the ability to carry out the following, as required to carry out equipment and basic rig maintenance:

- apply legislative, organisation and site requirements and procedures for carrying out equipment and basic rig maintenance
- report regularly to and work as directed by the driller/derrickman timely and efficiently
- assemble rust scaling equipment
- fit safety pins, where applicable
- wear appropriate protective clothing and equipment
- apply rust treatment undercoat/final coat correctly
- clean and preserve equipment on completion
- conduct pre-operating checks on forklift
- conduct periodic maintenance on chain blocks, comealongs and crane hoists
- examine hooks, shackles, slings, straps and baskets
- keep work area clean
- work within the company safety guidelines, procedures and practices
- use safe operational practices when handling equipment
- assemble surface preparation equipment correctly
- ensure safety pins are in air hose fittings
- wear appropriate protective clothing/equipment
- prepare and paint surfaces
- check, identify and report defects on rigging equipment
- clean decks correctly
- report immediately any malfunction or equipment failure

Required knowledge

Specific knowledge is required to achieve the Performance Criteria of this unit, particularly for its application in the various circumstances in which this unit may be used. This includes knowledge of the following, as required to carry out equipment and basic rig maintenance:

- occupational health and safety obligations
- communication methods, including:
 - two-way radio
 - intercom
 - verbal

- hand signals
- telephone
- public address system
- written work instructions company and statutory guidelines, procedures and practices
- maintenance procedures
- rig maintenance
- normal drilling operations
- non-routine drilling operations
- numerical skills, to calculate measurements, mass, load dimensions and safety working loads
- company equipment maintenance procedures
- surface preparation equipment
- safety pins and air hose fittings
- safe operating procedures and practices
- paint types and applications
- rust treatment
- equipment cleaning and preservation techniques
- chain blocks, comealongs and crane hoist maintenance procedures
- platform cleaning procedures

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	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	The evidence required to demonstrate competency in this unit must be relevant to worksite operations and satisfy all of the requirements of the performance criteria, required skills and knowledge and the range statement of this unit and include evidence of the following: • knowledge of the requirements, procedures and instructions for carrying out equipment and basic rig maintenance • implementation of requirements, procedures and techniques for the safe, effective and efficient completion of equipment and basic rig maintenance • working with others to undertake and complete the maintenance of equipment and basic rigs that meets all of the required outcomes • consistent timely completion of equipment and basic rig maintenance that safely, effectively and efficiently meets the required outcomes
Context of and specific resources for assessment	• This unit must be assessed in the context of the work environment. Where personal safety or environmental damage are limiting factors, assessment may occur in a simulated environment provided it is realistic and sufficiently rigorous to cover all aspects of workplace performance, including task skills, task management skills, contingency management skills and job role environment skills. • Assessment of this competency requires typical resources normally used in a resources and infrastructure sector environment. Selection and use of resources for particular worksites may differ due to the site circumstances. • The assessment environment should not disadvantage the participant. For example, language, literacy and numeracy demands of assessment should not be greater than those required on the job.

	• Customisation of assessment and delivery environment to sensitively accommodate cultural diversity. • Aboriginal people and other people from a non English speaking background may have second language issues. • Where applicable, physical resources should include equipment modified for people with disabilities. Access must be provided to appropriate learning and/or assessment support when required.
Method of assessment	This unit may be assessed in a holistic way with other units of competency. The assessment strategy for this unit must verify required knowledge and skill and practical application using more than one of the following assessment methods: • written and/or oral assessment of the candidate's required knowledge • observed, documented and/or first hand testimonial evidence of the candidate's: • implementation of appropriate requirement, procedures and techniques for the safe, effective and efficient achievement of required outcomes • consistent achievement of required outcomes • first hand testimonial evidence of the candidate's: • working with others to undertake and complete the carrying out of equipment and basic rig maintenance
Guidance information for assessment	Consult the SkillsDMC User Guide for further information on assessment including access and equity issues.

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 compliance documentation may include:	• legislative, organisational and site requirements and procedures • safe working practices • plant and equipment regulations • manufacturer's guidelines and specifications • Australian standards • code of practice • Employment and workplace relations legislation • Equal Employment Opportunity and Disability Discrimination legislation • maintenance procedures • policies and procedures • (PSLA) Petroleum Submerged Lands Act • duty of care • petroleum regulations • work schedules • permits to work
Work instructions may come from briefings, handovers, plans and work orders and may be written or verbal, formal or informal and may include:	• nature and scope of tasks • specifications • quality of finished works • achieved targets • operational conditions • obtaining of required permits • site layout • out of bounds areas • worksite inspection requirements • lighting conditions • plant of equipment defects • coordination requirements or issues • contamination control requirements • environmental control requirements • barricade and signage requirements
Hazards may include:	• working in proximity to drilling rig

	• working in a variety of conditions including: • day/night • hot/cold • wet/dry • storms - dust, lightning
Coordination requirements may include:	• other equipment operators • maintenance personnel • supervisors • site personnel
Briefing/handover details may include:	• work inspections • location of potential hazards • completion of maintenance records • colour coding for slings and ropes • safety briefing/induction • pre-tour safety meeting • weekly safety meetings • Job Safety Analysis (JSA) • agreed procedures which may include: • company • facility • client • permit to work
Personal protective equipment may include:	• gloves • goggles -sealed protective eyewear • breathing apparatus • hearing protection • correct footwear
Prepare surface may include:	• pneumatic chipping and scaling equipment • hand chipping and scaling equipment • pneumatic or electric wire buffing equipment • hand wire brush
Equipment may include:	• hand chipping and scaling equipment • pneumatic or electric wire buffing equipment • hand wire brush • paint and spraying compressor
Maintenance may include:	• crane hoists • chains • blocks • comealongs
Periodical maintenance may	• hooks

include:	• shackles • slicks • strops
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Unit Sector(s)

Drilling (Oil and Gas)

Competency field

Refer to Unit Sector(s).

Co-requisite units

Not applicable.