



Australian Government

Department of Education, Employment and Workplace Relations

PUADEFVH002A Extract disabled equipment using winching techniques in a field environment

Release: 1

PUADEFVH002A Extract disabled equipment using winching techniques in a field environment

Modification History

Not applicable.

Unit Descriptor

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This unit covers the competency required to assess equipment and vehicles requiring recovery and to employ suitable winching techniques and procedures to extricate casualties utilising specialist recovery vehicles equipped with motorised winching equipment.

Application of the Unit

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This unit applies to the operation of winching equipment capable of extracting a range of vehicles and equipment. Winching may be necessary to extract vehicles and equipment which have become bogged or broken down and due to terrain or environmental factors, cannot be extracted by other means. Typically, winching operations are conducted by individuals acting independently or in charge of a small team, isolated from assistance or supervision.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

Employability Skills This unit contains employability skills.

Pre-requisite Unit/s Nil

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency.

Performance Criteria describe the required performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the Required Skills and Knowledge and/or the Range Statement. Assessment of performance is to be consistent with the Evidence Guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Respond to call for assistance	<ul style="list-style-type: none">1.1 Winching tasks are received and details are confirmed1.2 Tasks are assessed to determine equipment requirements1.3 Recovery vehicle is checked and prepared for task in accordance with <i>workplace procedures</i>1.4 Recovery vehicle is deployed to casualty site in preparation to conduct task
2. Assess winching task	<ul style="list-style-type: none">2.1 Liaison is conducted with on site personnel2.2 <i>Equipment casualty</i> is assessed to determine suitability for winching2.3 Site is inspected, <i>hazards and obstacles associated with winching</i> are identified and measures are implemented to overcome obstacles2.4 <i>Winching equipment</i> requirements to extricate casualty are determined to ensure recovery vehicle and equipment are suitable for task2.5 <i>Winching procedure</i> is developed taking into account terrain conditions, requirements of casualty, site, recovery equipment and vehicle capabilities2.6 <i>Occupational health and safety (OH&S) requirements</i> are determined and applied during winching operations
3. Prepare for winching task	<ul style="list-style-type: none">3.1 Equipment casualty is prepared for winching in accordance with winching procedure3.2 Winching equipment is prepared in accordance with winching procedure3.3 <i>Briefing of on site personnel</i> is conducted and tasks are allocated and supervised
4. Extricate equipment casualty using winch	<ul style="list-style-type: none">4.1 Winching process is closely controlled and conducted in accordance with winching procedure4.2 <i>Minor problems</i> are dealt with as they arise4.3 Assistance is sought from appropriate personnel when <i>major problems</i> outside scope of own capabilities occur

ELEMENT

5. Finalise winching operations

PERFORMANCE CRITERIA

- 5.1 Equipment casualty is handed over to owner or recovered further in accordance with workplace procedures
- 5.2 Winching equipment is recovered and inspected for damage in accordance with workplace procedures
- 5.3 Unserviceable equipment is reported and suitable actions are taken in accordance with workplace procedures
- 5.4 Equipment is maintained in accordance with manufacturer's instructions and workplace procedures
- 5.5 Documentation is compiled and reports are made in accordance with workplace procedures
- 5.6 Worksite is refurbished in accordance with workplace procedures

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level, required for this unit.

Required Skills

- allocate appropriate materials and personnel to task
- assess risks
- brief and direct personnel
- communicate effectively in the workplace
- perform basic mathematical calculations
- provide reports and appropriate documentation
- solve problems relevant to task

Required Knowledge

- basic vehicle mechanical principles
- basic engineering principles including:
 - theory of levers and pulleys
- material capabilities
- characteristics and capabilities of recovery vehicles and equipment
- maintenance requirements and procedures
- organisational OH&S procedures relevant to winching operations
- recovery methods and procedures
- reporting requirements and procedures

Evidence Guide

EVIDENCE GUIDE

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EVIDENCE GUIDE

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

Assessment must confirm the ability to:

- conduct winching operations on ground which is soft enough to simulate the conditions encountered when winching bogged vehicles
- conduct a winching operation to extricate a light and a medium/heavy rigid vehicle
- utilise motorised winches, winch ropes and associated fittings.

Consistency in performance

Competency should be demonstrated over time using a variety of equipment casualties and situations which the candidate is likely to encounter within the workplace.

Context of and specific resources for assessment

Context of assessment

Competency should be assessed in areas of difficult terrain incorporating undulating ground.

Specific resources for assessment

Access is required to:

- recovery vehicles and winching equipment
- actual or simulated equipment casualties
- specific workplace operating procedures and publications.

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 in the Performance Criteria is detailed below.

Workplace procedures may include	Australian Standards Briefs Duty statements Legislative requirements Manufacturers' handbooks, industry specifications and technical instructions OH&S regulations Organisational policies and procedures Procedure manuals Relevant state/territory or federal legislation Standard operating procedures Written or verbal instructions
Equipment casualties may include	Construction equipment Light vehicles Medium or heavy rigid vehicles Plant equipment
Hazards associated with winching may include	Environmental hazards Equipment failure Fatigue Hazardous materials contained within equipment casualties Manual handling of heavy and/or awkward loads
Obstacles to winching may include	Distance between casualty and winching point Soil conditions Terrain Vegetation Weather conditions
Winching equipment may include	Chains Joining devices including: <ul style="list-style-type: none"> • hammerlocks • oblong links • shackles • swivels Pulleys Winches

RANGE STATEMENT

	Winch ropes and fittings
Winching procedure may include	Attachment method Contingencies Equipment layout Mechanical advantage Resources Safety procedures Sequence of events Total pull required Velocity ratio
OH&S requirements may include	Personal protective equipment Safety distances Safety equipment Warning devices
Briefing of on site personnel may include	<ul style="list-style-type: none"> • Communication procedures • Emergency procedures • Safety requirements • Winching procedures
Minor problems may include	<ul style="list-style-type: none"> • Avoidable damage to equipment casualty during winching operations • Minor malfunctions and breakages within winching equipment
Major problems may include	<ul style="list-style-type: none"> • Breakage of winch rope • Major malfunctions within winching equipment • Requirements for extricating equipment casualty exceeding capabilities of recovery vehicle • Rollover of equipment casualty • Serious injuries to on site personnel

Unit Sector(s)

Not applicable.

Corequisite Unit/s

Co-requisite Unit/s Nil