



Australian Government

Department of Education, Employment and Workplace Relations

ACMFAR305A Perform welding tasks using a forge

Revision Number: 1

ACMFAR305A Perform welding tasks using a forge

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit of competency covers the processes of identifying welding requirements from instructions, preparing the materials and carrying out routine welding using a forge. This unit forms part of the requirements of the trade qualification for farriery.
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Application of the Unit

Application of the unit	This unit is applicable to a farriery environment where the welding requirements are not required to meet the Australian Standard 1554 General Purpose. The materials used are generally low carbon and mild steels. In addition to legal and ethical responsibilities, all units of competency in the ACM10 Animal Care and Management Training Package have the requirement for animals to be handled gently and calmly. The individual is required to exhibit appropriate care for animals so that stress and discomfort is minimised.
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Licensing/Regulatory Information

Not applicable.

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. Identify weld requirements	1.1. Welding or bending requirements are identified from specifications . 1.2. Locations of welds are identified in accordance with specifications.
2. Prepare materials for welding	2.1. The amount of metal required for bending or welding is calculated. 2.2. Materials are cleaned and prepared using appropriate tools and techniques.
3. Prepare and manage fire for welding	3.1. Fuel is selected, and tools prepared to manage the fuel source. 3.2. The fire is managed to maintain its effectiveness as a forge. 3.3. The correct forge heat is identified for particular operations.
4. Undertake farriery welding tasks using a forge fire	4.1. A range of farriery welding tasks are undertaken using appropriate welds and tools . 4.2. Occupational health and safety (OHS) procedures applicable for use of forges are followed, including the use of required personal protective equipment. 4.3. The forge fire is safely extinguished, and clean-up procedures are completed.

Required Skills and Knowledge

Required skills

- adhere to OHS legislation, regulations and codes of practice
- calculate the amount of metal required for bonding and welding
- complete work tasks within acceptable timeframes and to industry standards
- interpret work orders/instructions correctly including task and time requirements
- judge correct welding heat to perform process on selected material
- set up, manage and shut down a forge
- literacy skills to read and follow organisational policies and procedures, including OHS, waste management and hygiene standards; follow sequenced written instructions; and record the information accurately and legibly
- oral communication skills/language to fulfil the job role as specified, including questioning, active listening, asking for clarification and seeking advice when required
- numeracy skills to estimate, calculate, record and apply routine workplace measure to required tasks
- problem-solving skills to select required materials and equipment and prioritise tasks
- weld metals using forge produced heat
- work as part of a team.

Required knowledge

- materials to be welded and how they react to heat
- OHS legislative requirements and farriery industry codes of practice
- process of welding by forge produced heat
- regulations covering farriers in specific equine industries
- range, use and availability of materials and equipment
- safe work practices
- types of forge and forge fuel.

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

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

The evidence required to demonstrate competence in this unit must be relevant to workplace operations and satisfy all of the requirements of the performance criteria, required skills and knowledge and the range statement of this unit. Assessors should ensure that candidates can:

- identify welding requirements
- prepare materials for welding
- prepare and manage fire for welding
- undertake farriery welding tasks using a forge
- safely extinguish forge and dispose appropriately of ash and debris.

The skills and knowledge required to perform welding tasks using a forge must be transferable to a range of work environments and contexts and include the ability to deal with unplanned events.

Context of and specific resources for assessment

Assessment of this unit is to be practical in nature and will be most appropriately assessed in worksites, where routine farriery tasks are performed, or in a situation that reproduces normal work conditions.

There must be access to the appropriate equipment and/or resources to enable one to demonstrate competence.

Method of assessment

To ensure consistency in one's performance, competency should be demonstrated, to industry defined standards, on more than one occasion over a period of time in order to cover a variety of circumstances and where possible, over a number of assessment activities.

The assessment strategy must include practical skills assessment. Suggested strategies for this unit are:

EVIDENCE GUIDE	
	• written and/or oral assessment of candidate's required knowledge • observed, documented and first-hand testimonial evidence of candidate's application of practical tasks • simulation exercises that reproduce normal work conditions • third-party evidence • workplace documentation • portfolio. This unit may be assessed in a holistic way with other units of competency relevant to the industry sector, workplace and job role.
Guidance information for assessment	Assessment methods should reflect workplace demands (e.g. literacy and numeracy demands) and the needs of particular target groups (e.g. people with disabilities, Aboriginal and Torres Strait Islander people, women, people with a language background other than English, youth and people from low socioeconomic backgrounds).

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.

Specifications may include:	• shape and size of shoe • corrective or supportive wedges, bars and other orthotic accessories.
Fuel for forge may include:	• coke fire • LPG gas • other fuel sources suitable for working metals used in farriery trades.
Different levels of forge heat may include:	• warm heat • black heat • dull red or blood red heat • bright red heat • bright yellow or near welding heat • light welding, sweating or slippery heat • full welding heat • white or snowball heat.
Tools may include:	• fire forge tools: • butcher block brush • fire tongs • gas cylinder • gas fire tools: • gas gauge • hammer • ignition source • poker • rake • shovel • swab.
Welding tasks may include:	• bending • drawing down • forge brazing • forge welding:

RANGE STATEMENT	
	• straight scarf weld • diagonal scarf weld • punching and drifting • upsetting or jumping up.
OHS implications may include:	• manual handling associated with working with tools and metal • use of bottled gas • use of fire and dangers to the operator from: • radiant and direct heat • sparks • weld splatter and hot coals on the floor • using personal protective equipment: • eye and ear protection • farrier's apron • gloves • work boots.

Unit Sector(s)

Unit sector	Farriery
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Competency field

Competency field	
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Co-requisite units

Co-requisite units		

