Australian Government

AURVTW2008 Carry out oxy acetylene welding, thermal cutting and thermal heating procedures

Release 1

INDUSTRY SKILLS COUNCILS
Creating Australia's Future

AURVTW2008 Carry out oxy acetylene welding, thermal cutting and thermal heating procedures

Modification History

Release	Comment
Release 1	Replaces AURV223608A Carry out oxy acetylene welding, thermal cutting and thermal heating procedures Unit code updated to meet policy requirements Reference to OHS legislation replaced with new WHS legislation Licensing statement added to unit descriptor

Unit Descriptor

Unit descriptor	This unit of competency covers the skills and knowledge required to carry out welding, thermal cutting and thermal heating procedures appropriate to the repairs conducted in the retail, service and repair streams. Licensing, legislative, regulatory or certification requirements may apply to this unit in some jurisdictions. Users are advised to check with the relevant regulatory authority.

Application of the Unit

Application of the unit	Work is carried out in accordance with legislative obligations, environmental legislation, relevant health regulations, manual handling and lifting equipment procedures and organisation insurance requirements. Work requires individuals to demonstrate some discretion, judgement and problem solving skills in lifting, safety equipment, oxy welding and thermal cutting and heating procedures, environmental issues, repair procedures and vehicle operational requirements.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

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. Prepare for work	1.1. Work instructions are used to determine job requirements, including job sheets, quality and quantity of materials. 1.2. Job specifications are read and interpreted. 1.3. Workplace health and safety requirements, including personal protection needs, are observed throughout the work. 1.4. Materials for repairs and replacements are selected and inspected for quality. 1.5. Correct hand, power tools and safety equipment are selected for safe use. 1.6. Products are determined to minimise waste materials. 1.7. Procedures are identified for maximising energy efficiency whilst completing the job.
2. Carry out oxy acetylene welding procedures	2.1. Welding procedures are completed without causing damage to any component or system. 2.2. Information is accessed from appropriate sources to enable welding to be performed in accordance with vehicle and equipment manufacturer procedures. 2.3. Welding is carried out according to a standard that meets industry regulations/guidelines, workplace health and safety (WHS) legislation, statutory legislation and enterprise policy/procedures.
3. Clean up work area and maintain equipment	3.1. Material that can be reused is collected and stored. 3.2. Waste and scrap is removed following workplace procedures. 3.3. Equipment and work area are cleaned and inspected for serviceable conditions in accordance with workplace procedures. 3.4. Unserviceable equipment is tagged and faults identified in accordance with workplace requirements. 3.5. Operator maintenance is completed in accordance with manufacturer's specifications and site procedures. 3.6. Tooling is maintained in accordance with workplace procedures.

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

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

Required skills

Required skills include:

- reading and interpreting job specifications
- following work procedures
- handling tools and equipment safely
- accessing relevant information

Required knowledge

Required knowledge includes:

- WHS regulations/requirements
- equipment safety requirements
- personal safety requirements (e.g. toxic fumes/lead poisoning)
- types of metals relevant to application
- welding procedures (oxy)
- thermal cutting procedures
- thermal heating procedures
- types of flux, rod and their applications
- equipment maintenance procedures
- planing of oxy welding, thermal cutting and heating
- workplace safety policies and procedures
- workplace guidelines regarding acceptable tolerance levels to be considered as per job sheet and manufacturer specification
- procedures for reporting faults and material defects

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	Assessors must be satisfied that the candidate can competently and consistently:
	• interpret work order and locate and apply relevant information
	• apply safe handling requirements for equipment, products and materials, including use of personal protective equipment
	• read and interpret communication procedural information from job sheets to prepare for work
	• identify materials used in the work process
	• follow work instructions, operating procedures and inspection processes to:
	  • minimise the risk of injury to self or others
	  • prevent damage and wastage of goods, equipment and products
	  • maintain required production output and product quality
	  • identify, set up, operate and maintain oxy welding, heating and cutting equipment.

Context of, and specific resources for assessment	• Assessment may occur on the job or in a workplace simulated facility with relevant process equipment, materials, work instructions and deadlines. • Access to vehicle and manufacturer specifications as identified in the Range Statement, and standard operating procedures.
Method of assessment	• Assessment methods must confirm consistency of performance over time and in a range of workplace relevant contexts. • Assessment should be by direct observation of tasks and questioning on underpinning knowledge. • Assessment should be conducted over time and may be in conjunction with assessment of other units of competency. • Competence in this unit may be assessed in conjunction with other functional units which

EVIDENCE GUIDE	
	together form part of the holistic work role.
Guidance information for assessment	

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.	
Methods	Methods include: • cutting metal • welding metal • heating metal • measuring. Methods should be applied under normal operating conditions.
Work practices	Work practices must abide by workplace health and safety requirements, and include: • WHS legislation • material safety management systems • hazardous substances and dangerous goods code • local safe operating procedures • Australian Design Rules regulations
Resources	Resources may include: • hand tools, welding equipment, thermal cutting equipment and thermal heating equipment • measuring equipment, marking out equipment and lifting equipment • oxy acetylene gas, welding rods, steel, tubing, aluminium, cast iron and marking chalk

RANGE STATEMENT	
Personal protective equipment	Personal protective equipment prescribed under legislation, regulations and enterprise policies and practices

Information/documents	Sources of information/documents may include:
	• workplace procedures relating to the use of tools and equipment
	• work instructions, including:
	  • job sheets
	  • vehicle manufacturer specifications
	  • enterprise operating procedures
	  • component manufacture specifications
	  • customer requirements
	  • industry/workplace codes of practice
	  • statutory legislation for vehicle road worthiness, including Australian Design Rules
	  • material safety data sheets
	  • workplace procedures relating to reporting and communication
	  • manufacturer specifications and operational procedures

Unit Sector(s)

Unit sector	Vehicle body

Co-requisite units

Not applicable.

Competency field

Competency field	Technical - Welding, Grinding, Machining and Soldering