



Australian Government

Department of Education, Employment and Workplace Relations

AUM8134B Remove and replace refrigeration system

Revision Number: 1

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Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit describes the application of the required skills and knowledge to remove and replace refrigeration systems. No licensing, legislative, regulatory or certification requirements apply to this unit at the time of publication.
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Application of the Unit

Application of the unit	This unit applies to the automotive and related component manufacturing environment and involves application of skills and knowledge at a <i>specialist</i> level. These skills and knowledge are to be used within the scope of the person's job and authority.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		
	Nil	Nil
	Nil	Nil

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 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.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. De-gas refrigeration system	1.1. Activities are carried out according to OHS and organisation requirements 1.2. De-gassing requirements are accessed and interpreted from appropriate manufacturer specifications, industry codes of practice and relevant legislation 1.3. System is de-gassed using approved recovery unit and in accordance with organisation procedures
2. Remove refrigeration system	2.1. Removal is completed without causing damage to any organisation property or vehicle 2.2. Removal information is accessed and interpreted from job specification and manufacturer specifications 2.3. Fittings and materials are disassembled for removal in accordance with manufacturer and safety requirements 2.4. Refrigeration system is removed using appropriate tools, equipment and techniques
3. Replace refrigeration system	3.1. Replacement information is accessed and interpreted from job specification and manufacturer specifications 3.2. Fittings and materials are assembled for replacement in accordance with manufacturer and safety requirements 3.3. Refrigeration system is replaced using appropriate tools and techniques
4. Gas and commission refrigeration system	4.1. Gassing information is accessed and interpreted from appropriate manufacturer specifications, industry codes of practice and relevant legislation 4.2. System is gassed and performance tested using approved methods and equipment and in accordance with organisation procedures 4.3. System installation is verified as operational in accordance with specifications

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

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

Required skills

- speak clearly and directly in order to inform team members of performance test results
- apply teamwork to a range of situations
- solve problems particularly in teams in order to meet performance indicators
- show initiative in adapting to changing work conditions or contexts particularly when working across a variety of work areas
- access, interpret and apply information on relevant organisation policies, procedures and instructions, particularly to ensure OHS requirements are adhered to during de/re-gassing
- manage time when planning, preparing and organising work priorities
- take responsibility for organising own work priorities.

Required knowledge

- relevant Occupational Health and Safety and Environmental regulations and organisation policies and procedures needed to carry out work in a manner which ensures the safety of people, equipment and the environment.
- technical work documentation covering procedures, specifications, schedules and work plans or equivalent
- quality system documentation covering instructions, procedures, performance indicators and review processes or equivalent
- cost minimisation/waste avoidance policies, procedures and practices
- environmental protection requirements relating to the disposal of waste material
- established communication channels and protocols
- problem identification and resolution techniques
- statutory legislation where application
- de-gassing and re-gassing procedures
- refrigeration removal and replacement procedures
- leakage test procedures
- system electrical circuits
- equipment/material safety requirements
- equipment maintenance procedures
- appropriate refrigerant/oils and capacities
- pipe and hose fabrication procedures.

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, the Range Statement and the Assessment Guidelines for this Training Package.	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	Evidence of the following is essential: • compliance with relevant legislative, regulations, standards, codes of practice and establish safe practices and organisation policies and procedures for managing personal work priorities • maintaining a working knowledge of current work systems and practices • working and communicating effectively and positively with others involved in the work • applying, within authority, the requirements of the job or work role in relation to: • achieving production goals • achieving work quality goals • responding positively to changing work requirements • contributing effectively to cost reduction initiatives • effectively applying problem solving techniques • modify activities to cater for variations in organisation context and environment • remove and replace refrigeration systems in accordance with specifications • gas refrigerant system de-gassed and re-gassed • conduct system performance test • conduct a leak test • complete organisation documentation - written / electronic.
Context of and specific resources for assessment	• assessment of the competency should take place in a safe working environment in a passenger motor vehicle manufacturing plant or simulated environment using tools/equipment/machinery required for the production process without undue disruption to the production process • assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints.

EVIDENCE GUIDE**Method of assessment**

A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:

- assessment methods must confirm consistency and accuracy of performance (over time and in a range of organisation relevant contexts) together with application of underpinning knowledge
- assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application
- assessment may be applied under project related conditions (real or simulated) and require evidence of process
- assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances.

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. Add any 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.

OHS requirements may include:

Legislation and regulations, organisational safety policies and procedures and may include: the use of personal protective equipment and clothing, rescue services, fire fighting organisation and equipment, first aid equipment, hazard and risk control and elimination, systems covering the use of hazardous materials and substances and manual handling procedures including lifting and carrying.

Organisation requirements may include:

- access and equity principles and practices
- environmental management (waste disposal, recycling and re-use guidelines)
- emergency and evacuation procedures
- equipment use procedures
- ethical standards
- legal obligations
- maintenance and storage procedures
- organisational and site guidelines
- policies and procedures relating to own role and responsibility
- procedural manuals
- quality assurance guidelines
- quality and continuous improvement processes and standards
- recording and reporting guidelines.

Tools and equipment may include:

- hand tools
- refrigerant leak detecting equipment, evacuation equipment, refrigerant recovery and/or recycling equipment, thermometers, refrigerant gassing equipment, refrigerant, refrigerant oils, refrigeration system kits
- ram air fan
- pipes, hoses, fittings.

Unit Sector(s)

Unit sector	Automotive Manufacturing
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Competency field

Competency field	Truck/Bus/Trailer Manufacture and Assembly
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Co-requisite units

Co-requisite units		
	Nil	Nil
	Nil	Nil