



Australian Government

Department of Education, Employment and Workplace Relations

MEM18098A Prepare to perform work associated with fuel system installation and servicing

Release: 1

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Modification History

Not applicable.

Unit Descriptor

This unit of competency covers the skills and knowledge required to prepare for work associated with fuel system servicing. It complements other relevant general occupational health and safety (OHS) and any required technical units of competency.

Application of the Unit

This unit applies to personnel who install or service fuel systems and equipment. They will typically undertake work at a station forecourt which may be operational or be shut down for refurbishment or under construction.

Work associated with installation and servicing may be undertaken by a person working autonomously or in a team.

The skills and knowledge needed to undertake the work are covered by relevant technical units of competency.

Band: A

Unit weight: 2

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

MEM09002B	Interpret technical drawing
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Employability Skills Information

This unit contains employability skills

Elements and Performance Criteria Pre-Content

Not applicable.

Elements and Performance Criteria

1	Plan and prepare for installation or servicing task	1.1	Clarify job requirements, as appropriate
		1.2	Clarify variations to work plan and take appropriate action
		1.3	Obtain required work permits
		1.4	Identify and comply with emergency and safety procedures
2	Confirm location and nature of key fuel system components	2.1	Identify and locate above and below ground storage containers
		2.2	Identify and locate fuel conveying systems
		2.3	Identify and locate pumps and pump systems
		2.4	Identify and locate dispensing systems
		2.5	Confirm location of fuel system components with site drawings
		2.6	Identify and report any hazards and/or inconsistencies between equipment drawings and regulatory requirements
3	Assess and manage risks associated with the work	3.1	Identify fuels and other hazardous materials on site
		3.2	Identify other hazards
		3.3	Identify and confirm shut-off procedures, details of emergency equipment and location of emergency equipment
		3.4	Assess hazards and determine risks
		3.5	Determine appropriate control measures to control risks
		3.6	Select appropriate tools and equipment to be used on the work
		3.7	Identify nature and location of required isolations
		3.8	Determine the type of, and appropriate locations for, barriers to prevent unauthorised access to the work location and put them in place at commencement

Required Skills and Knowledge

Required knowledge includes:

- types of fuels and their associated hazards
- fuel delivery systems and associated hazards:
 - pressure
 - suction
 - flammability
 - explosive potential
 - toxicity
 - static electricity
- dangerous goods classification and labelling
- storage and handling of dangerous goods
- suction/pressure systems
- first stage vapour recovery systems
- second stage vapour recovery systems
- pumps and pumping principles and problems
- fuel dispensing and metering systems
- interpretation of permits, site maps and hazard maps
- regulatory requirements, including licensing, OHS and environmental regulations

Required skills include:

- communicating effectively, including recording, reporting and documenting information
- identifying and complying with appropriate legislation and regulations
- identifying hazards
- assessing hazards and determining risks
- determining appropriate control measures using the hierarchy of control
- identifying support and assistance requirements
- relating to people from a range of social, cultural and ethnic backgrounds and of varying physical and mental capabilities
- selecting and using appropriate personal protection equipment
- using relevant computer systems

Evidence Guide

Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	A person who demonstrates competency in this unit must be able to provide evidence of the ability to: • determine work requirements • identify hazards and risks associated with the worksite • establish appropriate plan for the performance of work • apply any state/territory licensing, OHS and environmental legislation, standards and industry codes of practice.
Context of and specific resources for assessment	• The application of competency may be assessed in the workplace or simulated work environment. • Assessment may be conducted before a candidate goes to site using appropriate simulations, scenarios and questioning. • The competencies covered by this unit would be demonstrated by an individual working alone or as part of a team. • The assessment environment should not disadvantage the candidate. • Where applicable, reasonable adjustment must be made to work environments and training situations to accommodate ethnicity, age, gender, demographics and disability. • Access must be provided to appropriate learning and/or assessment support when required. • The following resources should be made available: • workplace location or simulated workplace • a bank of appropriate scenarios.
Method of assessment	
Guidance information for assessment	Assessment processes and techniques must be culturally appropriate and suitable to the language, literacy and numeracy capacity of the candidate and the competency being assessed. In all cases where practical assessment is used, it should be combined with targeted questioning to assess the underpinning knowledge.

Range Statement

Work permits	Work permits may include, but are not limited to: • permits issued by client • permits using the Australian Institute of Petroleum (AIP) form • other work documents required for the job Types of permit may include, but are not limited to: • hot work • cold work • confined space • excavation • working at heights
Emergency and safety procedures for worksite	Emergency and safety procedures for worksite may include, but are not limited to: • specific procedures for that site • location of emergency shut-off and procedures for re-setting emergency shut-off • dealing with spills or other losses in containment • fire response • other incident response procedures for that site • other site-specific hazards and procedures
Storage components	Storage components may include, but are not limited to: • single wall tanks • jacketed steel tanks • double-walled tanks (dry and liquid filled interstitial space) • fibre composite (FRP) tanks • high density polyethylene (HDPE) tanks
Fuel conveying systems	Fuel conveying systems may include, but are not limited to: • steel pipes • HDPE pipes • vapour recovery systems and pipes • pipe joining
Pumps and pump systems	Pumps and pump systems may include, but are not limited to: • centrifugal pumps • positive displacement pumps • pressure and suction systems • pumping problems • multiproduct pumps

Dispensing systems	Dispensing systems may include, but are not limited to: • fuel metering • hoses and nozzles • stage two vapour recovery • flow control valves • discharge control • multiproduct dispensers
Corrosion protection systems and components	Corrosion protection systems and components may be: • cathodic protection: • impressed current • sacrificial anode • wrapping • coating
Fuels	Fuels may include, but are not limited to: • petrol • ethanol blend fuels (of various concentrations) • diesel and biodiesel • liquefied petroleum gas (LPG)
Hazardous materials	Other hazardous materials may include, but are not limited to: • ‘solid’ pool chlorine (calcium hypochlorite) • ‘liquid’ pool chlorine (sodium hypochlorite solutions) • lubricants • cleaning agents • gas ‘bottles’ • workshop materials
Appropriate tools	Appropriate tools may include, but are not limited to tools that are: • intrinsically safe • ergonomically appropriate to the job • safe and in good condition
Required isolations	Required isolations may include, but are not limited to: • lock out/tag out • double block and bleed • use of blanks, blinds and goggles • removal of spool piece • removal of mechanical drives

Barriers	Barriers are methods of excluding unauthorised access from the worksite and may include, but are not limited to: • temporary fencing • bollards • witches hats • tapes • signage
Problems	Typical problems may include, but are not limited to: • variations to the work schedule • variations to the work scope • issues with the public or site personnel • failure of equipment • inappropriate/incomplete permit or work instructions

Unit Sector(s)

Maintenance and diagnostics

Custom Content Section

Not applicable.