



Australian Government

TLID0027 Load and unload chemical and fuel tanker

Change log

Section	Comment (major change)																																				
Title	Changed to reflect amended content																																				
Application	Updated to reflect amendments to unit																																				
Pre-requisite Unit	Removed																																				
Elements and Performance Criteria	All PCs changed to active voice References to LP removed Requirement to drive tanker removed Element and performance criteria structure updated and References to ADG code updated Some performance criteria consolidated where appropriate																																				
Foundation Skills	Foundation skills information about unit has been added to a new TLI Foundation Skills Companion Volume																																				
	<table><tr><th>Australian Core Skills Framework</th><th>Learning</th><th>Reading</th><th>Writing</th><th>Oral Comm</th><th>Numeracy</th></tr><tr><td></td><td>3</td><td>3</td><td>2</td><td>2</td><td>3</td></tr><tr><td colspan="6">Digital Skills (DigComp 3.0)</td></tr><tr><td colspan="6">Basic: CS3.4.04: Represent simple sequences symbolically, interpret simple symbolic sequences, and give basic instructions to a computer to perform simple tasks</td></tr><tr><td colspan="6">Basic: CS5.1.03: Identify common technical issues and follow instructions to help to solve them.</td></tr><tr><td colspan="6">Int: CS3.2.07: Modify or transform digital textual, numeric or visual representations to effectively and accurately convey the meaning of data and information.</td></tr></table>	Australian Core Skills Framework	Learning	Reading	Writing	Oral Comm	Numeracy		3	3	2	2	3	Digital Skills (DigComp 3.0)						Basic: CS3.4.04: Represent simple sequences symbolically, interpret simple symbolic sequences, and give basic instructions to a computer to perform simple tasks						Basic: CS5.1.03: Identify common technical issues and follow instructions to help to solve them.						Int: CS3.2.07: Modify or transform digital textual, numeric or visual representations to effectively and accurately convey the meaning of data and information.					
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Range of Conditions	Removed																																				
Performance Evidence	Performance Evidence reviewed and amended to reflect revised unit coverage																																				
Knowledge Evidence	Knowledge Evidence reviewed and amended to reflect revised unit coverage																																				
Assessment Conditions	Amendments to wording and simulation requirements																																				
If no major change in any section																																					

TLID0027 Load and unload chemical and fuel tanker

Modification History

Release	Comments
1	This unit of competency was first released in TLI Transport and Logistics Training Package Release 17.0.

Application

This unit involves the skills and knowledge required to load and unload a gas tanker in accordance with applicable dangerous goods regulations and the Australian Dangerous Goods Code (ADG Code)

It includes recognising the characteristics of different divisions of gases that are transported in gas tankers to ensure their safe transfer and transport, conducting pre-trip inspections and supervising loading. It also includes preparing a site to accept delivery, managing delivery, completing post-delivery activities and following emergency procedures.

A gas tanker is defined as any bulk road transport vehicle designed and authorised to transport gases.

A gas tanker is loaded and unloaded with limited or minimum supervision, and with accountability and responsibility for self and others in achieving the prescribed outcomes.

Licensing/Regulatory Information

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite unit(s)

Not Applicable.

Competency field(s)

D - Load Handling

Unit sector(s)

Transport and Logistics

Elements and Performance Criteria

Elements	Performance criteria
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Elements describe the essential outcomes.		Performance criteria describe the performance needed to demonstrate achievement of the element.	
1	Identify features of gas tankers and properties and hazards of gases being transported	1.1	Identify United Nations (UN) number, product class and any sub-risks of commonly transported gases in accordance with ADG Code
		1.2	Identify properties, associated hazards and thermal reactions of common gases transported by tankers in accordance with organisational requirements, emergency response guidebook and ADG Code
		1.3	Identify Emergency response requirements associated with the gasses being transported in accordance with the ADG Code and Emergency Response Guidebook (ERG)
		1.4	Determine hazardous atmosphere zones and control of ignition sources in accordance with Australian Standards, Codes of Practice and organisational requirements
		1.5	Explain elements of tanker design, construction, inspection and testing in accordance with the ADG code and relevant Australian Standards
		1.6	Identify appropriate safety equipment fitted to tanker for the product carted in accordance with the ADG Code
2	Conduct pre-trip inspection	2.1	Check tanker to ensure it is compatible with product to be transported, roadworthy, free from defects, has been tested, and compliance plates and/or labels fitted in accordance with the ADG Code and regulatory requirements
		2.2	Check tanker transfer equipment has been inspected and tagged or labelled in accordance with the ADG Code and organisational requirements
		2.3	Check tanker safety equipment is accessible, maintained, tagged, stowed and secured in accordance with the ADG Code and organisational requirements
		2.4	Check tanker to ensure personal protective equipment (PPE) is appropriate, available, ready for use and compliant with the ADG Code
		2.5	Check transport documentation for product identification, required volume or pressure,

			compatibility, accuracy, compliance and gantry selection in accordance with the ADG Code and organisational requirements
		2.6	Identify and report non-compliant vehicles and equipment in accordance with the ADG Code and organisational procedures
3	Prepare for and supervise loading	3.1	Ensure vehicle is positioned for loading in accordance with site traffic management plan and site procedures
		3.2	Complete a site risk assessment, check site emergency procedures and identify locations of emergency equipment
		3.3	Identify vessel/s to be loaded and ensure they can receive the intended product in accordance with the ADG Code and organisational requirements
		3.4	Identify, inspect and clean tanker and gantry safety and transfer equipment in accordance with organisational requirements
		3.5	Connect transfer hoses in correct bonding and transfer sequence in accordance with organisational requirements
		3.6	Control and monitor loading activities in accordance with level of responsibility, the ADG Code and organisational requirements
		3.7	Deactivate and disconnect loading system in accordance with organisational requirements
		3.8	Prepare loaded vehicle for transport in accordance with the ADG Code and organisational requirements
4	Check and prepare site to accept delivery	4.1	Complete pre-delivery vehicle inspection before entering delivery site or hazardous zones, report or rectify any identified risks in accordance with WHS/OHS legislation and organisational requirements
		4.2	Ensure vehicle is positioned for unloading in accordance with site traffic management plan, the ADG Code, site requirements and procedures
		4.3	Complete a site risk assessment, identify locations of emergency equipment and procedures, and apply risk controls if required before unloading

		4.4	Mark worksite with signs and/or cones, ensure exclusion zone is established, prepare vehicle for delivery and manage potential hazards in accordance with ADG Code and organisational requirements
		4.5	Select and use class specific PPE is selected to manage potential hazards in accordance with site and organisational requirements
5	Manage delivery	5.1	Visually inspect allocated receiving tanks, vessels, pumps, pipe work, connections and hose assemblies for damage, and assess for compliance with the ADG Code and organisational requirements
		5.2	Check product type and volume on delivery documents against receiving vessel contents volume or pressure to ensure sufficient ullage exists for delivery and observe safe fill limits
		5.3	Connect hose assemblies, connections, safety equipment and set up delivery systems in sequence to ensure product is delivered to the correct receiving vessel
		5.4	Monitor transfer, safety equipment and pressure gauges during the unloading sequence in accordance with the ADG Code organisational requirements and site procedures, and observe any special delivery instructions
6	Complete post-delivery operations	6.1	Complete product transfer and disconnect transfer and safety systems in accordance with the ADG Code and organisational requirements
		6.2	Secure and stow all equipment and restore site to required condition in accordance with site procedures
		6.3	Complete pre-departure inspection of tanker in accordance with organisational requirements
		6.4	Amend transport documentation to reflect product delivery and return to the Emergency Information Holder
		6.5	Ensure tanker is removed safely from loading site in accordance with site traffic management plan
7	Follow emergency procedures	7.1	Identify, site, facility and/or organisational procedures and requirements, Site Evacuation Plan and Emergency

			Response Guide (ERG) that apply to an incident during loading and unloading
		7.2	Identify procedures for assessing and classifying incidents for their level of risk and reporting in accordance with the organisation's Transport Emergency Response Plan (TERP)
		7.3	Identify requirements for engaging with authorised officers and emergency services in an emergency situation and providing information from transport documents in accordance with AUS/NZ Emergency Response Guide and or Emergency Procedure Guide
		7.4	Initiate emergency procedures and establish exclusion zones in accordance with the AUS/NZ Emergency Response Guidebook, and site requirements
		7.5	Identify legislative requirements for reporting incidents to the competent authority

Foundation skills

Foundation Skills essential to successful completion of this unit are mapped to the Australian Core Skills Framework (ACSF) and the European Digital Competence Framework (DigComp 3.0). Further information is available in the TLI Training Package Foundation Skills Companion Volume.

Range of conditions

Not Applicable.

Assessment Requirements for TLID0027 Load and unload chemical and fuel tanker

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements, performance criteria and range of conditions and include:

- Loading and unloading a gas tanker in accordance with ADG Code and organisational requirements including:
 - identifying the characteristics of gases and gas tankers
 - identifying, interpreting and following applicable regulation, codes, worksite procedures, signs and operational requirements
 - conducting risk assessments and applying control measures for loading and unloading a tanker
 - selecting appropriate personal protective equipment (PPE) for each division of gas in accordance with ADG Code
 - applying correct placarding for product being loaded
 - making accurate estimates of product volume in loading and unloading situations
 - completing transport documentation.

Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements, performance criteria and range of conditions and include knowledge of:

- dangerous goods (DG) information to load and unload a gas tanker
- relevant legislation and workplace procedures for loading and unloading gas
- relevant WHS/OHS and environmental procedures
- workplace traffic management and emergency response plans
- elements of tanker design, construction, inspection and testing in accordance with the ADG code and relevant Australian Standards
- inspection, maintenance, testing and compliance plate requirements for vehicles and equipment
- inspection and electrical isolation requirements for entry to hazardous atmospheres, zones or loading areas
- policies and processes that minimise risks associated with product hazards including:
 - control of ignition sources

- electrical bonding
- cryogenic products
- critical safety elements of fundamentally stabilising vehicle
- factors in determining if a vessel can receive product
- control measures, communications, observations, timing requirements when preparing for and completing product transfer for:
 - cryogenic products
 - flammable or compressed products
- monitoring loading and transfer of gas including:
 - safety equipment
 - checking for leaks
 - tanker pressure and pressure spikes
 - product level
 - regulatory mass management requirements
 - disruptions during the loading sequence
 - actions and communications required when unplanned events or discrepancies occur
- causal factors of gas tanker accidents and incidents
- strategies to minimise risk associated with product transfer
- characteristics of each division of gas/product including:
 - associated risks and relevant mitigation strategies
 - requirements for loading/unloading each division
- techniques and procedures for loading and unloading a gas tanker safely
- operator responsibilities during loading activities
- effects of product characteristics on load behaviour and vehicle stability
- meeting customer requirements when delivering gas to customer site
- procedures to be followed in an emergency
- techniques to continually identify and mitigate environmental risks
- required workplace and transport documentation including any permits.

Assessment Conditions

Assessment must occur in workplace operational situations where it is appropriate to do so; where this is not appropriate, assessment must occur in simulated workplace operational situations that replicate workplace conditions.

It is expected that assessment of emergency response components of this unit will be assessed in simulated scenarios.

Practical assessment must be undertaken with a tanker that meets all industry compliance and/or licensing requirements.

Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Resources for assessment must include:

- a range of relevant exercises, case studies and/or simulations
- a tanker that meets all the relevant industry compliance and/or licensing requirements for carrying Gas
- tools, equipment, machinery and relevant PPE currently used in the industry and compliant with the ADG Code
- applicable documentation such as workplace policies, procedures, current ADG Code, emergency procedure guides, emergency response documentation, shipping documentation and TERP.

Mandatory Workplace Requirements

Assessment of performance evidence may be in a workplace setting or an environment that accurately represents a real workplace.

Unit Mapping Information

Previous Code and Title	Equivalence	Comments
TLIC0022 Operate chemical and fuel tanker	Not equivalent	

Links

Companion volumes, including implementation guides, are found on the national training register - <https://training.gov.au/training/details/TLI>.