



Australian Government

TLIC0022 Operate chemical and fuel tanker

Release: 1

TLIC0022 Operate chemical and fuel tanker

Modification History

Release 1. This is the first release of this unit of competency in the TLI Transport and Logistics Training Package.

Application

This unit involves the skills and knowledge required to operate a chemical and fuel tanker.

It also includes carrying out a pre-trip inspection; positioning the tanker; loading the product; transporting and delivering a load safely and efficiently to a customer site in accordance with the workplace policies, procedures, site procedures, relevant work health and safety (WHS)/occupational health and safety (OHS) legislation, vehicle licensing and regulatory requirements.

A chemical and fuel tanker is defined as any bulk road transport vehicle authorised to carry fuel and/or chemical loads.

A chemical or fuel tanker is operated with limited or minimum supervision, with accountability and responsibility for self and others in achieving the prescribed outcomes.

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

Pre-requisite Unit

TLILIC0001 Licence to transport dangerous goods by road.

Competency Field

C – Vehicle Operation.

Unit Sector

Not applicable.

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

PERFORMANCE CRITERIA

Performance criteria describe the performance needed to demonstrate achievement of the element.

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| 1 Identify properties and hazards of chemicals and fuels being transported and features of tankers | 1.1 | United Nations (UN) number, product class, its packing group and any sub-risks of fuel being transported are identified in accordance with emergency response documentation |
| | 1.2 | Approved handler and approved filler requirements for chemicals and fuels being transported are identified in accordance with regulatory requirements |
| | 1.3 | Properties of chemicals and fuels being transported are identified in accordance with emergency response documentation |
| | 1.4 | Hazards associated with chemicals and fuels being transported are identified in accordance with emergency response documentation |
| | 1.5 | Hazardous atmosphere zones are identified in accordance with workplace policies and procedures |
| | 1.6 | Circumstances in which a chemical and fuel tanker may be left unattended are explained in accordance with workplace policies and procedures |
| | 1.7 | Functions of equipment fitted to a chemical and fuel tanker are identified in relation to safe transfer and transport of chemicals |
| | 1.8 | Factors that cause static electricity and ways of minimising risks, including static control measures, are identified in accordance with workplace policies and procedures |
| 2 Carry out a pre-trip inspection | 2.1 | Vehicle is inspected in accordance with workplace policies and procedures |
| | 2.2 | Vehicle load transfer equipment is inspected in accordance with workplace policies and procedures |
| | 2.3 | Non-compliant vehicles, equipment and/or trailers are reported in accordance with workplace, policies and procedures |
| | 2.4 | Safety equipment is inspected, stowed and secured in accordance with workplace policies and procedures |
| | 2.5 | Unserviceable items, or items with expired test dates, are replaced or reported in accordance with workplace procedures |

- 2.6 Personal protective equipment (PPE) is inspected, selected and worn in accordance with workplace policies and procedures
 - 2.7 Dangerous goods placards are inspected to confirm they are correct for the load being carried and are displayed in accordance with current Australian Dangerous Goods (ADG) Code (as required)
- 3 Position tanker and prepare to load**
 - 3.1 Vehicle is driven into loading site in accordance with site procedures and workplace policies and procedures
 - 3.2 Vehicle is positioned without injury to people or damage to property and in a position that enables loading to be carried out in accordance with site procedures and workplace policies and procedures
 - 3.3 Park brake is applied, engine is turned off and battery is isolated, as required
 - 3.4 Locations of emergency equipment and emergency procedures are identified before loading commences and loading area is checked for hazards in accordance with site procedures and workplace policies and procedures
 - 3.5 Product type and quantity to be loaded are checked to confirm they are in accordance with delivery documentation and are within safe carrying capacity and gross weight limitations of vehicle, and discrepancies are rectified in accordance with workplace policies and procedures
 - 3.6 Product transfer equipment, including vapour recovery product transfer, is connected in accordance with workplace policies and procedures
- 4 Load tanker with product**
 - 4.1 Site procedures are implemented for commencement of loading process
 - 4.2 Products to be loaded are checked for compatibility and correct segregation, taking account of product sub-risks in accordance with workplace policies and procedures
 - 4.3 Products to be loaded are checked to ensure they are compatible with tanker and that tanker is fit for purpose
 - 4.4 Loading process and fill levels are monitored in accordance with site procedures and workplace policies and procedures
 - 4.5 Vehicle is safely loaded using only approved equipment, and

in accordance with workplace policies, procedures and regulatory requirements

- 4.6** At completion of loading process, all valves on vehicle and load-out facility are closed and where site procedures specify, all transfer equipment is vented and/or depressurised before being disconnected and stowed, with all equipment secured in accordance with site procedures, workplace policies and procedures
- 4.7** Loaded vehicle is confirmed as being within legal weight limitations and in compliance with workplace policies and procedures and regulatory requirements
- 4.8** Loaded vehicle is inspected pre-departure to ensure all hoses, pipes and cables are disconnected and secure, brake interlock is deactivated as required, and obstacles are cleared in accordance with site procedures and workplace policies and procedures
- 4.9** Site is restored to a clean and tidy condition in accordance with site procedures
- 4.10** Vehicle is moved from loading area without damage to property or injury to people and in accordance with site procedures
- 4.11** Delivery documentation is completed, checked and secured in vehicle in accordance with regulatory requirements
- 4.12** Vehicle and tanker are checked to ensure placarding is correct, as required

5 Transport load safely and efficiently to customer site

- 5.1** Routes are planned to avoid congested areas, tunnels or areas where people may congregate and to maximise efficiency between delivery sites
- 5.2** Prescribed routes are followed in accordance with workplace policies and procedures, and courtesy and professionalism are exhibited toward other road users
- 5.3** Tanker is driven and manoeuvred in accordance with legal requirements, taking into consideration vehicle stability and prevailing environmental conditions
- 5.4** Eco-driving techniques are applied
- 5.5** Action is taken to deal with traffic delays and diversions

- 5.6** Workplace policies and procedures are adhered to in driving, parking and leaving tanker standing, or when tanker breaks down or stops on a road
- 6 Deliver load to customer site**
- 6.1** Pre-delivery assessment is made before entering delivery site, and site features that constitute a hazard and/or prevent delivery are rectified or reported in accordance with site procedures and workplace policies and procedures
- 6.2** Site instructions and/or restrictions are complied with
- 6.3** Vehicle is manoeuvred and positioned in such a way that product can be delivered efficiently and safely, with park brake applied and engine, unless required for pumping, turned off
- 6.4** PPE is used in accordance with workplace policies, procedures and regulatory requirements and steps are taken to apply personal safety measures
- 6.5** Ensure worksite is marked with signs and/or cones and vehicle is remained with during delivery and manage potential hazards in accordance with site procedures, workplace policies and procedures
- 6.6** Visible receiving vessel and/or components are checked for damage, and contents are checked to ensure sufficient ullage exists for delivery, with any deficiencies reported or actioned in accordance with site procedures and workplace policies and procedures
- 6.7** Preparation for delivery, including implementation of static control measures, is consistent with workplace policies, procedures and site requirements
- 6.8** Product type and quantity are confirmed against delivery documents
- 6.9** Delivery is undertaken in line with product being delivered, site procedures, workplace policies and procedures, and special delivery instructions
- 6.10** Gauges are checked, as required, valves are opened and closed in correct sequence, and hoses and connections are visually checked for leaks
- 6.11** At completion of delivery, product transfer equipment is disconnected in accordance with product type, site procedures and workplace policies and procedures

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| | 6.12 | Site is secured and restored to a clean and tidy condition in accordance with site procedures |
| | 6.13 | Delivery documentation is completed to reflect changes in vehicle load and receiving vessel, and distributed in accordance with workplace policies and procedures |
| | 6.14 | Vehicle is inspected pre-departure in accordance with workplace policies and procedures |
| | 6.15 | Vehicle is driven from site safely and in accordance with site and workplace policies and procedures |
| 7 | Apply driver emergency procedures in an emergency | |
| | 7.1 | Procedures for preventing emergencies during loading and unloading are implemented in accordance with emergency response documentation and transport emergency response plan (TERP) |
| | 7.2 | Procedures for emergencies in transit are identified in accordance with emergency response documentation and organisational TERP |
| | 7.3 | Emergency response documentation, workplace policies and procedures are identified in response to a person exposed to chemicals being transported |

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Non-essential conditions can be found in the TLI Transport and Logistics Training Package Companion Volume Implementation Guide.

Unit Mapping Information

This unit replaces and is not equivalent to TLIC0001 Operate chemical tanker.

This unit replaces and is not equivalent to TLIC0002 Operate fuel tanker.

This unit replaces and is not equivalent to TLID4048 Top load a dangerous goods tanker.

This unit replaces and is not equivalent to TLID4049 Bottom load a dangerous goods tanker.

Links

Companion Volume Implementation Guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=df441c6e-213d-43e3-874c-0b3f7036d851>

Assessment Requirements for TLIC0022 Operate chemical and fuel tanker

Modification History

Release 1. This is the first release of this unit of competency in the TLI Transport and Logistics Training Package.

Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all the requirements of the elements and performance criteria on at least one occasion and include:

- applying correct methods for ascending and descending a tanker ladder, as required
- applying correct placarding required for product being loaded, as required
- applying eco-driving techniques when operating a tanker
- applying precautions and required action to minimise, control or eliminate identified hazards
- applying techniques for loading and unloading a tanker
- completing documentation relating to operating a tanker
- identifying and preparing product transfer tanker equipment
- identifying compatibility of tanker with product
- identifying emergency equipment, including:
 - emergency shut down controls
 - evacuation controls
 - eye wash equipment and safety showers
 - fire-extinguishers
 - spill control equipment
- identifying personal protective equipment (PPE) required for product being transported
- identifying product and placarding tanker accordingly
- identifying properties of chemicals and/or fuels to be carried
- implementing contingency plans
- interpreting and following operational instructions and prioritising work
- meeting customer requirements when delivering fuel to customer site
- modifying activities depending on operational contingencies, risk situations and environments
- monitoring and anticipating traffic and site hazards and taking appropriate actions
- monitoring performance of tanker, trailers and equipment, and taking appropriate action, as required
- operating and adapting to differences in equipment in accordance with operating procedures
- planning routes to avoid congested areas, tunnels or areas where people may congregate
- reading and interpreting relevant instructions, workplace policies and procedures, information, and signs

- selecting and using required PPE conforming to industry and work health and safety (WHS)/occupational health and safety (OHS) standards
- working collaboratively with others
- working systematically with required attention to detail without injury to self or others, or damage to goods or equipment.

Knowledge Evidence

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

- applicable regulatory requirements, including:
 - current Australian Dangerous Goods (ADG) Code
 - environmental protection regulations
 - placarding requirements
 - relevant permit and licensing requirements
 - relevant state and/or territory roads and traffic authority driving regulations
- causal factors of chemical tanker accidents and incidents
- effects of weight distribution on load behaviour and vehicle stability
- efficient driving techniques and eco-driving considerations
- factors involved in trip preparation
- factors that may cause traffic delays and diversions
- loading and unloading procedures for tanker, including:
 - bottom loading
 - top loading
- product transfer equipment, including:
 - delivery hoses
 - external piping and fittings
 - hose connections
 - overfill protection systems
 - valves
 - warning devices
- procedures to be followed in a driving emergency and in response to a transport emergency response plan (TERP)
- relevant dangerous goods information for operating chemical and fuel tanker
- relevant legislation and workplace policies and procedures for transporting chemicals
- relevant road rules, regulations, permit and licence requirements of relevant state/territory roads and traffic authority
- relevant WHS/OHS, workplace policies and procedures and regulations for chemical and fuel tanker operations, including:
 - bottom and top loading

- environmental protection
- fall protection and fall constraint safety equipment if working at heights
- safe delivery of product to customer site
- techniques for safe driving and delivery of product to a customer site
- techniques for safely loading and unloading a tanker safely
- techniques to continually identify and mitigate environmental risks
- workplace documentation, including:
 - dangerous goods shipping documentation
 - relevant internal data entry, including logbooks, data sheets and load sheets.

Assessment Conditions

Assessors must hold credentials specified within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must satisfy the Principles of Assessment and Rules of Evidence and all regulatory requirements included within the Standards for Registered Training Organisations current at the time of assessment.

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.

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 access to:

- 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 chemicals and/or fuel
- tools, equipment, machinery and relevant PPE currently used in the industry, including:
 - chemical resistant gloves
 - eye wash kit
 - fire extinguisher
 - spill kit
 - torch
- applicable documentation such as workplace policies, procedures, current ADG Code, emergency procedure guides, emergency response documentation, shipping documentation and TERP.

A simulator is not suitable for final assessment of this unit of competency.

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