



Australian Government

Department of Education, Employment and Workplace Relations

PUADEFPE007A Assist in the operation of the towed flexible barge system

Revision Number: 1

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Modification History

Not applicable.

Unit Descriptor

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This unit covers the competency required to assist in the operation of the *towed flexible barge (TFB) system* to transfer fuel from ships anchored offshore to shore-based storage facilities. This transfer involves the TFB being refuelled at sea. The TFB is then moored offshore and fuel is transferred to shore via a floating pipeline system. This unit does not cover the movement of the barge.

Application of the Unit

Application of the Unit

The TFB system is utilised in marine environments where no other facilities exist to transfer large quantities of fuel from ocean tankers to shore-based field fuel installations. This unit applies to personnel working in teams under supervision.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

Employability Skills This unit contains employability skills.

Pre-requisite Unit/s Nil

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.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

1. Prepare for operations

- 1.1 Task requirements are received and confirmed with supervisor
- 1.2 **Components** are unpacked and inspected for serviceability in accordance with **workplace procedures**
- 1.3 Components are assembled in accordance with workplace procedures
- 1.4 Difficulties encountered during assembly are dealt with or reported in accordance with workplace procedures
- 1.5 Appropriate **personal protective equipment** is selected and worn during transfer operations
- 1.6 Occupational health and safety (OH&S) requirements and recognised safety precautions are applied throughout the operation in accordance with standard procedures
- 1.7 Environmentally sustainable work practices are identified, assessed and implemented where feasible
- 1.8 Appropriate documentation is completed throughout the operation in accordance with workplace procedures
- 1.9 Operational orders, administrative and emergency procedures are received from supervisor and acknowledged prior to commencement of operation

2. Receive fuel from ship

- 2.1 TFB is connected to ship's pipeline in preparation for transfer operations
- 2.2 **Pre-operation checks** are conducted in accordance with manufacturers' instructions and workplace procedures
- 2.3 **Fuel is tested** for product contamination and results are recorded
- 2.4 Contaminated product is quarantined and reported to supervisor
- 2.5 Fuel is transferred in accordance with workplace procedures
- 2.6 **Emergencies/incidents** are responded to in accordance with **emergency response plans**
- 2.7 TFB is disconnected from refuelling ship in accordance with workplace procedures

ELEMENT**PERFORMANCE CRITERIA****3. Issue fuel from TFB to shore**

- 3.1 Powerpack, hydraulic lines and floating pipeline system are connected to manifold raft
- 3.2 TFB is connected to manifold raft in preparation for transfer operations
- 3.3 Pre-operation checks are conducted in accordance with manufacturers' instructions and workplace procedures
- 3.4 Pipeline system is pressurised with air to test for leaks prior to fuel transfer
- 3.5 Fuel is transferred in accordance with workplace procedures
- 3.6 Petroleum equipment is monitored during transfer operations and faults are rectified or reported in accordance with workplace procedures
- 3.7 Gauges are monitored to ensure transfer is in accordance with Standard Operating Procedures
- 3.8 **Communication** is maintained with team members and supervisor during transfer operations
- 3.9 Emergencies/incidents are responded to in accordance with emergency response plans
- 3.10 TFB is disconnected from manifold raft
- 3.11 Floating pipeline system is pigged in accordance with workplace procedures
- 3.12 Equipment is recovered in accordance with workplace procedures

4. Perform cleaning and maintenance procedures

- 4.1 Appropriate personal protective equipment is selected and worn during cleaning operations
- 4.2 Equipment is cleaned following use in accordance with manufacturers' instructions
- 4.3 Cleaning chemicals are handled and used in accordance with manufacturers' instructions
- 4.4 Workplace environmental procedures are followed when performing cleaning operations
- 4.5 Equipment is inspected for damage and wear in accordance with workplace procedures
- 4.6 Maintenance and **minor repairs** within scope of own responsibilities are conducted in accordance with manufacturers' instructions and workplace procedures

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

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

Required Skills

- communicate effectively in the workplace
- control fuel spills
- interpret technical diagrams and publications
- interpret fuel markings and panels
- operate fuel pumping and discharge systems
- use personal protective and safety equipment

Required Knowledge

- cleaning procedures and use of cleaning agents
- dangerous goods handling procedures
- first aid
- functions and responsibilities of team members
- hazard control methods associated with fuel products
- maintenance procedures for fuel storage mediums
- relevant OH&S and pollution control legislation and policies

Evidence Guide

EVIDENCE GUIDE

Critical aspects for assessment and evidence required to demonstrate competency in this unit

- Nil

Consistency in performance

Competency should be demonstrated over time to ensure the candidate is assessed across a wide variety of situations within the workplace.

EVIDENCE GUIDE

Context of and specific resources for assessment

Context of assessment

Competency should be assessed in a marine environment or a simulated environment.

Specific resources for assessment

Access is required to:

- TBF system, discharge system and associated equipment
- bulk fuel tankers or simulated platform
- suitable fuel products
- safety equipment and personal protective equipment
- specific workplace operating procedures and publications.

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.

Towed flexible barge system may consist of	Floating fuel storage tank Floating ship to shore pipeline Hydraulic powerpack and lines Manifold raft Mooring raft Nose cone discharge pump
Components may include	Additional equipment and sub-systems including: <ul style="list-style-type: none"> • air compressor • compressed air lines • containerisation system • firefighting equipment • mooring system • pollution control system TFB and associated equipment TFB discharge system and associated equipment
Workplace procedures may include	Australian Standards Briefs Duty statements Fire orders Legislative requirements Manufacturers' handbooks, industry specifications and technical instructions Organisational policies and procedures Pollution control plan Procedure manuals Relevant state/territory and organisational OH&S regulations Relevant state/territory or federal legislation Standard Operating Procedures Technical manuals Written or verbal instructions
Personal protective equipment may include	<ul style="list-style-type: none"> • Eye protection • Gloves • Hearing protection • Personal floatation devices • Safety headwear and footwear

RANGE STATEMENT**Pre-operation checks may include**

- Inspection of all components
- Security of fittings, hoses, rafts, TFBs
- Positioning of other team members

Testing fuel for product contamination must include testing

- Appearance
- Particulate
- Water

Emergencies/incidents may include

- Contact of hazardous substances with skin and eyes
- Fire
- Spills, leaks and ruptures

Emergency response plans may include

- Fire plan
- First aid plan
- Pollution control plan

Communication methods may include

- Hand signals
- Radio communications

Minor repairs may include

- Pump repairs
- Repairing minor leaks
- Replacing hoses

Unit Sector(s)

Not applicable.

Corequisite Unit/s

Co-requisite Unit/s

Nil