



Australian Government

Department of Education, Employment and Workplace Relations

TDTC497C Drive heavy rigid vehicle

Release: 1

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Modification History

Not applicable.

Unit Descriptor

Field C Driving vehicle

This unit involves the skills and knowledge required to drive a heavy rigid vehicle safely including systematic and efficient control of all vehicle functions, monitoring of traffic and road conditions, management of vehicle condition and performance, and effective management of hazardous situations. Assessment of this unit will usually be undertaken within a licensing examination conducted by, or under the authority of, the relevant State/Territory Road Traffic Authority

Persons achieving competence in this unit will need to fulfil all of the relevant State/Territory learner permit or driver licence requirements before driving a heavy rigid vehicle on a public road.

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Application of the Unit

Not applicable.

Licensing/Regulatory Information

Refer to Unit Descriptor

Pre-Requisites

Not applicable.

Employability Skills Information

Not applicable.

Elements and Performance Criteria Pre-Content

Not applicable.

Elements and Performance Criteria

Elements and Performance Criteria

Element	Performance Criteria
1 Drive the heavy rigid vehicle	1.1 The heavy rigid vehicle is started, steered, manoeuvred, positioned and stopped in accordance with traffic regulations and manufacturer's instructions 1.2 Engine power is managed to ensure efficiency and performance and to minimise engine and gear damage 1.3 Engine operation is maintained within manufacturer's specified torque range and temperature through effective gear selection and smooth transition in gear changes 1.4 Braking system of heavy rigid vehicle is managed and operated to ensure effective control of the vehicle under all conditions 1.5 Driving hazards are identified and/or anticipated and avoided or controlled through defensive driving 1.6 The heavy rigid vehicle is driven in reverse, maintaining visibility and achieving accurate positioning. 1.7 The heavy rigid vehicle is parked, shut down and secured in accordance with manufacturer's specifications, traffic regulations and workplace procedures 1.8 Where required, overwidth and overweight permit applications are undertaken in accordance with relevant regulatory requirements 1.9 Appropriate procedures are followed in the event of a driving emergency

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|---|--|-----|--|
| 2 | Monitor traffic and road conditions | 2.1 | The most efficient route of travel is taken through monitoring and anticipation of traffic flows and conditions, road standards and other factors likely to cause delays or route deviations |
| | | 2.2 | Traffic and road conditions are constantly monitored and acted upon to enable safe operation and ensure no injury to people or damage to property, equipment loads and facilities |
| 3 | Monitor and maintain vehicle performance | 3.1 | Vehicle performance is maintained through pre-operational inspections and checks of the vehicle |
| | | 3.2 | Performance and efficiency of vehicle operation is monitored during use |
| | | 3.3 | Defective or irregular performance or malfunctions are reported to the appropriate authority |
| | | 3.4 | Vehicle records are maintained/updated and information is processed in accordance with workplace procedures |

Required Skills and Knowledge

Not applicable.

Evidence Guide

Critical aspects of evidence to be considered

- a. Assessment must confirm appropriate knowledge and skills to:
 - a.1. follow correct heavy rigid vehicle handling procedures
 - a.2. monitor traffic and road conditions
 - a.3. carry out pre-operational checks
 - a.4. monitor and maintain vehicle performance
 - a.5. follow OHS and environmental protection procedures and regulations
 - a.6. follow emergency procedures when required

Interdependent assessment of units

- a. This unit of competency may be assessed in conjunction with other relevant competency units that form part of a transport worker's job function

Required knowledge and skills

- a. Relevant road rules, regulations, permit and licence requirements of the relevant State/Territory road traffic authority
- b. Relevant OHS and environmental procedures and regulations
- c. Heavy rigid vehicle controls, instruments and indicators and their use
- d. Heavy rigid vehicle handling procedures
- e. Procedures to be followed in the event of a driving emergency
- f. Engine power management and safe driving strategies
- g. Efficient driving techniques
- h. Pre-operational checks carried out on heavy rigid vehicle and related action
- i. Differences between transmission types
- j. Fatigue management techniques
- k. Principles of operation of air brakes and procedures for their use
- l. Fatigue management techniques
- m. Driving hazards and related defensive driving techniques
- n. Principles of stress management when driving a vehicle
- o. Factors which may cause traffic delays and diversions and related action that can be taken by a driver
- p. Workplace driving and operational instructions
- q. Causes and effects of fatigue on drivers
- r. Strategies to manage on-road fatigue
- s. Factors which increase fatigue-related accidents
- t. Lifestyles which promote the effective long-term management of fatigue
- u. Ability to read instructions, procedures and signage relevant to the driving of a heavy rigid vehicle
- v. Map reading and road navigation techniques
- w. Ability to monitor and anticipate traffic hazards and take appropriate action

Resource implications

- a. Access is required to opportunities to:
 - a.1. participate in a range of exercises, case studies and other real and simulated practical and knowledge assessments that demonstrate the skills and knowledge to drive a commercial heavy rigid vehicle equal to or less than 4.5 tonnes GVM and seating up to 12 adults (including the driver and all types of transmission), and/or
 - a.2. drive such a commercial heavy rigid vehicle in an appropriate range of operational situations

Consistency in performance

- a. Applies underpinning knowledge and skills when:
 - a.1. driving a heavy rigid vehicle
 - a.2. monitoring traffic and road conditions and taking appropriate action
 - a.3. carrying out pre-operational checks and taking appropriate action
 - a.4. monitoring and maintaining vehicle performance
 - a.5. exercising all required safety, environmental and hazard control precautions and procedures during driving operations
 - a.6. communicating effectively with others when driving a heavy rigid vehicle
 - a.7. completing required documentation
- b. Shows evidence of application of relevant workplace procedures including:
 - b.1. relevant State/Territory roads and traffic authority driving regulations and licence requirements pertaining to the class of vehicle
 - b.2. OHS policies and procedures
 - b.3. identification of driving hazards and the use of appropriate defensive driving techniques
 - b.4. workplace procedures and instructions (including security and housekeeping procedures)
 - b.5. relevant vehicle manufacturer's guidelines related to the driving of the heavy rigid vehicle
 - b.6. environmental protection procedures when driving a vehicle and carrying out pre-operational checks
- c. Action is taken promptly to report and/or rectify any identified vehicle faults or malfunctions in accordance with manufacturer's instructions, road traffic authority requirements and workplace procedures
- d. Performance is demonstrated consistently over a period of time and in a suitable range of contexts
- e. Work is completed systematically with required attention to detail and without injury to self or others or damage to goods or equipment

Context for assessment

- a. Assessment of competence must comply with the assessment requirements of the relevant State/Territory road traffic authority
- b. Assessment of this unit must be undertaken by a Registered Training Organisation:
 - b.1. As a minimum, assessment of knowledge must be conducted through appropriate oral and/or written questioning
 - b.2. Appropriate practical assessment must occur:
 - b.2.1. at the Registered Training Organisation, and/or
 - b.2.2. in an appropriate work situation

Critical aspects of evidence to be considered

- a. Assessment must confirm appropriate knowledge and skills to:
 - a.1. follow correct heavy rigid vehicle handling procedures
 - a.2. monitor traffic and road conditions
 - a.3. carry out pre-operational checks
 - a.4. monitor and maintain vehicle performance
 - a.5. follow OHS and environmental protection procedures and regulations
 - a.6. follow emergency procedures when required

Interdependent assessment of units

- a. This unit of competency may be assessed in conjunction with other relevant competency units that form part of a transport worker's job function

Required knowledge and skills

- a. Relevant road rules, regulations, permit and licence requirements of the relevant State/Territory road traffic authority
- b. Relevant OHS and environmental procedures and regulations
- c. Heavy rigid vehicle controls, instruments and indicators and their use
- d. Heavy rigid vehicle handling procedures
- e. Procedures to be followed in the event of a driving emergency
- f. Engine power management and safe driving strategies
- g. Efficient driving techniques
- h. Pre-operational checks carried out on heavy rigid vehicle and related action
- i. Differences between transmission types
- j. Fatigue management techniques
- k. Principles of operation of air brakes and procedures for their use
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- m. Driving hazards and related defensive driving techniques
- n. Principles of stress management when driving a vehicle
- o. Factors which may cause traffic delays and diversions and related action that can be taken by a driver
- p. Workplace driving and operational instructions
- q. Causes and effects of fatigue on drivers
- r. Strategies to manage on-road fatigue
- s. Factors which increase fatigue-related accidents
- t. Lifestyles which promote the effective long-term management of fatigue
- u. Ability to read instructions, procedures and signage relevant to the driving of a heavy rigid vehicle
- v. Map reading and road navigation techniques
- w. Ability to monitor and anticipate traffic hazards and take appropriate action

Resource implications

- a. Access is required to opportunities to:
 - a.1. participate in a range of exercises, case studies and other real and simulated practical and knowledge assessments that demonstrate the skills and knowledge to drive a commercial heavy rigid vehicle equal to or less than 4.5 tonnes GVM and seating up to 12 adults (including the driver and all types of transmission), and/or
 - a.2. drive such a commercial heavy rigid vehicle in an appropriate range of operational situations

Consistency in performance

- a. Applies underpinning knowledge and skills when:
 - a.1. driving a heavy rigid vehicle
 - a.2. monitoring traffic and road conditions and taking appropriate action
 - a.3. carrying out pre-operational checks and taking appropriate action
 - a.4. monitoring and maintaining vehicle performance
 - a.5. exercising all required safety, environmental and hazard control precautions and procedures during driving operations
 - a.6. communicating effectively with others when driving a heavy rigid vehicle
 - a.7. completing required documentation
- b. Shows evidence of application of relevant workplace procedures including:
 - b.1. relevant State/Territory roads and traffic authority driving regulations and licence requirements pertaining to the class of vehicle
 - b.2. OHS policies and procedures

- b.3. identification of driving hazards and the use of appropriate defensive driving techniques
- b.4. workplace procedures and instructions (including security and housekeeping procedures)
- b.5. relevant vehicle manufacturer's guidelines related to the driving of the heavy rigid vehicle
- b.6. environmental protection procedures when driving a vehicle and carrying out pre-operational checks
- c. Action is taken promptly to report and/or rectify any identified vehicle faults or malfunctions in accordance with manufacturer's instructions, road traffic authority requirements and workplace procedures
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Range Statement

General context

- a. Driving must be carried out in compliance with the licence requirements and regulations of the relevant State/Territory roads and traffic authority pertaining to heavy rigid vehicles
- b. Driving is performed with limited or minimum supervision, with limited accountability and responsibility for self and others in achieving the prescribed outcomes
- c. Driving involves the application of routine vehicle driving principles and procedures to maintain the safety and operation of a commercial heavy rigid vehicle across a variety of driving contexts

Worksite environment

- a. Type of vehicle includes all heavy rigid vehicles, for example any rigid vehicle with 3 or more axles, including trucks or buses, greater than 8 tonnes GVM.
- b. Driving may be carried out in typical road transport situations, including:
 - b.1. operations conducted at day or night
 - b.2. typical weather conditions
 - b.3. on the open road
 - b.4. on a private road
 - b.5. while at a depot, base or warehouse
 - b.6. while at a client's workplace or work site
- c. Vehicle handling procedures may include:
 - c.1. starting a vehicle
 - c.2. steering and manoeuvring a vehicle
 - c.3. accelerating and braking
 - c.4. positioning and stopping a vehicle
 - c.5. reversing a vehicle
 - c.6. operating vehicle controls, instruments and indicators
 - c.7. using air brakes
 - c.8. using defensive driving techniques
 - c.9. managing engine performance
- d. Pre-operational checks may include:
 - d.1. visual check of vehicle
 - d.2. checking and topping up of fluid levels
 - d.3. checks of tyre pressures
 - d.4. checks of operation of vehicle lights and indicators
 - d.5. checks of brakes
- e. Minor routine repairs may include:
 - e.1. replacement of blown globes in vehicle lights
 - e.2. replacement of broken fan belt
 - e.3. replacement of blown fuse
 - e.4. replacement of door mirrors
 - e.5. repairs to rear tail-light lens
 - e.6. changing of tyres
 - e.7. repair of tyre punctures
 - e.8. replacement of broken coolant hose
- f. Driving hazards may include (examples only):
 - f.1. wet and iced roads
 - f.2. oil on road

- f.3. animals and objects on road
- f.4. fire in vehicle
- f.5. leaking fuel
- f.6. faulty brakes
- f.7. parked vehicles on the road
- f.8. faulty steering mechanism on vehicle
- f.9. pedestrians crossing the road
- f.10. flooded sections of road
- f.11. windy sections of road
- f.12. foggy conditions
- f.13. work site hazards including power and service lines, buildings, structures, facilities, underground services, uneven or unstable ground and recently filled trenches, stationary and moving machinery and equipment, hazardous or dangerous materials, noise, light, energy sources, and obstructions
- g. Factors that can cause traffic delays and diversions may include:
 - g.1. traffic accidents
 - g.2. flooded sections of road
 - g.3. road damage
 - g.4. bridge/tunnel damage
 - g.5. road works
 - g.6. building construction
 - g.7. emergency situations such as bushfires, building fires, etc.
 - g.8. road closures for special events such as marches, parades, sporting events, etc.
 - g.9. holiday traffic
 - g.10. road closures for utility works such as electricity, water, sewerage, telecommunications, gas, etc.
- h. Depending on the type of organisation concerned and the local terminology used, workplace procedures may include:
 - h.1. company procedures
 - h.2. enterprise procedures
 - h.3. organisational procedures
 - h.4. established procedures

Sources of information/documents

- a. Documentation/records may include:
 - a.1. State/Territory heavy rigid vehicle driving licence and permit requirements
 - a.2. State/Territory road rules
 - a.3. workplace driving instructions and procedures
 - a.4. vehicle manufacturer's instructions, specifications and recommended driving procedures including preoperational checks of vehicle
 - a.5. emergency procedures
 - a.6. vehicle log book or record book (where required)
 - a.7. relevant standards and certification requirements
 - a.8. quality assurance procedures

Applicable regulations and legislation

- a. Applicable procedures and codes may include:
 - a.1. relevant State/Territory roads and traffic authority driving regulations and licence/permit requirements pertaining to heavy rigid vehicles
 - a.2. relevant State/Territory road rules

- a.3. relevant State/Territory permit regulations and requirements
- a.4. relevant State/Territory OHS legislation
- a.5. relevant State/Territory fatigue management regulations
- a.6. relevant State/Territory environmental protection legislation

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Unit Sector(s)

Not applicable.