



Australian Government

Department of Education, Employment and Workplace Relations

RIIVEH302A Operate multi-combination vehicle

Release: 1

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Modification History

Not applicable.

Unit Descriptor

This unit covers the operation of multi-combination vehicles in the resources and infrastructure industries. It includes preparing for operations, coupling and uncoupling trailers, conducting vehicle checks, supervising the loading and unloading of goods and materials, steering, manoeuvring and positioning a vehicle, managing engine power, monitoring and anticipating traffic and road conditions, monitoring vehicle efficiency, parking and securing the vehicle, and carrying out post-operational activities. Licensing, legislative, regulatory and certification requirements that apply to this unit can vary between states, territories, and industry sectors. Relevant information must be sourced prior to application of the unit.

Application of the Unit

This unit is appropriate for those working in an operational role at a worksite within:

- Civil construction
- Coal mining
- Drilling
- Extractive industries
- Metalliferous mining

Licensing/Regulatory Information

Refer to Unit Descriptor.

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for operations	1.1. Access, interpret and apply compliance documentation relevant to the work activity 1.2. Obtain, interpret and clarify/confirm work requirements in the form of shift briefings, handover details or work orders before proceeding with operation 1.3. Prepare vehicle records and carry out log-on procedures to site requirements
2. Couple and uncouple trailers	2.1. Couple or uncouple and check prime mover and trailer
3. Conduct vehicle checks	3.1. Conduct pre-start checks on vehicle, trailers and ancillary equipment 3.2. Test vehicle and trailer operations and report faults which affect the safety of the operation 3.3. Start engine in accordance with manufacturer's guidelines and start-up procedures , and check systems against operational criteria
4. Supervise loading and unloading of goods and materials	4.1. Identify and take into account load characteristics when determining appropriate loading and unloading procedures 4.2. Segregate dangerous or hazardous goods 4.3. Ensure that goods/materials are loaded in accordance with relevant mass and loading regulations and workplace procedures 4.4. Select and supervise the use of lifting aids and appliances used to aid loading 4.5. Conduct unloading activities in a safe and efficient manner taking into account suitable locations, stowage, safe use of equipment and the balance of remaining load 4.6. Identify goods requiring special handling and/or documentation and follow appropriate procedures
5. Steer, manoeuvre and position vehicle	5.1. Steer, manoeuvre and position vehicle in accordance with traffic regulations and site rules

	5.2.Ensure vehicle movements are within limits of vehicle and road dimensions and in line with manufacturer's specifications 5.3.Confine centrifugal forces to load configuration and driving environment 5.4.Perform smooth and controlled movements 5.5.Avoid contact with obstacles 5.6.Carry out movements ensuring no injury to personnel or damage to property, equipment or facilities, and load 5.7.Utilise available road area to increase radius of turn and swept path
6. Manage engine power	6.1.Manage engine power to ensure efficiency of vehicle movement and to minimise damage to the engine and drive line 6.2.Operate vehicle within manufacturer's specified torque range and temperature 6.3.Coordinate engine power with gear selection to maintain torque range 6.4.Effect smooth transition in gear changes necessary to maintain engine power and torque range
7. Monitor and anticipate traffic and road conditions	7.1.Constantly monitor and anticipate traffic and road condition to allow a safe operation and ensure no injury to people or damage to property, equipment, loads and facilities 7.2.Achieve vehicle speed and safety using the accelerator, gears, brakes and speed retarding devices 7.3.Anticipate traffic flows to ensure the most efficient route of travel is taken to destinations without backtracking 7.4.Take account of road and traffic conditions, road standards, distance and load
8. Monitor vehicle efficiency	8.1.Constantly monitor the vehicle's performance to ensure maximum efficiency of operation and fuel consumption 8.2.Take account of warning devices that indicate engine or vehicle performance is hindered 8.3.Constantly monitor vehicle for any engine malfunctions or factors which may affect vehicle performance

	8.4. Report any <i>faults</i> or damage to vehicle to the appropriate authority
9. Park and secure the vehicle	9.1. Bring vehicle to a halt through the use of brakes using straight line braking techniques 9.2. Park and lock/secure vehicle in accordance with manufacturer's specifications, site procedures and legal requirements 9.3. Park vehicle in an area that is safe and legal in line with traffic regulations
10. Carry out post-operational activities	10.1. Carry out engine shutdown 10.2. Complete post-operational checks in accordance with approved procedures and faults 10.3. Maintain/update vehicle records and process

Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

Required skills

Specific skills are required to achieve the Performance Criteria of this unit, particularly for its application in the various circumstances in which this unit may be used. This includes the ability to carry out the following, as required to operate a multi-combination vehicle:

- apply legislative, organisation and site requirements and procedures for operating a multi-combination vehicle
- apply relevant occupational health and safety requirements
- operate within relevant statutory requirements
- access, read and interpret technical information, including manufacturer's manuals related to multi-combination vehicles/trailers, and their operations
- operate vehicles within specifications and limitations
- identify and report faults in vehicles and ancillary equipment
- change wheels
- complete appropriate vehicle records and documentation

Required knowledge

Specific knowledge is required to achieve the Performance Criteria of this unit, particularly for its application in the various circumstances in which this unit may be used. This includes knowledge of the following as required to operate a multi-combination vehicle:

- site requirements related to multi-combination vehicle operations
- occupational health and safety requirements related to multi-combination vehicle operations
- methods of securing loads
- procedures for loading and unloading goods/materials
- risks and precautions when loading and unloading goods/materials
- vehicle road codes and regulations
- site transport operations
- operations, characteristics and limitations of multi-combination vehicles, trailers and ancillary equipment
- operator level mechanical principles

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	The evidence required to demonstrate competency in this unit must be relevant to worksite operations and satisfy all of the requirements of the performance criteria, required skills and knowledge and the range statement of this unit and include evidence of the following: • knowledge of the requirements, procedures and instructions for operating a multi-combination vehicle • implementation of requirements, procedures and techniques for the safe, effective and efficient operation of multi-combination vehicles • working with others to undertake and complete the operation of multi-combination vehicles that meets all of the required outcomes • consistent timely completion of the operation of multi-combination vehicles that safely, effectively and efficiently meet the required outcomes
Context of and specific resources for assessment	• This unit must be assessed in the context of the work environment. Where personal safety or environmental damage are limiting factors, assessment may occur in a simulated environment provided it is realistic and sufficiently rigorous to cover all aspects of workplace performance, including task skills, task management skills, contingency management skills and job role environment skills. • Assessment of this competency requires typical resources normally used in a resources and infrastructure sector environment. Selection and use of resources for particular worksites may differ due to the site circumstances. • The assessment environment should not disadvantage the participant. For example, language, literacy and numeracy demands of assessment should not be greater than those

	required on the job. • Customisation of assessment and delivery environment should sensitively accommodate cultural diversity. • Aboriginal people and other people from a non English speaking background may have second language issues • Where applicable, physical resources should include equipment modified for people with disabilities. Access must be provided to appropriate learning and/or assessment support when required.
Method of assessment	This unit may be assessed in a holistic way with other units of competency. The assessment strategy for this unit must verify required knowledge and skill and practical application using more than one of the following assessment methods: • written and/or oral assessment of the candidate's required knowledge • observed, documented and/or first hand testimonial evidence of the candidate's: • implementation of appropriate requirements, procedures and techniques for the safe, effective and efficient achievement of required outcomes • consistent achievement of required outcomes • first hand testimonial evidence of the candidate's: • working with others to undertake and complete the operation of multi-combination vehicles
Guidance information for assessment	Consult the SkillsDMC User Guide for further information on assessment including access and equity issues.

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, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Compliance documentation may include:	• legislative, organisation and site requirements and procedures • manufacturer's guidelines and specifications • Australian standards • traffic regulations • company procedures • enterprise procedures • organisational procedures • safety information and procedures including: • vehicle height • condition of brakes and braking system (air pressure) • load characteristics • vehicle speed • prime mover/trailer load weight ratio • use of authorised cargo restraining equipment • fluid levels • Employment and workplace relations legislation • Equal Employment Opportunity and Disability Discrimination legislation
Vehicle records may include:	• manual or electronic data collection systems • log-on/off, activity recording • trip records • refuelling information
Coupling or uncoupling procedures may include:	• selection of an appropriately firm and level parking area • applying parking brakes • ensuring turn-table jaw release is locked/unlocked • turn-table lock and trailer wheel chocks • compatibility of turn-table and trailer ring pin • alignment of prime-mover, turn-table and trailer skid-pad

	• connecting brake service, emergency lines, auxiliary air and electrical lines • inspecting and testing of air brakes, trailer brakes, lock status of turn-table jaw release • securing and testing trailer landing legs
Pre-start checks may include:	• fluid levels, including fuel, engine oil, brake fluids, coolant, clutch/transmission fluid and windscreen washer fluid • windows and mirrors for clear visibility • tyres and wheels (air pressure, tyre damage, illegal tread depth and condition, abnormal wear pattern and tyre compatibility) • fan belts • seat belts • door hatches and latches • battery and connections • visible and current registration and licences • spare wheel • wheel nuts • wheel chocks and wedges • rear guards • warning horn • trailer king pin • ancillary drive belt(s) • turn-table • pneumatic system including draining as required • skid plate block
Start-up procedures may include:	• lights (headlights, clearance lights, indicators, hazard lights, reversing lights) • brakes • heating and ventilation • instruments and gauges • windscreen washers and wipers • pneumatic system including hydraulic hoses and hose connections
Load characteristics may include:	• bulk materials • plant and equipment • irregularly shaped • packaged or unpackaged • labelled or unlabelled • palletted or unpalletted

Engine power may include:	• selecting gear ratio to achieve smooth take-off • changing gears to maintain specified torque range at all speeds • utilising engine retarder
Road and traffic conditions may include:	• effects of weather conditions on road • road surface • road gradient • degree of visibility • speed limits • approved routes • legal parking areas • parking distances • traffic pattern and density
Warning devices may include:	• audible reversing buzzer • warning lights • speedometer • tachometer • oil pressure • air pressure • temperature gauges/warning lights • brake warning light • fuel quantity • electrical charging • ancillary systems indicators, e.g. high beam, turn signals, parking brake
Engine malfunctions may include:	• overheating: • coolant • exhaust • drive-line • low oil temperature • electrical discharge/overcharge • low air pressure • ancillary systems • abnormal emissions
Faults that may affect the safety and efficiency of the operation may include:	• excessive wear on king pins • loose/leaking air brake and hose fitting • excessive wear in suspension system

Unit Sector(s)

Vehicle Operations

Competency field

Refer to Unit Sector(s).

Co-requisite units

Not applicable.