



Australian Government

RIIVEH305E Operate and maintain a four wheel drive vehicle

Release: 1

RIIVEH305E Operate and maintain a four wheel drive vehicle

Modification History

Release	Comment
1	This unit replaces RIIVEH305D Operate and maintain a four wheel drive vehicle. Amended element 5 and performance evidence to use of recovery equipment and remove use of snatch straps. Added mapping table.

Application

This unit describes the skills and knowledge required to operate and maintain a four wheel drive vehicle in the Resources and Infrastructure Industries.

This unit is appropriate for those working in supervisory and technical specialist roles.

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.

Elements and Performance Criteria

1. Identify four-wheel drive specific terms, terminology and techniques	1.1 Access, interpret and apply four wheel drive vehicle documentation and ensure the work activity is compliant 1.2 Identify the structural and handling differences between a conventional two wheel drive and a four-wheel drive vehicle 1.3 Identify and demonstrate the purpose and use of front wheel hubs 1.4 Identify factors affecting tyre size, fitment, rating, and pressure 1.5 Identify recovery hooks and mounting features 1.6 Identify hazards associated with incorrect use of vehicle features or equipment
2. Plan for minimal environmental impact	2.1 Determine types of impact likely to occur during four-wheel driving activities 2.2 Demonstrate compliance with land management principles and policies when planning exploration activities 2.3 Comply with policies and management plans relevant to the activity area 2.4 Plan and conduct activities in a manner which minimises

	environmental impact 2.5 Adopt and implement procedures to ensure minimisation of harm to the environment from four-wheel drive activities 2.6 Demonstrate cooperation and consideration towards other land users
3. Perform pre-departure checks	3.1 Perform routine pre-departure checks under the bonnet, under the body, on external and internal items and accessories 3.2 Take action to correct any deficiency 3.3 Determine food and water requirements for journey 3.4 Select navigation equipment 3.5 Interpret weather conditions, determine suitability for driving 3.6 Apply safe vehicle loading practices 3.7 Secure items of personal luggage 3.8 Advise passengers of any special safety precautions to be taken when traversing rough terrain
4. Use four-wheel drive mode	4.1 Operate four-wheel drive both on and off road, in accordance with road rules, principles of four-wheel driving and WHS regulations 4.2 Apply smooth accelerator control strategies over a range of terrain types 4.3 Demonstrate recommended braking techniques for hard top surfaces and off road conditions 4.4 Identify situations where the engagement of four-wheel drive is required 4.5 Engage four-wheel drive mode 4.6 Survey track to identify hazards, assess risk and select a best route 4.7 Select routes to minimise damage to the environment 4.8 Use appropriate range, gear, speed, driving and braking technique, negotiate a range of terrain types whilst maintaining control of vehicle, being aware of contextual/environment issues 4.9 Maintain appropriate hand positioning on steering wheel 4.10 Check brakes and undercarriage after negotiating varying terrain 4.11 Assess and perform repairs to damaged tracks 4.12 Use standard operating procedures when travelling in company with other vehicles
5. Coordinate and	5.1 Apply work procedures to ensure risk assessment, safe

recover a vehicle	operating practices, and communication requirements are adhered to 5.2 Identify equipment and methods to recover a stuck vehicle 5.3 Identify risks associated with vehicle recovery and develop and implement strategies to minimise risks 5.4 Identify correctly rated recovery equipment and attachment points 5.5 Demonstrate procedures for preparing vehicles for recovery 5.6 Identify techniques to minimise impact on the environment during vehicle recovery 5.7 Coordinate safe recovery of a four-wheel drive vehicle using designated equipment and recovery method 5.8 Perform post recovery checks and report any vehicle or environmental repairs needed 5.9 Return recovery equipment to a reusable condition
6. Perform maintenance and minor repairs on four-wheel drive vehicles	6.1 Select/access maintenance equipment, including spares and fluids, prior to departure, considering contextual issues of the trip 6.2 Check vehicles prior to and regularly during trip, and perform routine maintenance/repair tasks 6.3 Submit vehicle written performance reports 6.4 Demonstrate safe use of a jack to change a wheel on a four-wheel drive vehicle

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit. Further information is available in the Resources and Infrastructure Industry Training Package Companion Volume.

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
RIIVEH305E Operate and maintain a four wheel drive vehicle	RIIVEH305D Operate and maintain a four wheel drive vehicle	Amended element 5 and performance evidence to use of recovery equipment and remove use of snatch straps. Added mapping table.	Not equivalent

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=88a61002-9a21-4386-aaf8-69c76e675272>

Assessment Requirements for RIIVEH305E Operate and maintain a four wheel drive vehicle

Modification History

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1	This unit replaces RIIVEH305D Amended element 5 and performance evidence to use of recovery equipment and remove use of snatch straps. Added mapping table.

Performance Evidence

- Evidence is required to be collected that demonstrates a candidate's competency in this unit. Evidence must be relevant to the roles within this sector's work operations and satisfy all of the requirements of the performance criteria of this unit and include evidence that the candidate:
 - locates and applies relevant documentation, policies and procedures
 - works effectively with others to undertake and complete effective operation and maintenance of a four wheel drive vehicle to meet all required outcomes including:
 - preparing for and organising work activities to meet all task requirements
 - communicating clearly and concisely with others to receive and clarify work instructions
 - using a range of communication techniques and aids to advise others of work activity
 - demonstrates completion of the operation and maintenance of a four wheel drive vehicle that safely, effectively and efficiently meets all of the required outcomes on more than one (1) occasion including:
 - performing pre-departure checks
 - selecting and programming navigation equipment
 - operating a four wheel drive vehicle on and off road
 - applying correct braking techniques according to terrain
 - engaging four wheel drive mode
 - carrying out stop stall key start recovery procedures (only applies to manual licencees)
 - selecting routes and applying techniques to minimise damage to the environment
 - identifying and using multiple types of recovery equipment
 - performing recovery of four wheel drive
 - operating a jack to support a four wheel drive on unstable ground

Knowledge Evidence

The candidate must demonstrate knowledge of the following when operating and maintaining a four wheel drive vehicle:

- problem solving skills for operation and maintenance of a four wheel drive vehicle
- handover procedures
- technical information, including manufacturer's manuals related to operation and maintenance of a four wheel drive vehicle
- operating vehicles within specifications and limitations
- faults in vehicles and ancillary equipment
- driving techniques and handling characteristics of four-wheel drives in different terrain
- differences between optional four-wheel drive and constant four-wheel drive vehicles and their impacts on vehicle operation and capability
- tyre management principles
- hazards associated with vehicle recovery, including:
 - slopes
 - pot holes
 - power lines
 - wet, slippery conditions
 - mud
 - changes in terrain
 - obstacles such as tree branches or poles
- travelling in convoy
- area restrictions
- knowledge of basic four wheel drive maintenance procedures, including:
 - charging batteries
 - changing fuses and globes
 - jump-starting
 - battery safety

Assessment Conditions

- Assessors must satisfy the Standards for Registered Training Organisations (RTOs) 2015/AQTF mandatory competency requirements for assessors; and industry regulations for certification and licensing; and,
- this unit must be assessed in the context of this sector's work environment; and,
- this unit must be assessed in compliance with relevant legislation/regulation and using policies, procedures, processes and operational manuals directly related to the industry sector for which it is being assessed; and,
- assessment may be conducted in conjunction with the assessment of other units of competency; and,
- assessment must confirm consistent performance can be applied in a range of relevant workplace circumstances; and,
- assessors must demonstrate the performance evidence, and knowledge evidence as outlined in this unit of competency, and through the minimum years of current* work experience specified below in an industry sector relevant to the outcomes of the unit; or,

- where the assessor does not meet experience requirements a co-assessment or partnership arrangement must exist between the qualified assessor and an industry subject matter expert. The industry subject matter expert should hold the unit being assessed (or an equivalent unit) and/or demonstrate equivalence of skills and knowledge at the unit level. An industry technical expert must also demonstrate skills and knowledge from the minimum years of current work experience specified below in the industry sector, including time spent in roles related to the unit being assessed; and,
- assessor and Industry subject matter expert requirements differ depending on the Australian Qualifications Framework Level (AQF) of the qualification being assessed and/or industry sector as follows:

Industry sector	AQF** Level	Required assessor or industry subject matter expert experience
Drilling, Metalliferous Mining, Coal Mining, Extractive (Quarrying) and Civil Construction	1	1 Year
	2	2 Years
Drilling, Coal Mining and Extractive (Quarrying)	3-6	3 Years
Metalliferous Mining and Civil Construction	3-6	5 Years
Other sectors	Where this unit is being assessed outside of the Resources and Infrastructure Sectors, assessor and/or industry subject matter expert experience should be in-line with industry standards for the sector in which it is being assessed and, where no industry standard is specified, should comply with any relevant regulation.	

*Assessors can demonstrate current work experience through employment within industry in a role relevant to the outcomes of the unit; or, for external assessors this can be demonstrated through exposure to industry by conducting frequent site assessments across various locations.

**Where a unit is being delivered outside of a qualification the first numeric character in the unit code should be considered to indicate the AQF level.

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