



Australian Government

RIIVEH305F Operate and maintain a four wheel drive vehicle

Release: 1

RIIVEH305F Operate and maintain a four wheel drive vehicle

Modification History

Release	Comments
Release 1	This version first released with RII Resources and Infrastructure Industry Training Package Version 5.0.

Application

This unit describes the skills and knowledge required to operate and maintain a four wheel drive vehicle in the resources and infrastructure industries.

It applies to those working in supervisory and technical specialist roles. They generally work under minimal supervision to undertake a broad range of skilled applications in varied work contexts, using some discretion and judgement in selecting equipment, services or contingency measures.

Licensing, legislative and certification requirements may apply to this unit and can vary between states, territories and industry sectors. Users must check requirements with relevant body before applying the unit.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Identify four-wheel drive specific terms, terminology and techniques	1.1 Obtain, interpret and confirm work requirements 1.2 Access, interpret and apply documentation required to operate and maintain a four wheel drive 1.3 Identify the structural and handling differences between a conventional two wheel drive and a four-wheel drive vehicle 1.4 Identify and demonstrate the purpose and use of front wheel hubs 1.5 Identify factors affecting tyre size, fitment, rating, and pressure 1.6 Identify recovery hooks and mounting features 1.7 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

ELEMENT	PERFORMANCE CRITERIA
	policies when planning exploration activities 2.3 Comply with policies and management plans relevant to the work 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 according to manufacturer specifications 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 according to workplace procedures 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 according to manufacturer specifications 4.2 Apply smooth accelerator control strategies over a range of terrain types according to manufacturer specifications 4.3 Demonstrate recommended braking techniques for hard top surfaces and off road conditions according to manufacturer specifications 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 the 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 according to workplace procedures
5. Coordinate and	5.1 Apply work procedures to ensure risk assessment, safe operating

ELEMENT	PERFORMANCE CRITERIA
recover a vehicle	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 according to manufacturer specifications 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 according to workplace procedures 6.3 Submit vehicle written performance reports according to workplace procedures 6.4 Demonstrate safe use of a jack to change a wheel on a four-wheel drive vehicle according to manufacturer specifications

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance but not explicit in the performance criteria.

SKILL	DESCRIPTION
Reading	Identifies and interprets information from workplace procedures, documentation and regulations
Writing	Produces and completes written documents required for workplace procedures
Self-management	Monitors and minimises own exposure to worksite risks and hazards during activities

Unit Mapping Information

Supersedes and is equivalent to RIIVEH305E Operate and maintain a four wheel drive vehicle.

Links

Companion Volume implementation guides is found on VETNet -

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

Assessment Requirements for RIIVEH305F Operate and maintain a four wheel drive vehicle

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Performance Evidence

The candidate must demonstrate the ability to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including evidence of the ability to:

- operate and maintain a four wheel drive vehicle on at least two occasions, 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 licences)
 - 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.

During the above, the candidate must:

- locate and apply relevant legislation, documentation, policies and procedures and confirm that the work activity is compliant
- implement the requirements, procedures and techniques for operating and maintaining a four wheel drive vehicle
- work effectively with others to operate and maintain a four wheel drive vehicle in a way that meets all required outcomes
- communicate clearly and concisely with others to receive and clarify work instructions and to determine coordination requirements prior to commencing and during work activities.

Knowledge Evidence

The candidate must be able to demonstrate knowledge to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including knowledge of:

- key legislation required to operate and maintain a four wheel drive vehicle
- key policies, procedures and documentation required to operate and maintain a four wheel drive vehicle, including:
 - environmental and land management principles
 - problem solving skills for operation and maintenance of a four wheel drive vehicle
 - handover procedures
 - technical information, including manufacturer manuals related to operation and maintenance of a four wheel drive vehicle
 - operation of 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, including tree branches and poles
 - travelling in convoy
 - area restrictions
 - basic four wheel drive maintenance procedures, including:
 - charging batteries
 - changing fuses and globes
 - jump-starting
 - battery safety
- principles and techniques for identifying relevant hazards and emergencies
- techniques for coordinating and communicating job activities with others.

Assessment Conditions

Mandatory conditions for assessment of this unit are stipulated below. The assessment must:

- include access to:
 - personal protective equipment

- equipment related to operating and maintaining a four wheel drive vehicle
- relevant documentation
- be conducted in a safe environment; and,
- be assessed in the context of this sector's work environment; and,
- be assessed in compliance with relevant legislation/regulation and using policies, procedures and processes directly related to the industry sector for which it is being assessed; and,
- confirm consistent performance can be applied in a range of relevant workplace circumstances.

Where personal safety or environmental damage are limiting factors, assessment may occur in a simulated work environment* provided it is realistic and sufficiently rigorous to cover all aspects of this sector's workplace performance, including environment, task skills, task management skills, contingency management skills and job role environment skills.

Assessor requirements

Assessors must be able to clearly demonstrate current and relevant industry knowledge and experience to satisfy the mandatory regulatory standards as set out in the Standards for Registered Training Organisations (RTOs) 2015/Australian Quality Training Framework mandatory requirements for assessors current at the time of assessment and any relevant licensing and certification requirements. This includes:

- vocational competencies at least to the level being delivered and assessed
- current industry skills directly relevant to the training and assessment being provided
- current knowledge and skills in vocational training and learning that informs their training and assessment
- formal relevant qualifications in training and assessment
- having knowledge of and/or experience using the latest techniques and processes
- possessing the required level of RII training product knowledge
- having an understanding and knowledge of legislation and regulations relevant to the industry and to employment and workplaces
- demonstrating the performance evidence, and knowledge evidence outlined in this unit of competency, and
- the minimum years of current** work experience after competency has been obtained as specified below in an industry sector relevant to the outcomes of the unit.

It is also acceptable for the appropriately qualified assessor to work with an industry expert to conduct assessment together and for the industry expert to be involved in the assessment judgement. The industry expert must have current industry skills directly relevant to the training and assessment being provided. This means the industry subject matter expert must demonstrate skills and knowledge from the minimum years of current work experience after competency has been obtained as specified below, including time spent in roles related to the unit being assessed:

Industry sector	AQF indicator level***	Required assessor or industry subject matter expert experience
Drilling, Metalliferous	1	1 year

Industry sector	AQF indicator level***	Required assessor or industry subject matter expert experience
Mining, Coal Mining, Extractive (Quarrying) and Civil Infrastructure	2	2 years
Drilling, Coal Mining, Extractive (Quarrying), Metalliferous Mining and Civil Infrastructure	3-6	3 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.	

*Guidance on simulated environments has been stipulated in the Companion Volume Implementation Guide located on VETNet.

**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 a minimum number of site assessments as determined by the relevant industry sector, across various locations.

*** While a unit of competency does not have an AQF level, where a unit is being delivered outside of a qualification the first numeric character in the unit code should be considered as the AQF indicator level for assessment purposes.

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