



Australian Government

Department of Education, Employment and Workplace Relations

SRODRV001B Drive and recover a 4WD vehicle

Release: 1

SRODRV001B Drive and recover a 4WD vehicle

Modification History

Not applicable.

Unit Descriptor

This unit has been developed for the Outdoor Recreation Industry Training Package. This unit covers the skills and knowledge required to use appropriate range, gear and techniques to drive a four wheel drive vehicle through and over different terrain and apply basic vehicle recovery techniques. It relates only to the specialist skills and knowledge for four wheel drive vehicles. General driving and maintenance skills are covered in other units.

Application of the Unit

Not applicable.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

Not applicable.

Elements and Performance Criteria Pre-Content

Not applicable.

Elements and Performance Criteria

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Element	Performance Criteria
1 Identify four wheel drive specific terms, terminology and techniques	1.1 Identify the structural and handling differences between a conventional two wheel drive and a four wheel drive vehicle 1.2 Identify and demonstrate the purpose and use of front wheel hubs 1.3 Identify factors affecting tyre size, fitment, rating, and pressure 1.4 Identify correctly, recovery hooks and mounting features 1.5 Identify hazards associated with incorrect use of vehicle features or equipment
2 2 Plan for minimal environmental impact	2.1 Determine human <i>impacts caused by outdoor recreation activities</i> on natural processes and interrelationships and the types of impact likely to occur during four wheel driving and associated activities 2.2 Assess if particular settings offer appropriate recreation opportunities by examining the nature of the activities and matching it with the <i>characteristics of the settings</i> 2.3 Identify current <i>management strategies</i> implemented by land managers for environmental asset management 2.4 Demonstrate compliance with land management principles and policies when planning the activity location/site 2.5 Comply with policies and management plans relevant to the activity area 2.6 Plan and conduct activities in a manner which minimises environmental impact 2.7 Adopt and model a positive and caring attitude towards the natural environment throughout

- activities
- 2.8 Demonstrate cooperation and consideration towards other users in settings where multiple use occurs
 - 2.9 Identify *basic techniques* to determine the nature and degree of impact and evaluate the effectiveness of minimal impact practices
 - 2.1 Modify impact reduction strategies, where necessary, after evaluation
- 3 **3 Perform pre-departure checks**
- 3.1 Perform routine pre-departure checks under the bonnet, under the body, and 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 suitable navigation equipment where necessary
 - 3.5 Interpret weather conditions to determine suitability for activity
 - 3.6 Apply safe vehicle loading practices
 - 3.7 Secure items of personal luggage safely
 - 3.8 Advise passengers of any special safety precautions to be taken when traversing rough terrain
- 4 **4 Use the features of a four wheel drive vehicle to drive in a variety of terrain types**
- 4.1 Operate four wheel drive vehicles correctly and safely both on and off road, in accordance with road rules, principles of four wheel driving and occupational health and safety 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, correctly
 - 4.5 Engage correctly, where relevant, front hubs or centre differential lock (constant four wheel drive

- vehicles)
- 4.6 Survey track to identify hazards, asses 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 to negotiate a *range of terrain* types whilst maintaining control of vehicle at all times
 - 4.9 Perform a stop stall key start recovery procedure on a moderate incline
 - 4.1 Check, where necessary, brakes and undercarriage after negotiating varying terrain
 - 4.1 Perform repairs to damaged tracks if necessary
 - 4.1 Use standardised operating procedures when travelling in company with other vehicles
 - 4.1 Maintain appropriate hand positioning on steering wheel
- 5 Use a single snatch strap to recover a vehicle**
- 5.1 Identify risks associated with vehicle recovery and develop and implement strategies to minimise risks
 - 5.2 Identify recovery hooks
 - 5.3 Confirm use of recommended mounting strategy on the four wheel drive vehicle and use of rated recovery equipment when practicable
 - 5.4 Demonstrate procedures for preparing vehicles for recovery
 - 5.5 Demonstrate techniques to minimise impact on the environment during vehicle recovery
 - 5.6 Demonstrate techniques for joining 2 snatch straps
 - 5.7 Coordinate safe recovery of a four wheel drive vehicle using a single snatch strap
 - 5.8 Perform post recovery checks and repairs, correctly

- 6 **6 Perform maintenance and minor repairs on four wheel drive vehicles**
- 6.1 Select/access maintenance equipment correctly, including spares and fluids, prior to departure after consideration of *contextual issues*
 - 6.2 Check vehicles regularly prior to and during trip and correctly perform *routine maintenance* /repair tasks
 - 6.3 Make vehicle performance reports to the designated person
 - 6.4 Demonstrate safe use of a jack to support a four wheel drive vehicle on uneven ground

Required Skills and Knowledge

Not applicable.

Evidence Guide

The Evidence Guide identifies the critical aspects, knowledge and skills to be demonstrated to confirm competence for this unit. This is an integral part of the assessment of competence and should be read in conjunction with the Range Statements

Critical aspects of evidence to be considered

Assessment must confirm sufficient knowledge of safe four-wheel driving and recovery techniques in the work environment

Assessment of performance should be over a minimum of two (2) different occasions, (for example over consecutive days), covering the prescribed number of categories from the Range Statements

In particular, assessment must confirm the ability to

safely and correctly use the features of a four wheel drive to negotiate a range of different terrain types, both day and night (terrain will vary according to work environment/location)

use appropriate technique and ability to safely recover a four wheel drive vehicle using a single snatch strap

apply maintenance and repair techniques specific to four wheel drive vehicles

be aware of, and use, minimal environmental impact practice

Interdependent assessment of units

This unit must be assessed after attainment of competency in the following unit(s)

Possess a current open driver's licence

This unit must be assessed in conjunction with the following unit(s)

SROODR002A Plan outdoor recreation activities

For the purpose of integrated assessment, this unit may be assessed in conjunction with the following unit(s)

TDTB03 01A Carry out vehicle maintenance

Required knowledge and skills

Required knowledge

Features and handling characteristics of four wheel drive vehicles

Four wheel driving techniques in different terrain

Terms used to describe four wheel drive capabilities (approach and departure angles, ramp over angle, ground clearance, suspension travel)

Differences between four wheel drive and four wheel drive vehicles and their impacts on vehicle operation and capability

Tyre management principles

Environmental impact of four wheel driving

Occupational Health and Safety legislation relevant to the use of four wheel drive vehicles

Use of single snatch straps to recover vehicles and hazards associated with vehicle recovery

Techniques for travelling in convoy

Minimum impact codes

Legal and statutory requirements (of land management agencies)

Specific problems of fragile environments or threatened species

Area restrictions

Natural processes and interrelationships occurring within natural environments and the manner in which interrelationships between natural processes can be affected

General knowledge of factors affecting land management planning (eg, limits of acceptable change, recreation succession)

Familiarity with terms used in planning for appropriate use of sites/locations (recreation setting, recreation opportunity)

Cultural protocols for making contact and communicating with indigenous people and organisations

Practices which may be implemented to minimise impact (eg, avoidance of sensitive

areas, appropriate site and route selection, limited party size, keeping to marked tracks or routes, campfire management and rehabilitation)

Practices and procedures used by land management authorities to reduce impact

restricting access

limiting group size

seasonal restrictions,

use of permits

enforcing Codes of Ethics and Conduct

Required skills

Four wheel driving techniques in different terrain

Skills and attitude to reduce environmental impact

Vehicle recovery using single snatch straps

Research and evaluation of impact through observation and questioning

Problem solving and solution focused strategies

Resource implications

Physical resources - assessment of this competency requires access to

a suitable four wheel drive vehicle

a suitable outdoor environment where four wheel drive skills may be demonstrated

maintenance/repair resources

recovery equipment

food and water resources

map(s) and compass

Human resources - assessment of this unit of competency will require human resources consistent with those outlined in the Assessment Guidelines. That is, an assessor (or persons within the assessment team) must

be competent in this unit but preferably be competent in the unit at the level above, i.e., SRODRV002B

be competent, as a minimum, in the units SRXFAD001A, SRXRIK001A and SRXEMR001A to ensure adequate risk management during the assessment

be current in their knowledge and understanding of the industry through provision of evidence of professional activity in the relevant area

have attained the mandatory competency requirements for assessors under the Australian Quality Training Framework (AQTF) as specified in Standard 7.3 of the *Standards for Registered Training Organisations*

Consistency in performance

Due to issues such as the variation in possible terrains, this unit must be assessed over a minimum of two (2) different occasions, (for example over consecutive days), in order to ensure consistency of performance over the prescribed number of variables and contexts applicable

Context for assessment

This unit must be assessed on the job through practical demonstration or through simulation with a four wheel drive vehicle in environments where four wheel drive skills may be demonstrated

Assessment of this unit of competence will usually include observation of processes and procedures, oral and/or written questioning on required knowledge and skills and consideration of required attitudes

Where performance is not directly observed and/or is required to be demonstrated over a 'period of time' and/or in a 'number of locations', any evidence should be authenticated by colleagues, supervisors, clients or other appropriate persons

**KEY
COMPETENCIES**

Collect, Analyse&O	Communicate	Plan&Organise	Work with Others&in	Use Mathematics	Solve	Use
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rganise Information	Ideas&Info rmation	Activities	Teams	al Ideas&Tec hniques	Problems	Technology
1	1	1	1	1	3	2

These levels do not relate to the Australian Qualifications Framework. They relate to the seven areas of generic competency that underpin effective workplace practices.

The three levels of performance (1, 2 and 3) denote the level of competency required to perform the task:

Use routine approaches

Select from routine approaches

Establish new approaches

Collecting, analysing and organising

informatio**n -**

Collecting information regarding the proposed route of the journey

Communicating ideas and**informatio****n -**

Advising passengers of any special safety precautions that need to be taken

Planning and organising activities -

Planning sufficient fuel for the activity

Working with teams and others

- Assisting others to recover a vehicle

Using mathematical ideas and techniques

- Ensuring suitable tyre pressures

Solving problems -
Recovering a stuck vehicle

Using technology
- Using a snatch strap and winch

Please refer to the Assessment Guidelines for advice on how to use the Key Competencies.

Range Statement

Range Statements

The Range Statements provide advice to interpret the scope and context of this unit of competence, allowing for differences between enterprises and workplaces. The Range Statements relate to the unit as a whole and helps facilitate holistic assessment. In addition, the following variables may be present for this particular unit of competency

RANGE STATEMENT

CATEGORIES

Basic techniques

[all categories]

observation

questioning

Characteristics of the settings

[all categories]

biological, including

vegetation

landscape

topography

scenery

social, including

number of people present and activities they pursue

managerial, including

ownership

development

access regulations

Contextual issues

[all categories]

duration of trip

type of terrain to be covered

remoteness of area to be visited

Impacts caused by outdoor recreation activities

[all categories]

pollution with foreign matter (human waste, rubbish, soap, detergent)

vegetation trampling and breakage

breakage and dislodgment of rock and other

formations
compaction of soil and other deposits
disturbance of fauna
introduction of new flora and fauna
chemical alteration of environments
damage to, or inappropriate behaviour in,
cultural sites
graffiti
reduction in decomposing timber
campfire scars
noise
intrusion into private lives and culture
development of facilities and signs

Management strategies

[all categories]
dispersal of use
concentration of use
site location
site hardening or shielding
type of use
zoning
size limitations

Range of terrain types

[six categories]
moderate inclines (up and down)
sloping terrain
very soft ground
rocky areas
sand
axle deep water crossings
mud/black soil
snow/ice (where relevant)

Routine maintenance/repair tasks

[all categories]
changing wheels in uneven terrain
fluid top - up

Unit Sector(s)

Not applicable.