



Australian Government

Department of Education, Employment and Workplace Relations

SISODRV201A Drive AWD/4WD vehicles on unsealed roads

Release: 2

SISODRV201A Drive AWD/4WD vehicles on unsealed roads

Modification History

Not Applicable

Unit Descriptor

This unit describes the performance outcomes, skills and knowledge required to use appropriate range, gear and techniques to drive a four wheel drive or all wheel drive on unsealed roads to deliver personnel or equipment to activity sites. It covers driving on graded formed dirt roads with slight to moderate inclines and small forded water crossings.

Application of the Unit

This unit applies to those required to delivering personnel or equipment to activity sites and those undertaking inspections along a route.

This unit may also apply to leaders working for outdoor education or adventure providers; volunteer groups; not-for-profit organisations or government agencies.

Licensing/Regulatory Information

Driving must be carried out according to the licensing, certification requirements of the relevant State or Territory authority.

Pre-Requisites

Nil

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

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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|---------------------------------------|---|
| 1. Determine vehicle characteristics. | <p>1.1. Determine the structural, handling and operational <i>features and characteristics</i> of the <i>vehicle</i>.</p> <p>1.2. Determine the purpose and use of front wheel hubs.</p> <p>1.3. Identify factors affecting tyre size, fitment, rating, and pressure.</p> <p>1.4. Identify recovery points, tie down points and mounting features of the vehicle.</p> <p>1.5. Identify hazards associated with incorrect use of vehicle features or equipment.</p> |
| 2. Perform pre operational checks. | <p>2.1. Perform <i>pre start checks</i> according to <i>organisational policies and procedures, relevant legislation</i> and <i>manufacturer's specifications</i>.</p> <p>2.2. Check and adjust tyre pressure according to expected <i>terrain</i> and manufacturer's recommendations.</p> <p>2.3. Make <i>required adjustments</i> to establish appropriate driving position.</p> <p>2.4. Secure loads as required according to organisational policies and procedures relevant legislation.</p> |
| 3. Operate vehicle. | <p>3.1. Select and engage gear and devices appropriate to the terrain and any identified <i>hazards</i>.</p> <p>3.2. Maintain traction according to the features of the vehicle and requirements of the terrain.</p> <p>3.3. Apply appropriate braking techniques to maintain traction according to the features of the vehicle and requirements of the terrain.</p> <p>3.4. Inspect water crossings for depth, flow rate and solidity of base prior to making crossings.</p> <p>3.5. Negotiate water crossings using appropriate speed, gear selection and device engagement while maintaining safety of vehicle, personnel and environment.</p> |

ELEMENT	PERFORMANCE CRITERIA
4. Change wheels.	<ul style="list-style-type: none">4.1. Locate jack and position according to manufacturer's specifications, organisational policies and procedures and relevant legislation.4.2. Remove and replace wheel according to manufacturer's specifications, organisational policies and procedures and relevant legislation4.3. Report or repair flat tyre according to manufacturer's specifications, organisational policies and procedures and relevant legislation
5. Complete operations.	<ul style="list-style-type: none">5.1. Park and shut down vehicle according to manufacturer's specifications, organisational policies and procedures and relevant legislation5.2. Report faults and malfunctions according to organisational policies and procedures.5.3. Clean and store vehicle and equipment according to organisational policies and procedures.5.4. Complete and submit <i>documentation</i> according to organisational policies and procedures.

Required Skills and Knowledge

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

Required skills

- problem-solving skills to select and apply appropriate speeds, gears and braking techniques to maintain safe vehicle operation
- planning and organising skills to:
 - conduct thorough pre-start and shut down procedures
 - perform safe wheel changing
- literacy skills to complete all required documentation
- numeracy skills to:
 - monitor vehicle instruments
 - identify speed restrictions and advisory signage.

Required knowledge

- legislation and organisational policies and procedures to enable safe operation of vehicle and equipment
- features and characteristics of four wheel drive and all wheel drive vehicles and equipment to enable safe vehicle operations
- vehicle handling procedures and techniques for a limited range of conditions including formed dirt roads, small to medium inclines of 15 degrees and small water crossings to lower hubs depth only to enable safe vehicle operations
- the effect of centre of gravity, changing fluid movements in vehicles and hard surface driving to enable safe and efficient vehicle operation
- appropriate use of gears and gear ranges and traction devices to enable safe and efficient vehicle operation
- commonly encountered hazards on unsealed roads and methods of avoiding or mitigating danger
- minimal impact techniques to ensure protection of the environment.

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

Evidence of the following is essential:

- safe and efficient AWD or 4WD vehicle operation over formed roads
- determines the different characteristics and features of a range of AWD and 4WD vehicles and performs pre start checks
- changes wheels, performs shut down procedures and completes all required documentation including reporting faults and any required maintenance.

Context of and specific resources for assessment

Assessment must ensure application of driving techniques to negotiate formed dirt roads and small inclines to 15 degrees on sufficient occasions to demonstrate competency and consistency of performance.

Assessment must also ensure access to:

- a suitable environment with formed dirt roads and inclines
- a suitable AWD or 4WD vehicle
- legislation and organisational policies and procedures that impact on the conduct of driving activities.

Method of assessment

A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:

- observation of safe and efficient AWD or 4WD vehicle operation over formed dirt roads
- oral or written questioning to assess knowledge of vehicle operating systems and associated risks and procedures for reporting maintenance requirements
- third-party reports from a supervisor detailing performance.

Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended.

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.

Features and characteristics may include:

- controls
- indicators
- instruments
- traction devices.

Vehicle may include:

- AWD or 4WD
- 4WD
- light AWD or 4WD trucks.

Pre-start checks may include:

- fluid levels
- battery condition
- hydraulic lines and connections
- brakes and drive lines
- air conditioning
- fuel
- body damage
- accessories.

Organisational policies and procedures may include:

- occupational health and safety
- use and maintenance of equipment
- communication protocols
- land management and minimal impact codes
- vehicle reporting and notification procedures
- procedures for travelling in convoy with other vehicles
- code of ethics.

Relevant legislation may include:

- occupational health and safety
- permits or permission for access
- environmental regulations.

Manufacturer's specifications may include:

- engine characteristics
- systems arning function
- vehicle operation
- radius of turning circle
- safety procedures.

Terrain may include:

- bitumen
- formed dirt roads
- small water crossings

Required adjustments may include:

- small inclines to 15 degrees.
- seats
- mirrors
- seatbelts
- steering wheel.

Hazards may include:

- temperature extremes
- slippery or unstable terrain
- dangerous animals and insects
- stinging trees and nettles
- dense vegetation
- group management hazards.

Documentation may include:

- faults
- maintenance requirements
- fuel usage
- odometer readings.

Unit Sector(s)

Outdoor Recreation

Competency Field

Driving