

**Modification history**

Release	Comments
Release 1	This version released with Forest and Wood Products Training Package Training Package Version 7.0.

FWPCOT3XXX	FWPCOT3XXX Operate a four wheel drive on unsealed roads
<b>Application</b>	<p>This unit of competency describes the outcomes required to safely operate a four wheel drive vehicle on unsealed roads.</p> <p>The unit applies to individuals who operate four wheel drive vehicles in a variety of work settings and industry sectors as part of forestry operations.</p> <p>All work must be carried out to comply with workplace procedures, according to state/territory health and safety regulations, legislation and standards that apply to the workplace.</p> <p>Individuals must hold a recognised or provisional driver's licence prior to commencing this unit of competency.</p>
<b>Prerequisite Unit</b>	
<b>Unit Sector</b>	Common Technical (COT)

Elements	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 differences between four wheel drive and two wheel drive vehicles	1.1 Access, interpret and apply vehicle manufacturer information relevant to operating a four wheel drive vehicle on unsealed roads 1.2 Identify the structural and handling differences between a conventional two-wheel drive vehicle and a four wheel drive vehicle
2. Identify differences between four wheel drive and two wheel drive vehicles	2.1 Determine type of operation and ensure safe operating conditions 2.2 Perform pre-start checks 2.3 Establish and check communication with others, including convoy procedures 2.4 Secure loads according to safety, environmental and regulatory requirements 2.5 Research weather and topography for a planned trip on unsealed roads
3. Operate vehicle on unsealed roads	3.1 Check and change tyre pressure suitable for unsealed road according to workplace procedures 3.2 Continually monitor the track to identify hazards, assess risks and select the best route according to safety and environmental requirements 3.3 Identify situations where the engagement of four wheel drive is required and engage front hubs or centre differential lock where fitted 3.4 Use range, gear, speed, driving and braking technique appropriate to surface conditions while maintaining control of vehicle at all times 3.5 Check brake operation and undercarriage after operating vehicle on unsealed road conditions 3.6 Park and shut down vehicle
4. Ascend and descend slopes less than 15 degrees	4.1 Inspect intended vehicle path before negotiation of slope 4.2 Use appropriate range, gear, speed, driving and braking technique to negotiate a slope while maintaining control of vehicle 4.3 Use control braking to ascend and descend and avoid skidding 4.4 Maintain traction and minimise wheel spin 4.5 Apply appropriate automatic and manual techniques when vehicle cannot proceed any further on a slope
5. Complete operation	5.1 Conduct a post-trip inspection of vehicle 5.2 Complete post-trip documentation, including maintenance and minor repairs reports

<b>Foundation Skills</b>	
<i>This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.</i>	
<b>Skill</b>	<b>Description</b>
Reading	<ul style="list-style-type: none"> <li>Read and comprehend basic factual information on tool and equipment labels and in manufacturer manuals</li> </ul>
Writing	<ul style="list-style-type: none"> <li>Complete workplace forms using required format, industry terminology and structure</li> </ul>
Oral communication	<ul style="list-style-type: none"> <li>Use effective verbal communication techniques to convey instructions to people involved in four wheel drive operation</li> </ul>
Numeracy	<ul style="list-style-type: none"> <li>Estimate time of a journey, water depth and fuel consumption</li> </ul>

<b>Unit Mapping Information</b>			
<b>Code and title current version</b>	<b>Code and title previous version</b>	<b>Comments</b>	<b>Equivalence status</b>
FWPCOT3XXX Operate a four wheel drive on unsealed roads	FWPCOT3259 Operate a four wheel drive on unsealed roads	Updated Elements and Performance Criteria  Updated and added new Knowledge and Performance Evidence  Reworded Foundation Skills  Updated Assessment Conditions	Not equivalent

<b>Links</b>	Companion Volumes, including Implementation Guides, are available at VETNet: <a href="https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=0d96fe23-5747-4c01-9d6f-3509ff8d3d47">https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=0d96fe23-5747-4c01-9d6f-3509ff8d3d47</a>
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TITLE	Assessment requirements for FWPCOT3XXX Operate a four wheel drive on unsealed roads
<b>Performance Evidence</b>	
<p>An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.</p> <p>There must be evidence that the individual has performed each of the following tasks while driving a four wheel drive vehicle on unsealed roads:</p> <ul style="list-style-type: none"> <li>• driven three separate ascents and three separate descents less than 15 degrees. In conducting this task, the individual has: <ul style="list-style-type: none"> <li>• selected appropriate range and gearing</li> <li>• used the most appropriate wheel placement</li> </ul> </li> <li>• used on one occasion traction aids and brakes when driving ascents and descents less than 15 degrees</li> <li>• performed on two occasions a forward and a reverse stop start recovery on an incline according to the type of transmission</li> <li>• demonstrated on one occasion the setting of vehicle controls for operation on unsealed roads. This may include: <ul style="list-style-type: none"> <li>• the use of free wheel hubs if fitted</li> <li>• selection of low range in either manual or auto vehicles</li> <li>• use of terrain selection system if fitted</li> <li>• use of differential locks if fitted</li> <li>• activation of traction control or terrain selection mode if fitted and where effective</li> </ul> </li> <li>• driven vehicle and operated vehicle controls and technology to avoid traction loss on unsealed roads in three of the following conditions: <ul style="list-style-type: none"> <li>• loose gravel</li> <li>• ruts</li> <li>• loose material in centre and sides of track</li> <li>• corrugations</li> <li>• mud</li> <li>• rocky</li> <li>• sand</li> <li>• snow</li> <li>• side slopes</li> <li>• rutted</li> <li>• water crossing.</li> </ul> </li> </ul>	

<b>Knowledge Evidence</b>	
<p>An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:</p> <ul style="list-style-type: none"> <li>• structural differences between conventional two wheel drive and a four wheel drive including: <ul style="list-style-type: none"> <li>• recovery hooks and mounting features</li> <li>• purpose and use of front wheel hubs</li> <li>• factors affecting tyre selection and pressure</li> </ul> </li> <li>• environmental protection requirements affecting four wheel drive operations</li> <li>• common unsealed road surface hazards: <ul style="list-style-type: none"> <li>• loose gravel</li> <li>• ruts</li> <li>• loose material in centre and sides of track</li> <li>• corrugations</li> </ul> </li> <li>• prestart checks for four wheel drive vehicle</li> <li>• types of communication equipment including: <ul style="list-style-type: none"> <li>• personal location beacon (PLB)</li> <li>• phone</li> <li>• radio</li> </ul> </li> <li>• safe operating conditions for a four wheel drive vehicle</li> </ul>	

<b>Knowledge Evidence</b>	
<ul style="list-style-type: none"> <li>• interpreting weather conditions to determine suitability for driving</li> <li>• selecting routes to minimise damage to the environment</li> <li>• visibility</li> <li>• loading of four wheel drive, including techniques to reduce overloading</li> <li>• braking techniques</li> <li>• cornering techniques</li> <li>• types of environmental risks and hazards associated with operating a four wheel drive vehicle on unsealed roads including: <ul style="list-style-type: none"> <li>• rocks and other unexpected obstacles</li> <li>• damage to vehicle</li> <li>• leaking fuel</li> <li>• animals and objects in vehicle path</li> <li>• slippery surfaces</li> <li>• overhead tree limbs</li> <li>• other vehicles</li> <li>• fallen trees, limbs and logs</li> <li>• flood</li> <li>• poor visibility</li> </ul> </li> <li>• tyre management principles for checking, changing and maintenance</li> <li>• principles for effective self-recovery of vehicle</li> <li>• communication channels and protocols</li> <li>• techniques for travelling in convoy</li> <li>• procedures for recording and reporting workplace information.</li> </ul>	
<b>Assessment Conditions</b>	
<p>Assessment of the skills in this unit of competency must take place under the following conditions:</p> <ul style="list-style-type: none"> <li>• physical conditions: <ul style="list-style-type: none"> <li>• skills must be demonstrated in a work environment or an environment that accurately represents workplace conditions</li> </ul> </li> <li>• resources, equipment and materials: <ul style="list-style-type: none"> <li>• site with access to unsealed roads</li> <li>• manual or automatic four wheel drive vehicle or all wheel drive vehicle</li> <li>• personal protective equipment required for operating a four wheel drive on unsealed roads</li> <li>• relevant personnel for the purposes of communicating information</li> </ul> </li> <li>• specifications: <ul style="list-style-type: none"> <li>• workplace safety and environmental policies and procedures applicable to forestry operations.</li> </ul> </li> </ul> <p>Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.</p>	
<b>Links</b>	Companion Volumes, including Implementation Guides, are available at VETNet: <a href="https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=0d96fe23-5747-4c01-9d6f-3509ff8d3d47">https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=0d96fe23-5747-4c01-9d6f-3509ff8d3d47</a>