

**Modification history**

Release	Comments
Release 1	This version released with FWP Forest and Wood Products Training Package Version 5.0.

FWPCOT3XXX	Set up and run multi-head moulder to produce complex profiles
<b>Application</b>	<p>This unit of competency describes the skills and knowledge required to set up and run a computer numerically controlled (CNC) or semi-automated multi-head moulder in a sawmill to produce timber with complex profiles such as tongue and groove flooring, lining board, shiplap, joinery profiles and other detailed mouldings.</p> <p>The unit applies to individuals who set up and run multi-head moulders in a sawmill to produce timber with complex profiles.</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>No occupational licensing, legislative or certification requirements apply to this unit at the time of publication.</p>
<b>Prerequisite Unit</b>	Nil
<b>Unit Sector</b>	

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. Prepare for work	1.1 Review work order to determine job requirements and where required seek clarification from appropriate personnel 1.2 Review environmental protection procedures and workplace health and safety requirements including the use of personal protective equipment, equipment lockout and safe manual handling techniques 1.3 Identify, assess and take actions to mitigate risks and hazards associated with working with multi-head moulders 1.4 Identify and implement workplace procedures for minimising waste material and maximising energy efficiency 1.5 Consult with appropriate personnel to ensure that work is coordinated effectively with others in the workplace 1.6 Obtain tools, equipment and testing devices needed for the work and check for correct operation and safety
2. Select and fit cutter heads for complex timber profile	2.1 Select cutter heads consistent with required timber profile 2.2 Check cutter heads for damage and defects according to manufacturer and workplace procedures 2.3 Prepare cutter head according to manufacturer procedures 2.4 Select and fit splitting units, as required, according to workplace procedures to produce required timber sizes
3. Complete setup	3.1 Adjust machine components to meet product requirements 3.2 Set safety hoods and machine guards according to manufacturer and workplace safety requirements 3.3 Calculate feed speed and set in relation to timber size, profile and species according to workplace procedures

<b>Elements</b>	<b>Performance Criteria</b>
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
4. Calibrate moulder	<p>4.1 Remove setting-up tools and other tools and equipment from the moulder according to workplace procedures</p> <p>4.2 Complete start-up check according to workplace procedures</p> <p>4.3 Run test piece through the moulder to check equipment operation, accuracy, quality and dimensions of finished work</p> <p>4.4 Accept or reject trialled material and dispose of according to environmental protection practices</p> <p>4.5 Monitor dust extraction system during the test run and test piece machining to ensure compliance with workplace health and safety requirements</p> <p>4.6 Adjust components until output timber conforms to the required profile</p> <p>4.7 Check operation of branding equipment and install brand, as required, according to workplace procedures</p> <p>4.8 Reset tally meter as required according to workplace procedures</p> <p>4.9 Record and report outcomes of set-up and calibration activities, including equipment faults and maintenance requirements, to appropriate personnel</p>
5. Operate multi-head moulder	<p>5.1 Maintain feed rate appropriate to machine capability, timber condition and board size</p> <p>5.2 Assess dressing conditions regularly to ensure continuity of supply and processing</p> <p>5.3 Adjust conditions to optimise feed rate and maintain finished dimensions according to work order requirements</p> <p>5.4 Regularly evaluate finish and measure dressed board dimensions and make adjustments to ensure product quality and required dimensions</p> <p>5.5 Dispose of incorrect cuts, off cuts and defective material according to environmental protection practices</p>
6. Monitor multi-head moulder	<p>6.1 Monitor in-feed and out-feed of timber to prevent degrading of output product</p> <p>6.2 Monitor quality of output product and make adjustments to correct identified quality issues according to workplace procedures</p> <p>6.3 Monitor and maintain supplies of timber to ensure consistent operation of the moulder</p>
7. Maintain multi-head moulder	<p>7.1 Follow workplace safety procedures to lock out equipment</p> <p>7.2 Check cutter for bluntness or damage</p> <p>7.3 Remove and replace cutters according to manufacturer recommendations</p> <p>7.4 Dispose of used cutters according to environmental protection practices</p> <p>7.5 Monitor dust extraction system during operation to ensure compliance with workplace health and safety requirements</p> <p>7.6 Keep machine area clear of dust and debris according to workplace health and safety procedures</p> <p>7.7 Record and report production outcomes, equipment faults and maintenance requirements to appropriate personnel</p>

<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>Extract essential information from workplace documents on the operation of multi-head moulders</li> </ul>
Writing	<ul style="list-style-type: none"> <li>Prepare routine written reports that inform others about the outcomes of work activities</li> </ul>
Oral Communication	<ul style="list-style-type: none"> <li>Employ active listening and questioning to clarify information on process flow in sawmills</li> </ul>
Numeracy	<ul style="list-style-type: none"> <li>Measure finished dimensions against specifications and allowable tolerances</li> </ul>
Navigate the world of work	<ul style="list-style-type: none"> <li>Understand main tasks, responsibilities and boundaries of own role</li> </ul>
Interact with others	<ul style="list-style-type: none"> <li>Use modes of communication suitable to purpose to confirm and clarify understanding</li> </ul>
Get the work done	<ul style="list-style-type: none"> <li>Recognise and respond to routine problems</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 Set up and run multi-head moulder to produce complex profiles	FWPCOT3205 Dress boards using multi-headed machines	This unit and FWPCOT3XXX have replaced FWPCOT3205 for creating specific skills required of operators using multi-head moulder/planer to produce timber with a simple or complex profiles.	Non-equivalent

<b>Links</b>	Companion Volumes, including Implementation Guides, are available at VETNet: <a href="https://vetnet.education.gov.au/Pages/TrainingDocs.aspx?q=0d96fe23-5747-4c01-9d6f-3509ff8d3d47">https://vetnet.education.gov.au/Pages/TrainingDocs.aspx?q=0d96fe23-5747-4c01-9d6f-3509ff8d3d47</a>
--------------	---

<b>TITLE</b>	<b>Assessment requirements for FWPCOT3XXX Set up and run multi-head moulder to produce complex profiles</b>
--------------	---

### Performance Evidence

An individual demonstrating competency must satisfy all the elements and performance criteria in this unit. There must be evidence that, on at least one occasion, the individual has:

- set up and run a multi-head moulder to produce timber with any of the following complex profiles:
  - tongue and groove flooring
  - lining board
  - shiplap
  - joinery profiles
  - other detailed mouldings
- in doing the above job, the individual has:
  - worked safely including following workplace health and safety procedures
  - selected and fitted cutter heads for a profile specified in a work order
  - calibrated the moulder to ensure output timber conforms to the required profile
  - run the moulder
  - completed workplace reports on set up and calibration activities.

### Knowledge Evidence

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

- purpose, features, operating parameters, components and operation of multi-head moulders
- equipment used in setting up and running multi-head moulders
- types of cutters used to produce complex profiles
- types and applications of complex profiles:
  - tongue and groove flooring
  - lining board
  - shiplap
  - joinery profiles
  - other detailed mouldings
- cutter head damage and defects:
  - types
  - effects
  - corrective actions
- multi-head moulder machine components:
  - cutters
  - fences
  - guides
  - bed plates
  - rollers
  - beam
- variables impacting of the finished quality of machined timber:
  - machine variables including cutting speed, cutter pitch, feed speed, cutting angles, cutter sharpness
  - timber variables including moisture content, grade, age, species
- feed rates and how they affect production output and finished quality of timber boards
- methods for calculating feed speed
- factors that impact on the selection of feed speed
  - size
  - profile
  - species
- typical timber defects and how these impact on the quality of finished timber product:
  - warp
  - wane
  - cupping
  - shakes

<b>Knowledge Evidence</b>
<ul style="list-style-type: none"> <li>• insect defects</li> <li>• knots</li> <li>• resin pockets</li> <li>• industry standard profiles, lengths, cross sections and tolerances and applicable terminology</li> <li>• cutting patterns used on timber boards to achieve maximum volume recovery</li> <li>• methods for assessing cutter condition</li> <li>• types of risk and hazards and mitigation measures associated with dressing timber boards using multi-head moulders</li> <li>• workplace procedures specific to dressing timber boards using multi-head moulders:                             <ul style="list-style-type: none"> <li>• workplace health and safety with particular emphasis on equipment lockout and use of personal protective equipment (PPE)</li> <li>• communication reporting lines</li> <li>• recording and reporting production outcomes, equipment faults and maintenance requirements.</li> <li>• environment protection legislation relating to sawmill operations</li> </ul> </li> <li>• industry codes of practice relating to sawmill operations</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 timber sawmill or an environment that accurately represents workplace conditions</li> </ul> </li> <li>• resources, equipment and materials:                             <ul style="list-style-type: none"> <li>• multi-head moulder</li> <li>• cutters for complex profiles</li> <li>• tools for setting up and calibrating multi-head moulder</li> <li>• PPE suitable for setting up and running a multi-head moulder</li> </ul> </li> <li>• specifications:                             <ul style="list-style-type: none"> <li>• template documents for recording outcomes of setting up and running multi-head moulders</li> <li>• manufacturer instructions for setting up and running multi-head moulders</li> <li>• work order with specific instructions for setting up and running multi-head moulders</li> <li>• workplace procedures for setting up and running multi-head moulders.</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.education.gov.au/Pages/TrainingDocs.aspx?q=0d96fe23-5747-4c01-9d6f-3509ff8d3d47">https://vetnet.education.gov.au/Pages/TrainingDocs.aspx?q=0d96fe23-5747-4c01-9d6f-3509ff8d3d47</a>
--------------	--