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# HEAVY MACHINE OPERATOR



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## ASSESSMENT PACKAGE

National Vocational Certificate Level 4

Version 1 - November, 2019



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**Document Version**

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**ASSESSMENT PACKAGE**  
National Vocational Certificate Level 4

Version 1 - November, 2019

<b>Title of Qualification:</b> National Vocational Certificate level 4, <b>In Heavy Machine Operator</b>	CS Code:	Level: 4	Version: 1 (2019)
<b>Competency Standard Title:</b> <b>073200595 Operate Excavator</b>	<b>Assessment Date (DD/MM/YY):</b>		

Candidate Details	Name: .....  Registration/Roll Number: .....
Guidance for Candidate	<p><b>To meet this standard, you are required to complete the following within the given time frame (for practical demonstration &amp; assessment):</b></p> <ol style="list-style-type: none"> <li><b>Assessment Task 1:</b> Comply with safety requirements.</li> <li><b>Assessment Task 2:</b> Set up equipment.</li> <li><b>Assessment Task 3:</b> Install attachments.</li> <li><b>Assessment Task 4:</b> Operate controls of Wheel Excavator.</li> <li><b>Assessment Task 5:</b> Operate controls of Crawler Excavator.</li> <li><b>Assessment Task 6:</b> Create slopes.</li> <li><b>Assessment Task 7:</b> Build, excavate, and maintain haul roads and ramps.</li> <li><b>Assessment Task 8:</b> Create mass excavation.</li> <li><b>Assessment Task 9:</b> Excavate trenches.</li> <li><b>Assessment Task 10:</b> Excavate ditches.</li> <li><b>Assessment Task 11:</b> Load Trucks</li> <li><b>Assessment Task 12:</b> Cut and fills materials.</li> <li><b>Assessment Task 13:</b> Stock piles materials.</li> <li><b>Assessment Task 14:</b> Excavate and back fills trenches.</li> <li><b>Assessment Task 15:</b> Hoist objects.</li> <li><b>Assessment Task 16:</b> Clear land.</li> <li><b>Assessment Task 17:</b> Demolish buildings and other structures.</li> <li><b>Assessment Task 18:</b> Monitor performance of machines.</li> </ol> <p><b>And complete:</b></p> <ol style="list-style-type: none"> <li><b>Knowledge assessment test (Written or Oral).</b></li> <li><b>Portfolios at the time of assessment (if any).</b></li> </ol>

Minimum Evidence Required	<p><b>During a practical assessment, under observation by an assessor, you will complete:</b></p> <p><b>Assessment Task 1: Comply with safety requirements.</b></p> <p>Performance Criteria 1: Operate safety controls.</p> <p>Performance Criteria 2: Interpret warning signs, lights, sounds and symbols.</p>
	<p><b>Assessment Task 2: Set up equipment.</b></p> <p>Performance Criteria 1: Retain stability of machine.</p> <p>Performance Criteria 2: Position attachment correctly.</p>
	<p><b>Assessment Task 3: Install attachments.</b></p> <p>Performance Criteria 1: Select tools for installation of attachments.</p> <p>Performance Criteria 2: Position equipment and attachment for installation.</p> <p>Performance Criteria 3: Interpret hand signals.</p> <p>Performance Criteria 4: Install attachments safely.</p>
	<p><b>Assessment Task 4: Operate controls of Wheel Excavator.</b></p> <p>Performance Criteria 1: Operate control smoothly and safely.</p> <p>Performance Criteria 2: Operate different operating controls simultaneously as required.</p>
	<p><b>Assessment Task 5: Operate controls of Crawler Excavator.</b></p> <p>Performance Criteria 1: Operate control smoothly and safely.</p> <p>Performance Criteria 2: Operate different operating controls simultaneously as required.</p>
	<p><b>Assessment Task 6: Create slopes.</b></p> <p>Performance Criteria 1: Interpret dimensions of slope.</p> <p>Performance Criteria 2: Identify grade checking instruments.</p> <p>Performance Criteria 3: Fill cuts in the slope with a partial bucket technique.</p>

	<p><b>Assessment Task 7: Build, excavate, and maintain haul roads and ramps.</b></p> <p>Performance Criteria 1: Identify obstructions and hazards.</p> <p>Performance Criteria 2: Identify grade checking devices.</p> <p>Performance Criteria 3: Locate existing structures and utilities.</p> <p>Performance Criteria 4: Build haul roads and ramps as instructed.</p>
	<p><b>Assessment Task 8: Create mass excavation.</b></p> <p>Performance Criteria 1: Perform straight edges and stable sides.</p> <p>Performance Criteria 2: Dig offset from footing location.</p> <p>Performance Criteria 3: Keep the machine level.</p> <p>Performance Criteria 4: Perform partial bucket technique.</p>
	<p><b>Assessment Task 9: Excavate trenches.</b></p> <p>Performance Criteria 1: Identify site obstructions and hazards.</p> <p>Performance Criteria 2: Maintain equipment in stable position and correct location for job.</p> <p>Performance Criteria 3: Identify grade checking devices.</p> <p>Performance Criteria 4: Excavate trench as per instructions.</p> <p>Performance Criteria 5: Interpret hand signals.</p>
	<p><b>Assessment Task 10: Excavate ditches.</b></p> <p>Performance Criteria 1: Identify site obstructions and hazards.</p> <p>Performance Criteria 2: Maintain equipment in stable position and correct location for job.</p> <p>Performance Criteria 3: Identify grade checking devices.</p> <p>Performance Criteria 4: Excavate ditch as per instructions.</p> <p>Performance Criteria 5: Interpret hand signals.</p>
	<p><b>Assessment Task 11: Load Trucks</b></p> <p>Performance Criteria 1: Identify site obstructions and hazards.</p> <p>Performance Criteria 2: Align according to the position of truck.</p> <p>Performance Criteria 3: Load transport vehicles in accordance with job specifications.</p> <p>Performance Criteria 4: Interpret hand signals.</p>

	<p><b>Assessment Task 12: Cut and fills materials.</b></p> <p>Performance Criteria 1: Identify site obstructions and hazards.</p> <p>Performance Criteria 2: Position equipment correctly.</p> <p>Performance Criteria 3: Identify grade checking devices.</p> <p>Performance Criteria 4: Cut and fill material as per instructions of assessor.</p> <p>Performance Criteria 5: Tamp the filled material.</p> <p>Performance Criteria 6: Interpret hand signals.</p>
	<p><b>Assessment Task 13: Stock piles materials.</b></p> <p>Performance Criteria 1: Identify site obstructions and hazards.</p> <p>Performance Criteria 2: Stockpile material as per instructions of assessor.</p>
	<p><b>Assessment Task 14: Excavate and back fills trenches.</b></p> <p>Performance Criteria 1: Identify site obstructions and hazards.</p> <p>Performance Criteria 2: Identify structures / utility lines.</p> <p>Performance Criteria 3: Maintain stability of equipment.</p> <p>Performance Criteria 4: Level the material.</p> <p>Performance Criteria 5: Identify grade checking devices.</p> <p>Performance Criteria 6: Backfill trenches/excavations as per instructions of assessor.</p> <p>Performance Criteria 7: Interpret hand signals.</p>
	<p><b>Assessment Task 15: Hoist objects.</b></p> <p>Performance Criteria 1: Inspect rigging (ropes) components visually.</p> <p>Performance Criteria 2: Identify and discard worn or damaged rigging components.</p> <p>Performance Criteria 3: Communicate with appropriate personnel to replace worn or damaged components.</p> <p>Performance Criteria 4: Identify site obstructions and hazards.</p> <p>Performance Criteria 5: Set up equipment in stable position and correct location for jobs.</p> <p>Performance Criteria 6: Hoist materials in accordance with manufacturer's specifications, job specifications and legislation.</p>

	Performance Criteria 7: Interpret hand signals.
	<p><b>Assessment Task 16: Clear land.</b></p> <p>Performance Criteria 1: Identify site obstructions and hazards.</p> <p>Performance Criteria 2: Install attachments.</p> <p>Performance Criteria 3: Maintain haul roads as required.</p> <p>Performance Criteria 4: Clear land in accordance with job specifications.</p>
	<p><b>Assessment Task 17: Demolish buildings and other structures.</b></p> <p>Performance Criteria 1: Identify site obstructions and hazards.</p> <p>Performance Criteria 2: Position equipment safely.</p> <p>Performance Criteria 3: Demolish structures and remove demolished materials in accordance with job specifications.</p> <p>Performance Criteria 4: Interpret hand signals.</p>
	<p><b>Assessment Task 18: Monitor performance of machines</b></p> <p>Performance Criteria 1: Identify gauges and symbols.</p> <p>Performance Criteria 2: Identify equipment problems.</p>

	<p><b>Portfolios required at the time of assessment (if any) for</b></p> <p>Performance criteria for the evaluation of portfolio:</p> <p>Submit log book or activity record (practical journal, project, pictures etc.) completed during the training.</p>
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**Assessors Judgment Guide** (to be completed by the Assessor and signed both by the assessor and the candidate after the assessment)

**073200595 Operate Excavator**

Candidate Details	Name: ..... Registration/Roll Number: ..... Candidate's Signature: .....
Assessment Outcome	COMPETENT <input type="checkbox"/> NOT YET COMPETENT <input type="checkbox"/> Name of Assessor: ..... Assessor's code: ..... Signature of the Assessor: .....

Assessment Summary (to be filled by the assessor)							
Activity	Method					Result	
Nature of Activity	Written	Oral	Observation	Portfolio	Role Play	Competent	Not Yet Competent
Practical Skill Demonstration							
Knowledge Assessment							
Other Requirement							

Each Assessment Task (with performance criteria)				
Assessment Task 1		Description of assessment task 1 <b>Comply with safety requirements</b>		
During the practical assessment, candidate demonstrated the following:			Yes	No
1	Performance Criteria 1: Operated safety controls.			
2	Performance Criteria 2: Interpreted warning signs, lights, sounds and symbols.			
Competent <input type="checkbox"/>			Not Yet Competent <input type="checkbox"/>	

Assessment Task 2		Description of assessment task 2 <b>Setup equipment</b>		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1	Performance Criteria 1: Retained stability of machine.			
2	Performance Criteria 2: Positioned attachment correctly.			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		

Assessment Task 3		Description of assessment task 3 <b>Install attachments</b>		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1	Performance Criteria 1: Selected tools for installation of attachments.			
2	Performance Criteria 2: Positioned equipment and attachment for installation.			
3	Performance Criteria 3: Interpreted hand signals.			
4	Performance Criteria 4: Installed attachments safely.			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		

Assessment Task 4		Description of assessment task 4 <b>Operate controls of Wheel Excavator</b>		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1	Performance Criteria 1: Operated control smoothly and safely.			
2	Performance Criteria 2: Operated different operating controls simultaneously as required.			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		

Assessment Task 5		Description of assessment task 5 <b>Operate controls of Crawler Excavator</b>		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1	Performance Criteria 1: Operated control smoothly and safely.			
2	Performance Criteria 2: Operated different operating controls simultaneously as required.			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		

Assessment Task 6		Description of assessment task6 <b>Create Slopes</b>		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1	Performance Criteria 1: Interpreted dimensions of slope.			
2	Performance Criteria 2: Identified grade checking instruments.			
3	Performance Criteria 3: Filled cuts in the slope with a partial bucket technique.			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		

Assessment Task 7		Description of assessment task 7 <b>Build, excavate, and maintain haul roads and ramps</b>		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1	Performance Criteria 1: Identified obstructions and hazards.			
2	Performance Criteria 2: Identified grade checking devices.			
3	Performance Criteria 3: Located existing structures and utilities.			
4	Performance Criteria 4: Build haul roads and ramps as instructed.			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		

Assessment Task8		Description of assessment task8 <b>Create mass Excavation</b>		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1	Performance Criteria 1: Performed straight edges and stable sides.			
2	Performance Criteria 2: Dig offset from footing location.			
3	Performance Criteria 3: Kept the machine level.			
4	Performance Criteria 4: Performed partial bucket technique.			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		

Assessment Task 9		Description of assessment task 9 <b>Excavate trenches</b>		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1	Performance Criteria 1: Identified site obstructions and hazards.			
2	Performance Criteria 2: Maintained equipment in stable position and correct location for job.			
3	Performance Criteria 3: Identified grade checking devices.			
4	Performance Criteria 4: Excavated trench as per instructions			
5	Performance Criteria 5: Interpreted hand signals.			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		

Assessment Task 10		Description of assessment task 10 <b>Excavate ditches</b>		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1	Performance Criteria 1: Identified site obstructions and hazards.			
2	Performance Criteria 2: Maintained equipment in stable position and correct location for job.			
3	Performance Criteria 3: Identified grade checking devices.			
4	Performance Criteria 4: Excavated ditches as per instructions.			
5	Performance Criteria 5: Interpreted hand signals.			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		

Assessment Task 11		Description of assessment task 11 <b>Load Trucks</b>		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1	Performance Criteria 1: Identified site obstructions and hazards.			
2	Performance Criteria 2: Aligned according to the position of truck.			
3	Performance Criteria 3: Loaded transport vehicles in accordance with job specifications.			
4	Performance Criteria 4: Interpreted hand signals.			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		

Assessment Task 12		Description of assessment task 12 <b>Cut and fills materials</b>		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1	Performance Criteria 1: Identified site obstructions and hazards.			
2	Performance Criteria 2: Positioned equipment correctly.			
3	Performance Criteria 3: Identified grade checking devices.			
4	Performance Criteria 4: Cut and fill material as per instructions of assessor.			
5	Performance Criteria 5: Tamped the filled material.			
6	Performance Criteria 6: Interpreted hand signals.			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		

Assessment Task13		Description of assessment task13 <b>Stock piles materials</b>		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1	Performance Criteria 1: Identified site obstructions and hazards.			
2	Performance Criteria 2: Stockpiled material as per instructions of assessor.			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		

Assessment Task 14		Description of assessment task 14 <b>Excavate and Back fills trenches</b>		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1	Performance Criteria 1: Identified site obstructions and hazards.			
2	Performance Criteria 2: Identified structures / utility lines.			
3	Performance Criteria 3: Maintained stability of equipment.			
4	Performance Criteria 4: Levelled the material.			
5	Performance Criteria 5: Identified grade checking devices.			
6	Performance Criteria 6: Backfilled trenches/excavations as per instructions of assessor.			
7	Performance Criteria 7: Interpreted hand signals.			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		

Assessment Task 15		Description of assessment task 15 <b>Hoist objects</b>		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1	Performance Criteria 1: Inspected rigging (ropes) components visually.			
2	Performance Criteria 2: Identified and discard worn or damaged rigging components.			
3	Performance Criteria 3: Communicated with appropriate personnel to replace worn or damaged components.			
4	Performance Criteria 4: Identified site obstructions and hazards			
5	Performance Criteria 5: Set up equipment in stable position and correct location for jobs.			
6	Performance Criteria 6: Hoist materials in accordance with manufacturer's specifications, job specifications and legislation.			
7	Performance Criteria 7: Interpreted hand signals.			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		

Assessment Task 16		Description of assessment task 16 <b>Clear land</b>		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1	Performance Criteria 1: Identified site obstructions and hazards.			
2	Performance Criteria 2: Installed attachments.			
3	Performance Criteria 3: Maintained haul roads as required.			
4	Performance Criteria 4: Cleared land in accordance with job specifications.			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		



Assessment Task 17		Description of assessment task 17 <b>Demolish buildings and other structures</b>		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1	Performance Criteria 1: Identified site obstructions and hazards.			
2	Performance Criteria 2: Positioned equipment safely.			
3	Performance Criteria 3: Demolished structures and removed demolished materials in accordance with job specifications.			
4	Performance Criteria 4: Interpreted hand signals.			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		

Assessment Task 18		Description of assessment task 18 <b>Monitor performance of machines</b>		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1	Performance Criteria 1: Identified gauges and symbols.			
2	Performance Criteria 2: Identified equipment problems.			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		

Portfolio (if any)		Description of portfolio		
Current <input type="checkbox"/> Sufficient <input type="checkbox"/> Authentic <input type="checkbox"/> Valid <input type="checkbox"/> Reliable <input type="checkbox"/>				
Portfolio meet the following performance standards:		Yes	No	Remarks
1	Performance criteria 1 for the evaluation of portfolio: Submitted log book or activity record (practical journal, project, pictures etc.) completed during the training.			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		

<b>Title of Qualification:</b> National Vocational Certificate level 4 in Heavy Machine Operator	<b>CS Code:</b>	<b>Level:</b> 4	<b>Version:</b> 1 (2019)
<b>Competency Standard Title:</b> <b>073200595 Operate Excavator</b>	<b>Assessment Date (DD/MM/YY):</b> --/--/--		

Guidance for Candidate	<b>To complete your assessment for this Competency Standard, you need to answer the questions on the following pages successfully.</b>
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**Assessors Guide** (to be completed by the Assessor and signed both by the assessor and the candidate after the assessment)

Candidate Details	Name:.....Registration/Roll Number: .....  Candidate's Signature:.....
Written Assessment Outcome	COMPETENT <input type="checkbox"/> NOT YET COMPETENT <input type="checkbox"/>  Name of the Assessor:.....Assessor's code:.....  Signature of the Assessor: .....

**Feedback to the candidate on assessment.**

<hr/> <hr/> <hr/> <hr/>	
Candidate Signature.....	Assessor Signature .....

<b>Title of Qualification:</b> National Vocational Certificate level 4 in <b>Heavy Machine Operator</b>	CS Code:	Level: 4	Version: 1 (2019)
<b>Competency Standard Title:</b> <b>073200595 Operate Excavator</b>	<b>Assessment Date (DD/MM/YY):</b> --/--/--		

## WRITTEN ASSESSMENT

Question	Candidate's answer
1. Describes types of Excavator?	
2. Describes components and functions of Excavator?	
3. Describes capacities & capabilities of Excavator?	

Question	Candidate's answer
<p>4. Describes attachments of Excavator and their purposes?</p>	
<p>5. Describes basic tools and supplies of Excavator?</p>	
<p>6. Describe safety equipment of Excavator?</p>	
<p>7. Write down daily maintenance works of Excavator?</p>	

Question	Candidate's answer
<p>8. Explain emergency shut-down procedure of Excavator?</p>	
<p>9. Enlist basic operating functions of Excavator?</p>	
<p>10. Describe pre start checks, startup and shutdown procedures of Excavator?</p>	

<b>Title of Qualification:</b> National Vocational Certificate level 4, <b>In Heavy Machine Operator</b>	CS Code:	Level: 4	Version: 1 (2019)
<b>Competency Standard Title:</b> <b>073200596 Operate Motor Grader</b>	<b>Assessment Date (DD/MM/YY):</b>		

Candidate Details	Name: .....  Registration/Roll Number: .....
Guidance for Candidate	<p><b>To meet this standard, you are required to complete the following within the given time frame (for practical demonstration &amp; assessment):</b></p> <p><b>19. Assessment Task 1:</b> Operate controls.</p> <p><b>20. Assessment Task 2:</b> Apply Grading fundamentals.</p> <p><b>21. Assessment Task 3:</b> Form and handle windrows.</p> <p><b>22. Assessment Task 4:</b> Strip surface materials.</p> <p><b>23. Assessment Task 5:</b> Cut and fill material.</p> <p><b>24. Assessment Task 6:</b> Maintain access roads.</p> <p><b>25. Assessment Task 7:</b> Create slopes.</p> <p><b>26. Assessment Task 8:</b> Create ditches.</p> <p><b>27. Assessment Task 9:</b> Create shouldering.</p> <p><b>28. Assessment Task 10:</b> Form sub-grade.</p> <p><b>29. Assessment Task 11:</b> Place aggregates to specified elevations (finish grading).</p> <p><b>30. Assessment Task 12:</b> Clear snow and ice.</p> <p><b>And complete:</b></p> <p><b>31. Knowledge assessment test (Written or Oral).</b></p> <p><b>32. Portfolios at the time of assessment (if any).</b></p>
Minimum Evidence Required	<p><b>During a practical assessment, under observation by an assessor, you will complete:</b></p> <p><b>Assessment Task 1: Operate controls.</b></p> <p>Performance Criteria 1: Operate controls smoothly and safely.</p> <p>Performance Criteria 2: Operate different operating controls simultaneously as instructed by assessor.</p>

	<p><b>Assessment Task 2: Apply Grading fundamentals.</b></p> <p>Performance Criteria 1: Operate wheel lean control.</p> <p>Performance Criteria 2: Operate frame articulation as per instructions.</p> <p>Performance Criteria 3: Select gear according to engine speed as per instructions.</p> <p>Performance Criteria 4: Apply grading tips.</p>
	<p><b>Assessment Task 3: Form and handle windrows.</b></p> <p>Performance Criteria 1: Select gear according to engine speed as per instructions.</p> <p>Performance Criteria 2: Adjust blade position.</p> <p>Performance Criteria 3: Cut material to form a windrow.</p> <p>Performance Criteria 4: Spread material back over area.</p>
	<p><b>Assessment Task 4: Strip surface materials.</b></p> <p>Performance Criteria 1: Identify waste layer from structural layer.</p> <p>Performance Criteria 2: Strip waste materials (usually organic) as per instructions of assessor.</p> <p>Performance Criteria 3: Make windrows of stripped material.</p> <p>Performance Criteria 4: Enter and exit machine.</p>
	<p><b>Assessment Task 5: Cut and fill material.</b></p> <p>Performance Criteria 1: Identify the height of cut and depth of fill.</p> <p>Performance Criteria 2: Select blade tilt, angel and height.</p> <p>Performance Criteria 3: Cut heights as per instructions of assessor.</p> <p>Performance Criteria 4: Select blade load as per available power traction.</p> <p>Performance Criteria 5: Move material to low areas.</p> <p>Performance Criteria 6: Grade area as per instructions of assessor to desired profile.</p>

	<p><b>Assessment Task 6: Maintain access roads.</b></p> <p>Performance Criteria 1: Identify drainage structures, culverts and obstacles.</p> <p>Performance Criteria 2: Make windrow to allow traffic to continue.</p> <p>Performance Criteria 3: Select blade position, wheel lean, articulation, gear and speed.</p> <p>Performance Criteria 4: Reshape and recover materials for the road surface.</p> <p>Performance Criteria 5: Cut shoulders and move material to center or from one side to another.</p>
	<p><b>Assessment Task 7: Create slopes.</b></p> <p>Performance Criteria 1: Identify slope dimensions as per instructions of assessor.</p> <p>Performance Criteria 2: Identify grade checking instruments.</p> <p>Performance Criteria 3: Select blade position, wheel lean, articulation, gear and speed.</p> <p>Performance Criteria 4: Smooth the area at the base of the slope for smooth working platform.</p> <p>Performance Criteria 5: Start at the top of slope.</p> <p>Performance Criteria 6: Shape the shoulder accurately.</p>
	<p><b>Assessment Task 8: Create ditches.</b></p> <p>Performance Criteria 1: Identify profile using grade checking instruments.</p> <p>Performance Criteria 2: Select blade position, wheel lean, articulation, gear and speed.</p> <p>Performance Criteria 3: Shape ditch by repeated passes.</p>
	<p><b>Assessment Task 9: Create shouldering.</b></p> <p>Performance Criteria 1: Select blade position, wheel lean, articulation, gear and speed.</p> <p>Performance Criteria 2: Position grader with outer tires on pavement, and inner tires just off pavement on shoulder for left side shoulder.</p> <p>Performance Criteria 3: Position grader with inner tires on pavement, and outer tires just off pavement on shoulder for right side shoulder.</p> <p>Performance Criteria 4: Move material to pavement edge to dress the shoulder.</p> <p>Performance Criteria 5: Roll the windrow back away from the pavement edge.</p> <p>Performance Criteria 6: Shape the shoulder accurately.</p>



	<div data-bbox="375 611 868 645" data-label="Section-Header"> <p><b>Assessment Task 10: Form sub-grade.</b></p> </div> <div data-bbox="454 689 1377 969" data-label="List-Group"> <ul style="list-style-type: none"> <li>Performance Criteria 1: Select blade tilt, angel and height.</li> <li>Performance Criteria 2: Select blade load as per available power traction.</li> <li>Performance Criteria 3: Remove unsuitable material.</li> <li>Performance Criteria 4: Cut and fill load bearing soils to create desired profile.</li> <li>Performance Criteria 5: Shape for drainage and ditch as required.</li> </ul> </div> <div data-bbox="375 1046 1382 1079" data-label="Section-Header"> <p><b>Assessment Task 11: Place aggregates to specified elevations (finish grading).</b></p> </div> <div data-bbox="454 1120 1331 1574" data-label="List-Group"> <ul style="list-style-type: none"> <li>Performance Criteria 1: Identify profile with grade checking instruments.</li> <li>Performance Criteria 2: Identify correct volume for the efficient placement.</li> <li>Performance Criteria 3: Position for efficient spreading.</li> <li>Performance Criteria 4: Identify correct volume of aggregates.</li> <li>Performance Criteria 5: Shift the circle and blade towards the piles.</li> <li>Performance Criteria 6: Cut out windrows without tire spinning.</li> <li>Performance Criteria 7: Angle the blade as per instructions of assessor.</li> <li>Performance Criteria 8: Precise control to achieve elevations and shape.</li> </ul> </div>
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	<p><b>Assessment Task 12: Clear snow and ice.</b></p> <p>Performance Criteria 1: Identify proper attachment, as chains, V-plow, wing plow, skid shoes and wing gates.</p> <p>Performance Criteria 2: Identify snow type, moisture content, density, weight, depth of snow, underlying surface, weather, visibility, traffic, obstacles and hidden structures.</p> <p>Performance Criteria 3: Mount chain on tires carefully.</p> <p>Performance Criteria 4: Drive the machine in higher speed to move snow across and off the blade.</p>
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	<p><b>Portfolios required at the time of assessment (if any) for</b></p> <p>Performance criteria 1 for the evaluation of portfolio:</p> <p>Submit log book or activity record (practical journal, project, pictures etc.) completed during the training.</p>
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**Assessors Judgment Guide** (to be completed by the Assessor and signed both by the assessor and the candidate after the assessment)

**073200596 Operate Motor Grader**

Candidate Details	Name: ..... Registration/Roll Number: ..... Candidate's Signature: .....
Assessment Outcome	COMPETENT <input type="checkbox"/> NOT YET COMPETENT <input type="checkbox"/> Name of Assessor: ..... Assessor's code: ..... Signature of the Assessor: .....

Assessment Summary (to be filled by the assessor)							
Activity	Method					Result	
Nature of Activity	Written	Oral	Observation	Portfolio	Role Play	Competent	Not Yet Competent
Practical Skill Demonstration							
Knowledge Assessment							
Other Requirement							

Each Assessment Task (with performance criteria)				
Assessment Task 1		Description of assessment task 1 <b>Operate Controls</b>		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1	Performance Criteria 1: Operated controls smoothly and safely.			
2	Performance Criteria 2: Operated different operating controls simultaneously as instructed by assessor.			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		

Assessment Task 2		Description of assessment task 2 <b>Apply Grading Fundamentals</b>		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1	Performance Criteria 1: Operated wheel lean control.			
2	Performance Criteria 2: Operated frame articulation as per instructions.			
3	Performance Criteria 3: Selected gear according to engine speed as per instructions.			
4	Performance Criteria 4: Applied grading tips.			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		

Assessment Task 3		Description of assessment task 3 <b>Form and handle windrows</b>		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1	Performance Criteria 1: Selected gear according to engine speed as per instructions.			
2	Performance Criteria 2: Adjusted blade position.			
3	Performance Criteria 3: Cut material to form a windrow.			
4	Performance Criteria 4: Spread material back over area.			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		

Assessment Task 4		Description of assessment task 4 <b>Strip surface materials</b>		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1	Performance Criteria 1: Identified waste layer from structural layer.			
2	Performance Criteria 2: Stripped waste materials (usually organic) as per instructions of assessor.			
3	Performance Criteria 3: Made windrows of stripped material.			
4	Performance Criteria 4: Entered and exit machine safely.			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		

Assessment Task5		Description of assessment task5 <b>Cut and fills materials</b>		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1.	Performance Criteria 1: Identified the height of cut and depth of fill.			
2.	Performance Criteria 2: Selected blade tilt, angel and height.			
3.	Performance Criteria 3: Cut heights as per instructions of assessor.			
4	Performance Criteria 4: Selected blade load as per available power traction.			
5	Performance Criteria 5: Moved material to low areas.			
6	Performance Criteria 6: Grade area as per instructions of assessor to desired profile.			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		

Assessment Task 6		Description of assessment task6 <b>Maintain access roads</b>		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1	Performance Criteria 1: Identified drainage structures, culverts and obstacles.			
2	Performance Criteria 2: Made windrow to allow traffic to continue.			
3	Performance Criteria 3: Selected blade position, wheel lean, articulation, gear and speed.			
4	Performance Criteria 4: Reshaped and recover materials for the road surface.			
5	Performance Criteria 5: Cut shoulders and move material to center or from one side to another.			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		

Assessment Task 7		Description of assessment task 7 <b>Create slopes</b>		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1	Performance Criteria 1: Identified slope dimensions as per instructions of assessor.			
2	Performance Criteria 2: Identified grade checking instruments.			
3	Performance Criteria 3: Selected blade position, wheel lean, articulation, gear and speed.			
4	Performance Criteria 4: Smoothed the area at the base of the slope for smooth working platform.			
5	Performance Criteria 5: Started at the top of slope.			
6	Performance Criteria 6: Shaped the shoulder accurately.			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		

Assessment Task8		Description of assessment task8 <b>Create ditches</b>		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1	Performance Criteria 1: Identified profile using grade checking instruments.			
2	Performance Criteria 2: Selected blade position, wheel lean, articulation, gear and speed.			
3	Performance Criteria 3: Shaped ditch by repeated passes.			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		

Assessment Task 9		Description of assessment task 9 <b>Create shouldering</b>		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1.	Performance Criteria 1: Selected blade position, wheel lean, articulation, gear and speed.			
2.	Performance Criteria 2: Positioned grader with outer tires on pavement, and inner tires just off pavement on shoulder for left side shoulder.			
3.	Performance Criteria 3: Positioned grader with inner tires on pavement, and outer tires just off pavement on shoulder for right side shoulder.			
4	Performance Criteria 4: Moved material to pavement edge to dress the shoulder.			
5	Performance Criteria 5: Rolled the windrow back away from the pavement edge.			
6	Performance Criteria 6: Shaped the shoulder accurately.			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		

Assessment Task 10		Description of assessment task 10 <b>Form sub-Grade</b>		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1	Performance Criteria 1: Selected blade tilt, angel and height.			
2	Performance Criteria 2: Selected blade load as per available power traction.			
3	Performance Criteria 3: Removed unsuitable material.			
4	Performance Criteria 4: Cut and fill load bearing soils to create desired profile.			
5	Performance Criteria 5: Shaped for drainage and ditch as required.			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		

Assessment Task 11		Description of assessment task 11 <b>Place aggregates to specified elevations (finish grading)</b>		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1	Performance Criteria 1: Identified profile with grade checking instruments.			
2	Performance Criteria 2: Identified correct volume for the efficient placement.			
3	Performance Criteria 3: Positioned for efficient spreading.			
4	Performance Criteria 4: Identified correct volume of aggregates.			
5	Performance Criteria 5: Shifted the circle and blade towards the piles.			
6	Performance Criteria 6: Cut out windrows without tire spinning.			
7	Performance Criteria 7: Angled the blade as per instructions of assessor.			
8	Performance Criteria 8: Precise control to achieve elevations and shape.			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		



Assessment Task 12		Description of assessment task 12 <b>Clear snow and ice</b>		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1	Performance Criteria 1: Identified proper attachment, as chains, V-plow, wing plow, skid shoes and wing gates.			
2	Performance Criteria 2: Identified snow type, moisture content, density, weight, depth of snow, underlying surface, weather, visibility, traffic, obstacles and hidden structures.			
3	Performance Criteria 3: Mounted chain on tires carefully.			
4	Performance Criteria 4: Drive the machine in higher speed to move snow across and off the blade.			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		

Portfolio (if any)		Description of portfolio		
Current <input type="checkbox"/> Sufficient <input type="checkbox"/> Authentic <input type="checkbox"/> Valid <input type="checkbox"/> Reliable <input type="checkbox"/>				
Portfolio meet the following performance standards:		Yes	No	Remarks
1	Performance criteria for the evaluation of portfolio: Submitted log book or activity record (practical journal, project, pictures etc.) completed during the training.			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		

<b>Title of Qualification:</b> National Vocational Certificate level 4 in Heavy Machine Operator	CS Code:	Level: 4	Version: 1 (2019)
<b>Competency Standard Title:</b> <b>073200596 Operate Motor Grader</b>	<b>Assessment Date (DD/MM/YY):</b> --/--/--		

Guidance for Candidate	<b>To complete your assessment for this Competency Standard, you need to answer the questions on the following pages successfully.</b>
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**Assessors Guide** (to be completed by the Assessor and signed both by the assessor and the candidate after the assessment)

Candidate Details	Name:.....Registration/Roll Number: .....  Candidate's Signature:.....
Written Assessment Outcome	COMPETENT <input type="checkbox"/> NOT YET COMPETENT <input type="checkbox"/>  Name of the Assessor:.....Assessor's code:.....  Signature of the Assessor: .....

**Feedback to the candidate on assessment.**

<hr/> <hr/> <hr/> <hr/>	
Candidate Signature.....	Assessor Signature .....

<b>Title of Qualification:</b> National Vocational Certificate level 4 in <b>Heavy Machine Operator</b>	CS Code:	Level: 4	Version: 1 (2019)
<b>Competency Standard Title:</b>  <b>073200596 Operate Motor Grader</b>	<b>Assessment Date (DD/MM/YY):</b> --/--/--		

## WRITTEN ASSESSMENT

Question	Candidate's answer
11. Describes types of Motor Grader?	
12. Describes components of Motor Grader and their functions?	
13. Describes capacities & capabilities of Motor Grader?	

Question	Candidate's answer
<p>14. Describes attachments of Motor Grader and their purposes?</p>	
<p>15. Describes basic tools and supplies of Motor Grader?</p>	
<p>16. Describe safety equipment of Motor Grader?</p>	
<p>17. Write down daily maintenance works of Motor Grader?</p>	

Question	Candidate's answer
<p>18. Write down emergency shut-down procedure of Motor Grader?</p>	
<p>19. Explain basic operating functions of Motor Grader?</p>	
<p>20. Write down Pre start checks, startup and shutdown procedures of Motor Grader?</p>	

<b>Title of Qualification:</b> National Vocational Certificate level 4, <b>In Heavy Machine Operator</b>	CS Code:	Level: 4	Version: 1 (2019)
<b>Competency Standard Title:</b> <b>073200597 Plan Work</b>	<b>Assessment Date (DD/MM/YY):</b>		

Candidate Details	Name: .....  Registration/Roll Number: .....
Guidance for Candidate	<p><b>To meet this standard, you are required to complete the following within the given time frame (for practical demonstration &amp; assessment):</b></p> <p><b>33. Assessment Task 1:</b> Assess site hazards.</p> <p><b>34. Assessment Task 2:</b> Ensure work procedures.</p> <p><b>35. Assessment Task 3:</b> Follow symbols and markings.</p> <p><b>36. Assessment Task 4:</b> Follow survey markers, construction grades, and stakes.</p> <p><b>37. Assessment Task 5:</b> Monitor Drawings and plans.</p> <p><b>38. Assessment Task 6:</b> Develop environmental concerns with site personnel.</p> <p><b>39. Assessment Task 7:</b> Demonstrate grades and stakes.</p> <p><b>40. Assessment Task 8:</b> Demonstrate grade checking devices.</p> <p><b>41. Assessment Task 9:</b> Review job specifications and safety considerations with site personnel.</p> <p><b>And complete:</b></p> <p><b>42. Knowledge assessment test (Written or Oral).</b></p> <p><b>43. Portfolios at the time of assessment (if any).</b></p>
Minimum Evidence Required	<p><b>During a practical assessment, under observation by an assessor, you will complete:</b></p> <p><b>Assessment Task 1: Assess site hazards.</b></p> <p>Performance Criteria 1: Inspect site visually.</p> <p>Performance Criteria 2: Identify actual and potential hazards.</p>

	<p><b>Assessment Task 2: Ensure work procedures.</b></p> <p>Performance Criteria 1: Identify equipment and attachments needed to do the job.</p> <p>Performance Criteria 2: Identify appropriate starting point.</p> <p>Performance Criteria 3: Identify access and exit points on site.</p> <p>Performance Criteria 4: Plan work procedures for efficiency, effectiveness and safety.</p> <p>Performance Criteria 5: Sequence job tasks to co-ordinate activities with others.</p>
	<p><b>Assessment Task 3: Follow symbols and markings.</b></p> <p>Performance Criteria 1: Identify survey markers, grade and stakes.</p> <p>Performance Criteria 2: Differentiate between survey markers, construction grades and stakes.</p>
	<p><b>Assessment Task 4: Follow survey markers, construction grades, and stakes.</b></p> <p>Performance Criteria 1: Recognize symbols.</p> <p>Performance Criteria 2: Identify markings on job site.</p>
	<p><b>Assessment Task 5: Monitor Drawings and plans.</b></p> <p>Performance Criteria 1: Perform metric and imperial measurements.</p> <p>Performance Criteria 2: Interpret abbreviations and symbols common to civil drawings.</p> <p>Performance Criteria 3: Distinguish between plan, side view and section.</p> <p>Performance Criteria 4: Determine scale and north orientation.</p>
	<p><b>Assessment Task 6: Develop environmental concerns with site personnel.</b></p> <p>Performance Criteria 1: Identify actual and potential environmental concerns, such as proximity to water courses, noise levels, fuel leaks and hazardous materials.</p> <p>Performance Criteria 2: Communicate with site supervisor.</p>

	<p><b>Assessment Task 7: Demonstrate grades and stakes.</b></p> <p>Performance Criteria 1: Interpret symbols and markings on stakes.</p> <p>Performance Criteria 2: Mark stakes/surface with appropriate symbols or markings, such as colored paint and ribbons.</p>
	<p><b>Assessment Task 8: Demonstrate grade checking devices.</b></p> <p>Performance Criteria 1: Check grades using information on stakes and site plans.</p> <p>Performance Criteria 2: Identify laser levels, sight levels and line (also known as string levels).</p>
	<p><b>Assessment Task 9: Review job specifications and safety considerations with site personnel.</b></p> <p>Performance Criteria 1: Communicate with site supervisor to confirm job specifications.</p> <p>Performance Criteria 2: Identify safety concerns, such as location of utilities.</p>
	<p><b>Portfolios required at the time of assessment (if any) for</b></p> <p>Performance criteria for the evaluation of portfolio:</p> <p>Submit log book or activity record (practical journal, project, pictures etc.) completed during the training.</p>



**Assessors Judgment Guide** (to be completed by the Assessor and signed both by the assessor and the candidate after the assessment)

**073200597 Plan Work**

Candidate Details	Name: ..... Registration/Roll Number: ..... Candidate's Signature: .....
Assessment Outcome	COMPETENT <input type="checkbox"/> NOT YET COMPETENT <input type="checkbox"/> Name of Assessor: ..... Assessor's code: ..... Signature of the Assessor: .....

Assessment Summary (to be filled by the assessor)							
Activity	Method					Result	
Nature of Activity	Written	Oral	Observation	Portfolio	Role Play	Competent	Not Yet Competent
Practical Skill Demonstration							
Knowledge Assessment							
Other Requirement							

Each Assessment Task (with performance criteria)					
Assessment Task 1		Description of assessment task 1 <b>Assess site hazards</b>			
During the practical assessment, candidate demonstrated the following:			Yes	No	Remarks
1	Performance Criteria 1: Inspected site visually.				
2	Performance Criteria 2: Identified actual and potential hazards.				
Competent <input type="checkbox"/>			Not Yet Competent <input type="checkbox"/>		

Assessment Task 2		Description of assessment task 2 <b>Ensure work procedures</b>		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1	Performance Criteria 1: Identified equipment and attachments needed to do the job.			
2	Performance Criteria 2: Identified appropriate starting point.			
3	Performance Criteria 3: Identified access and exit points on site.			
4	Performance Criteria 4: Planned work procedures for efficiency, effectiveness and safety.			
5	Performance Criteria 5: Sequenced job tasks to co-ordinate activities with others.			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		

Assessment Task 3		Description of assessment task 3 <b>Follow symbols and markings</b>		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1	Performance Criteria 1: Identified survey markers, grade and stakes.			
2	Performance Criteria 2: Differentiated between survey markers, construction grades and stakes.			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		

Assessment Task 4		Description of assessment task 4 <b>Follow survey markers, construction grades, and stakes</b>		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1	Performance Criteria 1: Recognized symbols.			
2	Performance Criteria 2: Identified markings on job site.			

Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>	
Assessment Task 5		Description of assessment task 5 <b>Monitor Drawings and plans</b>	
During the practical assessment, candidate demonstrated the following:		Yes	No
1.	Performance Criteria 1: Performed metric and imperial measurements.		
2.	Performance Criteria 2: Interpreted abbreviations and symbols common to civil drawings.		
3.	Performance Criteria 3: Distinguished between plan, side view and section.		
4	Performance Criteria 4: Determined scale and north orientation.		
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>	

Assessment Task 6		Description of assessment task6 <b>Develop environmental concerns with site personnel</b>	
During the practical assessment, candidate demonstrated the following:		Yes	No
1	Performance Criteria 1: Identified actual and potential environmental concerns, such as proximity to water courses, noise levels, fuel leaks and hazardous materials.		
2	Performance Criteria 2: Communicated with site supervisor.		
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>	

Assessment Task 7		Description of assessment task 7 <b>Demonstrate grades and stakes</b>		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1	Performance Criteria 1: Interpreted symbols and markings on stakes.			
2	Performance Criteria 2: Marked stakes/surface with appropriate symbols or markings, such as colored paint and ribbons.			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		

  

Assessment Task8		Description of assessment task8 <b>Demonstrate grade checking devices</b>		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1	Performance Criteria 1: Checked grades using information on stakes and site plans.			
2	Performance Criteria 2: Identified laser levels, sight levels and line (also known as string levels).			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		

Assessment Task 9		Description of assessment task 9 <b>Review job specifications and safety considerations with site personnel</b>		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
1.	Performance Criteria 1: Communicated with site supervisor to confirm job specifications.			
2.	Performance Criteria 2: Identified safety concerns, such as location of utilities.			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		

Portfolio (if any)		Description of portfolio		
Current <input type="checkbox"/> Sufficient <input type="checkbox"/> Authentic <input type="checkbox"/> Valid <input type="checkbox"/> Reliable <input type="checkbox"/>				
Portfolio meet the following performance standards:		Yes	No	Remarks
1	Performance criteria for the evaluation of portfolio: Submitted log book or activity record (practical journal, project, pictures etc.) completed during the training.			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		

<b>Title of Qualification:</b> National Vocational Certificate level 4 in Heavy Machine Operator	<b>CS Code:</b>	<b>Level:</b> 4	<b>Version:</b> 1 (2019)
<b>Competency Standard Title:</b> <b>073200597 Plan Work</b>	<b>Assessment Date (DD/MM/YY):</b> --/--/--		

Guidance for Candidate	<b>To complete your assessment for this Competency Standard, you need to answer the questions on the following pages successfully.</b>
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**Assessors Guide** (to be completed by the Assessor and signed both by the assessor and the candidate after the assessment)

Candidate Details	<p>Name: ..... Registration/Roll Number: .....</p> <p>Candidate's Signature: .....</p>
Written Assessment Outcome	<p>COMPETENT <input type="checkbox"/> NOT YET COMPETENT <input type="checkbox"/></p> <p>Name of the Assessor: ..... Assessor's code: .....</p> <p>Signature of the Assessor: .....</p>

**Feedback to the candidate on assessment.**

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Candidate Signature..... Assessor Signature .....	

<b>Title of Qualification:</b> National Vocational Certificate level 4 in <b>Heavy Machine Operator</b>	CS Code:	Level:4	Version: 1 (2019)
<b>Competency Standard Title:</b>  <b>073200597 Plan Work</b>	<b>Assessment Date (DD/MM/YY):</b> --/--/--		

## WRITTEN ASSESSMENT

Question	Candidate's answer
21. Define engineering & survey terminologies?	
22. Describe common aggregates and types?	
23. Describe compaction practice & equipment?	

Question	Candidate's answer
<p>24. Explain drawings/sketches, plans &amp; layouts?</p>	
<p>25. Explain symbols, marking, construction grades and stakes?</p>	



<b>Title of Qualification:</b> National Vocational Certificate level 4, In Heavy Machine Operator	CS Code: 0732CON06	Level: 4	Version: 1 (2019)
<b>Competency Standard Title:</b> <b>Summative Assessment HMO NVQF Level-4</b>	<b>Assessment Date (DD/MM/YY):</b>		

Candidate Details	Name: .....  Registration/Roll Number: .....
Guidance for Candidate	<p><b>To meet this standard, you are required to complete the following within the given time frame (for practical demonstration &amp; assessment):</b></p> <p><b>1. Assessment Task:</b> In a given situation to  <b>A. Operate Wheel/Crawler Excavator.</b>  <b>B. Operate Motor Grader.</b></p> <p><b>And complete:</b></p> <p><b>1. Knowledge assessment test (Written or Oral).</b>  <b>2. Portfolios at the time of assessment (if any).</b></p>
Minimum Evidence Required	<p>During a practical assessment, under observation by an assessor, you are required to  <b>A. Operate Wheel/Crawler Excavator. B. Operate Motor Grader.</b> demonstrating the following criteria:</p> <p><b>A. Operate Wheel/Crawler Excavator</b></p> <p>Operate different operating controls simultaneously as per assessor instructions.</p> <p><b>Install Attachments with Excavator</b></p> <p>Performance Criteria 1: Position equipment and attachment for installation.  Performance Criteria 2: Install attachments safely.</p> <p><b>Create Slopes</b></p> <p>Performance Criteria 3: Interpret dimensions of slope.  Performance Criteria 4: Fill cuts in the slope with a partial bucket technique.</p> <p><b>Create Mass Excavation</b></p> <p>Performance Criteria 5: Perform straight edges and stable sides.  Performance Criteria 6: Dig offset from footing location.</p>

Minimum Evidence Required	<p>Performance Criteria 7: Keep the machine level.</p> <p>Performance Criteria 8: Perform partial bucket technique.</p> <p><b>Excavate Trenches</b></p> <p>Performance Criteria 9: Maintain equipment in stable position and correct location for job.</p> <p>Performance Criteria 10: Excavate trench as per instructions.</p> <p><b>Excavate Ditches</b></p> <p>Performance Criteria 11: Excavate ditch as per instructions.</p> <p><b>Load Trucks</b></p> <p>Performance Criteria 12: Align according to the position of truck.</p> <p>Performance Criteria 13: Load transport vehicles in accordance with job specifications.</p> <p><b>Cut and Fills Materials</b></p> <p>Performance Criteria 14: Cut and fill material as per instructions of assessor.</p> <p>Performance Criteria 15: Tamp the filled material.</p> <p><b>Excavate and Back Fills Trenches</b></p>
Minimum Evidence Required	<p>Performance Criteria 16: Level the material.</p> <p>Performance Criteria 17: Backfill trenches/excavations as per instructions of assessor.</p> <p><b>B. Operate Motor Grader.</b></p> <p>Operate different operating controls simultaneously as instructed by assessor</p> <p><b>Strip surface materials</b></p> <p>Performance Criteria 1: Strip waste materials (usually organic) as per instructions of assessor</p> <p>Performance Criteria 2: Make windrows of stripped material</p> <p><b>Cut and fill material.</b></p> <p>Performance Criteria 3: Select blade tilt, angel and height</p> <p>Performance Criteria 4: Cut heights as per instructions of assessor</p> <p>Performance Criteria 5: Select blade load as per available power traction</p> <p>Performance Criteria 6: Move material to low areas</p> <p>Performance Criteria 7: Grade area as per instructions of assessor to desired profile</p> <p><b>Create slopes</b></p>

	<p>Performance Criteria 8: Identify slope dimensions as per instructions of assessor</p> <p>Performance Criteria 9: Select blade position, wheel lean, articulation, gear and speed</p> <p>Performance Criteria 10: Smooth the area at the base of the slope for smooth working platform</p> <p>Performance Criteria 11: Start at the top of slope</p> <p>Performance Criteria 12: Shape the shoulder accurately</p> <p><b>Form road base (sub-grade).</b></p> <p>Performance Criteria 13: Select blade tilt, angel and height</p> <p>Performance Criteria 14: Select blade load as per available power traction</p> <p>Performance Criteria 15: Remove unsuitable material</p> <p>Performance Criteria 16: Cut and fill load bearing soils to create desired profile</p> <p>Performance Criteria 17: Shape for drainage and ditch as required</p> <p><b>Place aggregates to specified elevations (finish grading)</b></p> <p>Performance Criteria 18: Identify profile with grade checking instruments</p> <p>Performance Criteria 19: Position for efficient spreading</p> <p>Performance Criteria 20: Shift the circle and blade towards the piles</p> <p>Performance Criteria 21: Cut out windrows without tire spinning</p> <p>Performance Criteria 22: Angle the blade as per instructions of assessor</p> <p>Performance Criteria 23: Precise control to achieve elevations and shape</p>
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	<p><b>Portfolios required at the time of assessment (if any) for</b></p> <p>Performance criteria 1 for the evaluation of portfolio: Submit log book or activity record (practical journal, project, pictures etc.) completed during the training.</p>
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*Continued on following page*

## Self-Assessment Checklist

<b>Candidate Name</b>	
<b>Registration No.</b>	
<b>Qualification</b>	National Vocational Certificate Level- 4 in <b>Heavy Machine Operator</b>
<b>Purpose of Assessment</b>	<b>Summative Assessment</b>
<b>Assessment Task</b>	<b>A. Operate Wheel/Crawler Excavator.</b> <b>B. Operate Motor Grader.</b> C. Knowledge Assessment

can.....

Performance Criteria	Yes	No
<b>A. Operate Wheel/Crawler Excavator.</b>		
<b>P1.</b> Position equipment and attachment for installation.	<input type="checkbox"/>	<input type="checkbox"/>
<b>P2.</b> Install attachments safely.	<input type="checkbox"/>	<input type="checkbox"/>
<b>P3.</b> Interpret dimensions of slope.	<input type="checkbox"/>	<input type="checkbox"/>
<b>P4.</b> Fill cuts in the slope with a partial bucket technique.	<input type="checkbox"/>	<input type="checkbox"/>
<b>P5.</b> Perform straight edges and stable sides.	<input type="checkbox"/>	<input type="checkbox"/>
<b>P6.</b> Dig offset from footing location.	<input type="checkbox"/>	<input type="checkbox"/>
<b>P7.</b> Keep the machine level.	<input type="checkbox"/>	<input type="checkbox"/>
<b>P8.</b> Perform partial bucket technique.	<input type="checkbox"/>	<input type="checkbox"/>
<b>P9.</b> Maintain equipment in stable position and correct location for job.	<input type="checkbox"/>	<input type="checkbox"/>
<b>P10.</b> Excavate trench as per instructions.	<input type="checkbox"/>	<input type="checkbox"/>
<b>P11.</b> Excavate ditch as per instructions.	<input type="checkbox"/>	<input type="checkbox"/>
<b>P12.</b> Align according to the position of truck.	<input type="checkbox"/>	<input type="checkbox"/>
<b>P13.</b> Load transport vehicles in accordance with job specifications.	<input type="checkbox"/>	<input type="checkbox"/>
<b>P14.</b> Cut and fill material as per instructions of assessor.	<input type="checkbox"/>	<input type="checkbox"/>
<b>P15.</b> Tamp the filled material.	<input type="checkbox"/>	<input type="checkbox"/>
<b>P16.</b> Level the material.	<input type="checkbox"/>	<input type="checkbox"/>
<b>P17.</b> Backfill trenches/excavations as per instructions of assessor.	<input type="checkbox"/>	<input type="checkbox"/>
<b>B. Operate Motor Grader.</b>		
<b>P1.</b> Strip waste materials (usually organic) as per instructions of assessor.	<input type="checkbox"/>	<input type="checkbox"/>
<b>P2.</b> Make windrows of stripped material.	<input type="checkbox"/>	<input type="checkbox"/>
<b>P3.</b> Select blade tilt, angel and height.	<input type="checkbox"/>	<input type="checkbox"/>
<b>P4.</b> Cut heights as per instructions of assessor.	<input type="checkbox"/>	<input type="checkbox"/>
<b>P5.</b> Select blade load as per available power traction.	<input type="checkbox"/>	<input type="checkbox"/>

<b>P6.</b> Move material to low areas.	<input type="checkbox"/>	<input type="checkbox"/>
<b>P7.</b> Grade area as per instructions of assessor to desired profile.	<input type="checkbox"/>	<input type="checkbox"/>
<b>P8.</b> Identify slope dimensions as per instructions of assessor.	<input type="checkbox"/>	<input type="checkbox"/>
<b>P9.</b> Select blade position, wheel lean, articulation, gear and speed.	<input type="checkbox"/>	<input type="checkbox"/>
<b>P10.</b> Smooth the area at the base of the slope for smooth working platform.	<input type="checkbox"/>	<input type="checkbox"/>
<b>P11.</b> Start at the top of slope.	<input type="checkbox"/>	<input type="checkbox"/>
<b>P12.</b> Shape the shoulder accurately.	<input type="checkbox"/>	<input type="checkbox"/>
<b>P13.</b> Select blade tilt, angel and height.	<input type="checkbox"/>	<input type="checkbox"/>
<b>P14.</b> Select blade load as per available power traction.	<input type="checkbox"/>	<input type="checkbox"/>
<b>P15.</b> Remove unsuitable material.	<input type="checkbox"/>	<input type="checkbox"/>
<b>P16.</b> Cut and fill load bearing soils to create desired profile.	<input type="checkbox"/>	<input type="checkbox"/>
<b>P17.</b> Shape for drainage and ditch as required.	<input type="checkbox"/>	<input type="checkbox"/>
<b>P18.</b> Identify profile with grade checking instruments.	<input type="checkbox"/>	<input type="checkbox"/>
<b>P19.</b> Position for efficient spreading.	<input type="checkbox"/>	<input type="checkbox"/>
<b>P20.</b> Shift the circle and blade towards the piles.	<input type="checkbox"/>	<input type="checkbox"/>
<b>P21.</b> Cut out windrows without tire spinning.	<input type="checkbox"/>	<input type="checkbox"/>
<b>P22.</b> Angle the blade as per instructions of assessor.	<input type="checkbox"/>	<input type="checkbox"/>
<b>P23.</b> Precise control to achieve elevations and shape.	<input type="checkbox"/>	<input type="checkbox"/>

Candidate's Signature \_\_\_\_\_ Assessor's Signature \_\_\_\_\_

Date: \_\_\_\_\_

**Assessors Judgment Guide** (to be completed by the Assessor and signed both by the assessor and the candidate after the assessment)

Candidate Details	Name: ..... Registration/Roll Number: ..... Candidate's Signature: .....
Assessment Outcome	COMPETENT <input type="checkbox"/> NOT YET COMPETENT <input type="checkbox"/> Name of the Assessor: ..... Assessor's code: ..... Signature of the Assessor: .....

Assessment Summary (to be filled by the assessor)							
Activity	Method					Result	
Nature of Activity	Written	Oral	Observation	Portfolio	Role Play	Competent	Not Yet Competent
Practical Skill Demonstration							
Knowledge Assessment							
Other Requirement							

Each Assessment Task (with performance criteria)				
Assessment Task		Description of assessment task <b>A. Operate Wheel/Crawler Excavator.</b> <b>B. Operate Motor Grader.</b>		
During the practical assessment, candidate demonstrated the following:		Yes	No	Remarks
Operate Wheel/Crawler Excavator				
1	Performance Criteria 1: Positioned equipment and attachment for installation.			
2	Performance Criteria 2: Installed attachments safely.			
3	Performance Criteria 3: Interpreted dimensions of slope.			
4	Performance Criteria 4: Filled cuts in the slope with a partial bucket technique.			
5	Performance Criteria 5: Performed straight edges and stable sides.			
6	Performance Criteria 6: Dig offset from footing location.			
7	Performance Criteria 7: Keep the machine level.			
8	Performance Criteria 8: Performed partial bucket technique.			
9	Performance Criteria 9: Maintained equipment in stable position and correct location for job.			
10	Performance Criteria 10: Excavated trench as per instructions.			
11	Performance Criteria 11: Excavated ditch as per instructions.			
12	Performance Criteria 12: Aligned according to the position of truck.			
13	Performance Criteria 13: Loaded transport vehicles in accordance with job specifications.			
14	Performance Criteria 14: Cut and fill material as per instructions of assessor.			
15	Performance Criteria 15: Tamp the filled material.			
16	Performance Criteria 16: Levelled the material.			
17	Performance Criteria 17: Backfill trenches/excavations as per instructions of assessor.			
B Operate Motor Grader				
1	Performance Criteria 1: Striped waste materials (usually organic) as per instructions of assessor.			
2	Performance Criteria 2: Made windrows of stripped material.			
3	Performance Criteria 3: Selected blade tilt, angel and height.			

4	Performance Criteria 4: Cut heights as per instructions of assessor.			
5	Performance Criteria 5: Selected blade load as per available power traction.			
6	Performance Criteria 6: Moved material to low areas.			
7	Performance Criteria 7: Grade area as per instructions of assessor to desired profile.			
8	Performance Criteria 8: Identified slope dimensions as per instructions of assessor.			
9	Performance Criteria 9: Selected blade position, wheel lean, articulation, gear and speed.			
10	Performance Criteria 10: Smooth the area at the base of the slope for smooth working platform.			
11	Performance Criteria 11: Start at the top of slope.			
12	Performance Criteria 12: Shaped the shoulder accurately.			
13	Performance Criteria 13: Selected blade tilt, angel and height.			
14	Performance Criteria 14: Selected blade load as per available power traction.			
15	Performance Criteria 15: Removed unsuitable material.			
16	Performance Criteria 16: Cut and fill load bearing soils to create desired profile.			
17	Performance Criteria 17: Shaped for drainage and ditch as required.			
18	Performance Criteria 18: Identified profile with grade checking instruments.			
19	Performance Criteria 19: Position for efficient spreading.			
20	Performance Criteria 20: Shift the circle and blade towards the piles.			
21	Performance Criteria 21: Cut out windrows without tire spinning.			
22	Performance Criteria 22: Angle the blade as per instructions of assessor.			
23	Performance Criteria 23: Precise control to achieve elevations and shape.			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		



## Knowledge Assessment

<b>Qualification</b>	National Vocational Certificate Level- 4 in <b>Heavy Machine Operator</b>
<b>Purpose of Assessment</b>	<b>Summative Assessment</b>
<b>Candidate Details</b>	Name: _____ Registration Number: _____ Signature: _____
<b>Assessment Outcome</b>	<div style="display: flex; justify-content: space-around; align-items: center;"> <span><b>COMPETENT</b> <input type="checkbox"/></span> <span><b>NOT YET COMPETENT</b> <input type="checkbox"/></span> </div> Name of the Assessor _____ Assessor's code: _____ Signature: _____

Portfolio (if any)	Description of portfolio			
Current <input type="checkbox"/>	Sufficient <input type="checkbox"/>	Authentic <input type="checkbox"/>	Valid <input type="checkbox"/>	Reliable <input type="checkbox"/>
Portfolio meet the following performance standards:		Yes	No	Remarks
1	Performance criteria 1 for the evaluation of portfolio: Submitted log book or activity record (practical journal, project, pictures etc.) completed during the training.			
Competent <input type="checkbox"/>		Not Yet Competent <input type="checkbox"/>		

<b>Questions</b> (Candidate confidently answered questions correctly and demonstrated understanding of the topics and their application)		<b>Satisfactory</b>	<b>Not Satisfactory</b>
1.	Name various attachments used with Excavator? <div style="border: 1px solid black; height: 100px; margin-top: 5px;"></div>		
2.	Name main functions of Excavator? <div style="border: 1px solid black; height: 100px; margin-top: 5px;"></div>		

3.	What is Motor Grader?		
4.	What Motor Grader is used for?		
5.	Name different components of Motor Grader?		
6.	What safety precaution will be considered when operating Excavator?		
7.	What safety precaution will be considered when operating Motor Grader?		

