

**071506T4MTM**

**MECHANICAL TECHNOLOGY AND MAINTENANCE TECHNICIAN LEVEL 6**

**ENG/OS/MEM/CR/05/6**

**Install Machine/ Equipment**

**July/August 2025**



**TVET CURRICULUM DEVELOPMENT, ASSESSMENT AND CERTIFICATION  
COUNCIL (TVET CDACC)**

**OBSERVATION CHECKLIST**

**INSTRUCTION TO ASSESSOR**

1. You are required to guide the candidate on duration of this assessment as per the department's practical assessment schedule for this unit as the assessment is to be done continuously during training.
2. You are required to mark the practical as the candidate performs the tasks.
3. You are required to take video clips at critical points.
4. Ensure the candidate has name tag and registration code at his/she back and front

## OBSERVATION CHECKLIST

<b>Candidate Registration No:</b>			
<b>Assessor's Name:</b>			
<b>Assessor's Registration Number:</b>			
<b>Venue of Assessment:</b>			
<b>Item to be evaluated:</b> Please award marks as guided. Give a brief comment on your observation.	Maximum marks	Candidate score	Remarks
<b>TASK 1: ASSEMBLE THE COMPONENTS OF THE CENTRIFUGAL PUMP.</b>			
1. Wore PPE'S as per SOPs i. Apron/dust coats ii. Goggles iii. Safety boots iv. Gloves <i>(Award marks as indicated or zero)</i>	01 01 01 01		
2. Handled tools and equipment as per workshop procedure. <i>(Award marks as indicated or zero)</i>	02		
3. Identified and prepared the work station Prepared materials and components. <i>(Award marks as indicated or zero)</i>	02 02		
4. Prepared pump assembly • Interpreted Technical drawings and geometric symbols. • Followed Installation guidelines/instructions. • Coupled the pump to the motor. (alignment and correct coupling) <i>(Award marks as indicated or zero)</i>	04 04 04		

<p>5. Checked and assembled pump adjustments as per installation specifications/manual</p> <ul style="list-style-type: none"> <li>• impeller</li> <li>• pulley</li> <li>• transmissions/coupling</li> <li>• drives/motor</li> <li>• shaft</li> <li>• suction/discharge</li> <li>• gland packing</li> <li>• bearings</li> <li>• casing</li> </ul> <p><i>(Award marks as indicated or zero)</i></p>	<p>03 02 02 01 03 03 02 02 02</p>		
<p>6. Performed house keeping</p> <ul style="list-style-type: none"> <li>• Cleaned the work station</li> <li>• Cleaned the tools and equipment.</li> <li>• Cleaned the Pump.</li> <li>• Disposed any waste as per workshop policy</li> </ul> <p><i>(Award marks as indicated or zero)</i></p>	<p>02 02 02 03</p>		
<b>Sub-total 1</b>	51		
<b>TASK 2: PREPARE CONCRETE INSTALLATION SITE/PLINTH FOR THE PUMP</b>			
<p>7. Wore PPE'S as per SOPs</p> <ul style="list-style-type: none"> <li>i. Apron/dust coats</li> <li>ii. Goggles</li> <li>iii. Safety boots</li> <li>iv. Gloves</li> </ul> <p><i>(Award marks as indicated or zero)</i></p>	<p>01 01 01 01</p>		

8. Handled tools and equipment as per workshop procedure. (Award marks as indicated or zero)	02		
9. Prepared machinery installation site			
i. Surveyed the site.	02		
ii. Identified correct site location, dimension and level	02		
iii. Carried out Civil works			
• Broke the ground	2		
• Leveling work	2		
• Prepared the concrete			
➤ Mixing of sand, cement and ballast	3		
➤ Sizing of the slab	2		
• Positioned eye bolts(1×4)	4		
• Build the foundation			
➤ Squareness	2		
➤ Proportionality	2		
• Cured the foundation	2		
(Award marks as indicated or zero)			
10. Performed house keeping			
• Cleaned the work station	02		
• Cleaned the tools and equipment.	02		
• Disposed any waste as per workshop policy			
(Award marks as indicated or zero)	03		
<b>Sub-total 2</b>	36		
<b>TASK 3: INSTALL THE PUMP</b>			
11. Wore PPE'S as per SOPs			
i. Apron/dust coats	01		

ii. Goggles	01		
iii. Safety boots	01		
iv. Gloves	01		
<i>(Award marks as indicated or zero)</i>			
12. Handled tools and equipment as per workshop procedure.	02		
<i>(Award marks as indicated or zero)</i>			
13. Mounted the pump			
• Bolted on foundation(1×4)	04		
• Torque loaded the nuts	02		
• Aligned the pump			
➤ Flatness	02		
➤ Proportionality	02		
• Performed electrical wiring	04		
<i>(Award marks as indicated or zero)</i>			
14. Connected ppr pipe at the suction and discharge point of the pump (no leakages)	04		
<b>Sub-total 3</b>	24		
<b>TASK 4: TEST RUN AND COMMISSION THE PUMP</b>			
15. Commissioned installed plant machinery			
• Test run the pump	02		
• Checked for vibrations of the pumps and pipes	04		
• Checked for leakages	02		
<i>(Award marks as indicated or zero)</i>			

16. Labeled the operation symbols and safety measures <ul style="list-style-type: none"> <li>• Controls (Start, stop and emergency)</li> <li>• Accessibility</li> </ul> <i>(Award marks as indicated or zero)</i>	04 02		
17. Performed house keeping <ul style="list-style-type: none"> <li>• Cleaned the work station</li> <li>• Cleaned the tools and equipment.</li> <li>• Cleaned the Pump.</li> <li>• Disposed any waste as per workshop policy</li> </ul> <i>(Award marks as indicated or zero)</i>	02 02 02 03		
18. Prepared an installation report in line with workplace procedure. <ul style="list-style-type: none"> <li>• Date installed</li> <li>• Name of the pump installed</li> <li>• Person who installed</li> <li>• Testing and commissioning of pump</li> <li>• Condition of the pump</li> </ul> <i>(Award 2 marks for every item captured in the report)</i>	10		
<b>Sub-total 4</b>	<b>33</b>		
<b>GRAND TOTAL</b>	<b>144</b>		
$\frac{x}{144} \times 100$			

**ASSESSMENT OUT COME**

**The candidate was found to be:**

**Competent**

**Not yet competent**

*(please tick as appropriate)*

*(The candidate is competent if he/she gets 50 % and above).*

<b>Feedback from the candidate:</b>	
<b>Feedback to candidate:</b>	
<b>Candidate's Signature</b> -----	<b>Date</b> -----
<b>Assessor's Signature</b> -----	<b>Date</b> -----

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