

071605T4MCT

MECHATRONIC TECHNOLOGY LEVEL 5

ENG/OS/MC/CR/02/5/A

Maintain Electro-Mechanical Systems

March/April 2025



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

PRACT MENT

INSTRUCTIONS TO ASSESSOR

1. Assess the candidate as the practical progresses observing the critical areas
2. You are required to mark the practical as the candidate perform the tasks
3. You are required to take video clips at critical points
4. Ensure the candidate has a name tag and registration code at the back and front

OBSERVATION CHECKLIST

Candidate's Name & Registration Code			
Assessors Name & Registration Code			
Venue of Assessment			
Date of Assessment			
Items to be Evaluated: <i>Please award marks as appropriate. Give a brief comment on your observation.</i>	Marks Available	Marks Obtained	Comments
1. Observed occupational health and safety by wearing: • Overall • Safety boots <i>(Award 1 Mark for each)</i>	2		
Sub-Total 1	2		
TASK 1: IDENTIFIED COMPONENTS			
2. Identified the following components • Inductive sensor • Photoelectric sensor • Capacitance sensor • Magnetic switches • Pressure regulating filter • Air speed regulating joint • Step driver • Motor <i>(Award 1 Mark for each)</i>	8		
Sub-Total 2	8		
TASK 2: MAINTAINED ELECTRICAL SYSTEM			
3. Identified and rectified loose cables on the step driver. <i>(Award 2 Mark for each)</i>	4		

4. Identified and rectified displaced magnetic switch. (Award 3 Marks or 0)	3		
5. Identified missing fuse and replaced. (Award 3 Marks or 0)	3		
6. Adjusted sensitivity on the photoelectric sensor. (Award 3 Marks or 0)	3		
Sub-Total 3	13		
TASK 3: MAINTAINED PNEUMATIC SYSTEM			
7. Identified and restored unplugged pressure pipes on the solenoid valves. (Award 2 Mark for each)	4		
8. Turned on the compressor. (Award 3 Marks or 0)	3		
9. Regulated adjusting nut to obtain wo pressure 0.4-0.6MP. (Award 3 Marks or 0)	3		
10. Checked for air leakages on the pipe recommended repair procedure. (Award 2 Marks for checking and 2 Marks for repair)	4		
11. Regulated the speed adjustment joint. (Award 3 Marks or 0)	3		
Sub-Total 4	17		
TASK 4: MAINTAINED CONVEYOR SYSTEM			
12. Checked free movement of the conveyor. (Award 2 Marks or 0)	2		
13. Removed dirt in the system. (Award 2 Marks or 0)	2		
14. Checked and repaired coupling. (Award 2 Marks or 0)	2		
Sub-Total 5	6		

TASK 5: TESTED AND OPERATED THE SYSTEM			
15. Turned on the machine following required SOP. (Award 2 Marks or 0)	2		
16. Operated the equipment. (Award 2 Marks or 0)	4		
17. Turned off the system using required SOP. (Award 2 Marks or 0)	2		
18. Performed housekeeping. (Award 2 Marks or 0)	2		
Sub-Total 6	10		
GRAND TOTAL	56		
ASSE TCOME			
The candidate was found to be: Competent <input style="width: 50px; height: 30px; border: 1px solid black;" type="checkbox"/> Not yet Competent <input style="width: 50px; height: 30px; border: 1px solid black;" type="checkbox"/> (Please tick as appropriate) (The candidate is competent if the candidate obtains at least 50%)			
Feedback from the Candidate:			
Feedback to the Candidate:			
Candidate Signature		Date:	
_____		_____	

Assessor's Signature _____	Date _____
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APPENDIX 1 PRINT FOR THE ASSESSOR ONLY

The assessor should perform the following activities before the start of the practical:

1. Loosen two cables on the step driver.
2. Adjust detection unit sensor on the top to appear out of range from the object path below it.
3. Adjust sensitivity of the photoelectric sensor to be faulty.
4. Disconnect any two pressure pipes on the solenoid valves.
5. Open one feeding unit pneumatic cylinder speed adjustment knobs to the maximum.
6. Switch off air service unit main switch.