071604T4AME

AGRICULTURAL MACHINERY AND EQUIPMENT LEVEL 4

ENG/OS/AME/4/CR/04/4/A

**Maintain Hydraulic Systems** 

March/April 2025



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

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## PRACTICAL ASSESSMENT

## 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: Please award marks as	Marks	Marks	Comments			
appropriate. Give a brief comment on your	Available	Obtained				
observation.						
TASK: Service the hydraulic gear pump and replace the seals						
1. Wore PPEs						
Overall/dustcoat	2					
Safety boots	~					
(Award 1 mark each or zero)						
2. Assembled tools and materials  (Award 1 Mark or zero)	1					
3.Correctly dismantled the hydraulic gear pump						
Placed the pump in a vice with the drive	2					
shaft pointing down.						
Marked each casting in the assembly	2					
Loosened and removed the cap screws	2					
and washers						
Removed the port end cover subassembly	2					
Removed the gear housing subassembly	2					
Removed and discarded the rubber						
section seals from the top and the bottom	2					
gear housing faces						
Wiped the gear face surface dry with a	2					
clean cotton cloth.						

Marked the teeth of the gear set at their	2
mesh point	
Removed the idler gear and the gear	2
shaft.	
(Award 2 Marks or zero)	
4.Inspected the parts	
Checked for Score marks, grooves, or	1
burrs on the outside diameter of the teeth	
and on the hub.	
Checked for broken gear teeth	1
Checked for wear or damage to the drive	
spline, key, or keyway.	1
Checked for flatness of the mating	
surfaces using a feeler gauge and straight	
edge.	
(Award 1 Mark or zero)	
5.Reassembled the hydraulic gear pump	
<ul> <li>Located the orientation mark on the gear</li> </ul>	2
housing and lined it up with the mark on	
the shaft end cover.	
Reassembled the gears back to the	
housing	2
Applied thin film of oil on the new seals	
and replaced them.	2
Placed the port end cover over the gear	
journals. The orientation mark on the port	2
end cover must line up with the mark on	
the gear housing	

Tightened the screws to the correct	2					
torque						
(Award 2 Marks each or zero)						
6.Tested the hydraulic gear pump for proper						
operation						
Rotated the gear shaft of the pump to	•					
make certain there is no binding in the	2					
pump.						
Rotated the gear shaft of the pump while	•					
immersed in hydraulic fluid to ascertain	2					
the discharge.						
	om					
7.Cleaned the working area, tools and equipment	1					
(Award 1 Mark or zero)						
GRAND TOTAL	40					
ASSESSMENT OUTCOME						
The candidate was found to be:						
The dangiage was found to be.	_					
Competent Not yet Competent						
(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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