

071506T4MTP

MECHANICAL TECHNICIAN LEVEL 6

ENG/OS/ME/CR/2/06/A

FABRICATE SHEET METAL PARTS

July /August 2024



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

PRACTICAL ASSESSMENT

INSTRUCTIONS TO THE ASSESSOR

1. You are required to mark the practical as the candidate performs the tasks.
2. You are required to take video clips at critical points.
3. Ensure the candidate has an identification tag pinned at the back and front near the shoulders showing Candidate's name and registration code.
4. ALL measurements are in millimeters.

This guide consists of SEVEN (7) printed pages

Turn Over

OBSERVATION & PRODUCT CHECKLIST

Candidate's name & Registration Code			
Assessor's 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
OBSERVATION CHECKLIST			
1. Adhered to prescribed safety precautions: a) Wore personal protective equipment's - Gloves - Dust coat/Overall - Safety Boots b) Used tools for their correct jobs (Award 1 Mark for each safety precaution observed.)	1 1 1 1		
2. Prepared an operation plan as per appendix 2 on assessors' tool (Award ½ Mark for each operation and ½ Mark for the correct tool)	7		
3. Inspected and filled the ' candidates inspection checklist ' Appendix 1 on the candidate tool. (Award ½ Mark for each identified measurement on 'appendix 1' on the candidate tool)	4		
4. Performed housekeeping operation Cleaned the work area			

- Returned the tools to their designated storage areas - Disposed waste materials to the designated waste bins <i>(Award 2 Mark for each observed housekeeping performed)</i>	2 2 2		
Sub-total	21		

PRODUCT CHECKLIST

Items to be evaluated: Please award marks as appropriate. Give a brief comment on your observation.	Marks available	Marks obtained	Comments
5. Prepared workpiece according to drawing specifications All dimensions are in mm Tolerance ± 0.5			
a. PART 1: BODY			
i. Linear dimensions 660 (2× 2) 150 (2× 2) 80 (2× 2) 35 (2× 2) 25 (2× 2) <i>(Award full mark or zero)</i>	4 4 4 4 4		
ii. Edge treatment (Filed edges 4× 1) <i>(Award 1 Marks for each edge)</i>	4		

iii.	Quality of weld			
	• Uniformity of weld	2		
	• No slag inclusion	2		
	• No hot-tear	2		
	• Complete fusion	2		
b. PART 2: PERFORATED PLATE				
i.	Diameter:			
	• Ø 200	4		
	<i>(Award full marks or zero)</i>			
ii.	Equally spaced holes:			
	• R30	1		
	• R20	1		
	• R10	1		
iii.	Deburred drilled holes	4		
iv.	Deburred the edges	1		
c. PART 3: BASE				
i.	Diameter			
	• Ø 210	2		
	<i>(Award full marks zero)</i>			
ii.	Edge treatment			
	• Deburred edge	1		
d. PART 4: STANDS				
i.	Linear dimensions			
	• 20 (9 off) (9 × 1)	9		
	• 20 (9 off) (9 × 1)	9		

14 (9 off) (9 × 1) (Award full marks or zero)	9		
ii. Edge treatment (filed edges) (9 off) (9 × 1)	9		
e. PART 5: DOOR			
i. Linear dimensions 80 (2× 2) 35 (2× 2) (Award full Marks or zero)	4 4		
ii. Edge treatment - Deburred drilled holes - Deburred edge (4× 1)	2 4		
f. ASSEMBLED PARTS			
i. Fitted part 2 to part 1	3		
ii. Welded part 3 to part 1	3		
iii. Riveted part 6 to part 1	3		
iv. Riveted part 5 to part 6 (Award 3 Marks for every correctly assembled part))	3		
v. Welded part 4 to part 1 (9 OFF) (Award ½Mark for every correctly assembled part))	4 ½		
vi. Quality of Arc welded joints - Good arc penetration - Firmness of the product (Award 3 Marks for each observed quality)	3 3		

vii. Quality of riveted joint			
• Aligned rivets (4× 1)	4		
• Well-formed rivet head (4× 1)	4		
(Award 1 Mark for each observed quality)			
Sub total	127½		
Total:	148½		
Candidate Overall Score = $\frac{x}{148\frac{1}{2}} \times 100\%$			
ASSESSMENT OUTCOME			
The candidate 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 candidate:			
Feedback to candidate:			
Candidate's Signature	Date		
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Assessor's Signature	Date		
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Appendix 2

Operation plan

Serial No.	Operation	Equipment/ Tool
	Part 1: body	
1.	Cutting	Bench shear
2.	Rolling	Rolling machine
3.	Welding	Arc welding machine
	Part 2: Perforated Plate	
4.	Drilling	Drilling machine Drill bit
	Part 3: Base	
5.	Bending	Bench vice Ball pein hammer
	Part 4: Stands	
6.	welding	Ball pein hammer
	Part 5: Door	
7.	Riveting	Ball pein hammer and anvil

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