

Domain	PLUMBING	Unit ID: 442
Title:	Perform basic sheet metal work as part of plumbing operations	
Level: 1		Credits: 6

Purpose

This unit standard specifies the competencies required to perform basic sheet metal work as part of plumbing operations. It includes planning and preparing for work, marking out and cutting sheet metal, shaping sheet metal, forming and making joints and cleaning up the work area.

This unit standard is intended for those who work as plumbers.

Special Notes

1. Entry information:
 - Prerequisite
 - 434 - *Apply safety rules and regulations in plumbing operations or demonstrated equivalent knowledge and skills.*
2. To demonstrate competence, at a minimum, evidence is required of marking out and fabricating two different products used in plumbing operations.
3. Assessment evidence may be collected from a real workplace or simulated real workplace or an appropriate simulated realistic environment in which plumbing operations are carried out.
4. Tools and equipment may include but are not limited to bending machine, rolling machine, jenny and swing machine, tin snips, divider, scribe, centre punch, pop rivet gun, vice, grooving tool, steel tape, large steel combination square, hammer, twist drill, counter sink bit, wheel brace, electric drill, drill press, rivet set and snap, tin mans rivet, pop rivet, guillotine, file, sliding bevels, protractors.
5. Materials may include but are not limited to sheet metal, flat sheet copper, rivets, silicon and other sealants.
6. Performance of all elements in this unit standard must comply with all relevant workplace requirements and/or manufacturers' specifications.
7. Regulations and legislation relevant to this unit standard include the following:
 - Labour Act, No. 6, 1992
 - Occupational Health and Safety Regulations No. 18, 1997 and all subsequent amendments.

Quality Assurance Requirements

This unit standard and others within this subfield may be awarded by institutions which meet the accreditation requirements set by the Namibia Qualifications Authority and the Namibia Training Authority and which comply with the national assessment and moderation requirements. Details of specific accreditation requirements and the national assessment arrangements are available from the Namibia Qualifications Authority and the Namibia Training Authority on www.nta.com.na.

Elements and Performance Criteria

Element 1: Mark out and cut sheet metal

Performance criteria

- 1.1 Materials are identified and selected in line with job requirements.
- 1.2 Positions are marked and angles read with sliding bevels and protractors in line with job requirements.
- 1.3 Correct thickness of sheet metal is selected in line with job requirements.
- 1.4 Angles are cut in line with job requirements.

Element 2: Shape sheet metal

Performance criteria

- 2.1 Tools and equipment are selected in line with job requirements.
- 2.2 Safety precautions are followed in line with workplace procedures.
- 2.3 Sheet metal is bent, folded and rolled according to job requirements.
- 2.4 The correct and safe use maintenance and storage of tools and equipment is demonstrated in line with workplace procedures and manufacturers' specifications.

Element 3: Form and make joints

Range

Tools and equipment include riveting, grooving, drilling and bending tools to make joints in sheet metal.

Performance Criteria

- 3.1 Tools and equipment to be used for the task are selected in line with job requirements.
- 3.2 Safety precautions are followed in line with workplace procedures.
- 3.3 Joints are identified, selected, formed and made in line with job requirements.
- 3.4 Joints are cleaned and visually inspected ensuring materials are correctly aligned, pinned and sealed in line with job requirements.
- 3.5 The correct and safe use, maintenance and storage of tools and equipment are demonstrated in line with workplace procedures and manufacturers' specifications.

Element 4: Clean up work area

Performance criteria

- 4.1 Work is completed and appropriate personnel notified in line with workplace procedures.
- 4.2 Work area is cleared of waste, cleaned, restored and secured in line with workplace procedures.
- 4.3 Plant, tools and equipment are cleaned, checked and maintained in line with workplace procedures.

Registration Data

Subfield:	General Construction
Date first registered:	15 November 2007
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Body responsible for review:	Namibia Training Authority