

Domain**CARPENTRY****Title:****Use and maintain hand tools****Level: 1****Credits: 6****Purpose**

This unit standard specifies the competencies required to use and maintain hand tools. It includes identifying and using hand tools, sharpening hand tools and maintaining and storing hand tools.

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

Special Notes

1. Entry information:

Prerequisite:

- *1157-Demonstrate basic knowledge of workplace health and safety or demonstrated equivalent knowledge and skills.*

2. This unit standard is to be delivered and assessed in the context of carpentry operations and should be assessed in conjunction with other relevant technical unit standards selected from this domain.

3. To demonstrate competence, at a minimum, evidence is required of the correct use and maintenance of hand tools.

4. Assessment evidence may be collected from a real workplace or simulated workplace in which carpentry operations is carried out.

5. All inspection, operation and maintenance procedures associated with the use of tools and equipment shall comply with manufacturers' and company guidelines, instructions, and reasonable flat rate time.

6. Hand tools may include but not limited to the following:

- Geometrical tools: steel ruler, folding ruler, measuring tape, straight edge, spirit level, marking knife, compass, callipers, try-square, mitre square, sliding bevel, combination square, marking gauge, mortise gauge, cutting gauge, panel gauge, thumb gauge and chalk line.
- Percussion tools: Warrington hammer, claw hammer, mallet (rubber and wood), ballpein hammer and club hammers (1.8kg and 5kg).
- Impelling tools: London pattern screwdriver, cabinet screwdriver, set of screwdriver, ratchet screwdriver, nail punch and brace.
- Boring tools: auger bit, centre bit, forstner bit, countersink bit, gimlet, bradawl and cobra bit.
- Holding and supporting tools: workbench, bench stop, bench vice, bench hook, holdfast, G-cramp, sash cramp, saw cramp, mitre cramp, square shoot and mitre shoot, F-cramp, fast action cramp, edge cramp, pipe cramp.

- Shaving tools: trying plane, jack plane, smoothing plane, block plane, side rebate plane, compass plane, router plane, spoke shave, plough plane, combination plane, shoulder plane, bullnose plane, universal plane and multi plane.
 - Paring tools: firmer chisel, bevelled-edge chisel, paring chisel, mortise chisel, skew chisel, corner chisel, scribing gauge and firmer gauge.
 - Abrading tools: hand saw, rip saw, cross-cut saw, panel saw, dovetail saw, fret saw, bow saw, compass saw, keyhole saw, nest of saws, tenon saw, coping saw and hack saw.
 - Scraping and other abrading tools: hand scraper, cabinet scraper, rasp, surfboards, file brush, hook scraper, burnisher and files.
 - Sharpening stones: natural stones, artificial stones (abrasive and bond)
 - Pliers: Long nose pliers, combination pliers, waterpump pliers and nail pinchers
 - General tools: Silicon gun, pop rivet gun, spanners (No. 6 -32), shifting spanners, socket set, wrenches, bars (crow and pinch), shovels and allen key set.
7. Regulations and legislation relevant to this unit standard include the following:
- Labour Act No 11, 2007 as amended;
 - Public and Environmental Health Act No 1, 2015;
 - 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 on www.namqa.org and the Namibia Training Authority on www.nta.com.na.

Elements and Performance Criteria

Element 1: Identify and use hand tools

Performance criteria

- 1.1 Safety requirements for hand tools are explained.
- 1.2 Hand tools are identified and selected in line with job requirements.
- 1.3 Method of operation of hand tools is explained.
- 1.4 Tools are safely used in line with manufacturers' and workplace specifications.

Element 2: Sharpen hand tools

Range

Hand tools to be sharpened may include but are not limited to drill bits, plane blades, chisel blades, scraper blades, saw teeth, gauges and bradawls.

Performance criteria

- 2.1 Purposes for sharpening hand tools are explained.
- 2.2 Different sharpening tools and lubricants are identified.
- 2.3 Use and store of sharpening tools and lubricants in line with workplace procedures are explained.
- 2.4 Personal protective equipment required for sharpening operations is identified and used in line with workplace requirements.
- 2.5 Sharpening angles of plane blades, chisels and drill bits are explained and demonstrated in line with manufacturers' specifications.
- 2.6 Teeth topping, shaping, setting and sharpening angles of saws are explained and demonstrated in line with manufactures' specifications.

Element 3: Maintain and store hand tools

Performance criteria

- 3.1 Cleaning and routine maintenance of hand tools is undertaken in line with workplace procedures.
- 3.2 Unsafe and faulty tools are identified and marked for repaired in line with workplace procedures after each complete task.
- 3.3 Hand tools are checked for faults and serviceability in line with workplace procedures.
- 3.4 Hand tools are stored in line with workplace and manufacturers' recommendations.

Registration Data

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