

Training Package	Metal and Engineering (MEM05)			HSC Requirements and Advice
Title	Use hand tools			
Unit code	Competency field	Band	Unit weight	HSC Indicative Hours
MEM18001C	Maintenance and diagnostics	A	2	20

Unit descriptor	This unit covers using a range of hand tools for a variety of general engineering applications.
Prerequisites	None
Application of the competency	Applications may include hand tools used for adjusting, dismantling, assembling and finishing of items or components, and the finishing, cutting, scraping of metallic and non-metallic material to size and shape. This includes simple tapping and threading and routine maintenance of hand tools.
Related units	This unit should not be selected if the hand tool is dedicated to a single operation or machine and if only a machine specific/customised tool is used. When using hand held power tools or power tools used for hand held operations, refer to Unit MEM18002B (Use power tools/hand held operations).

Evidence Guide

The evidence guide specifies the evidence required to demonstrate achievement in the unit of competency as a whole. It must be read in conjunction with the unit descriptor, performance criteria, range statement and the assessment guidelines for the Metal and Engineering Training Package.

Overview of assessment requirements	Context of assessment	Interdependent assessment	Method of assessment
A person who demonstrates competency in this unit must be able to use hand tools for a range of general engineering applications.	This unit may be assessed on the job, off the job or a combination of both on and off the job. Where assessment occurs off the job, that is the candidate is not in productive work, then an appropriate simulation must be used where the range of conditions reflects realistic workplace situations. The competencies covered by this unit would be demonstrated by an individual working alone or as part of a team. The assessment environment should not disadvantage the candidate.	This unit could be assessed in conjunction with any other units addressing the safety, quality, communication, materials handling, recording and reporting associated with using hand tools or other units requiring the exercise of the skills and knowledge covered by this unit.	Assessors should gather a range of evidence that is valid, sufficient, current and authentic. Evidence can be gathered through a variety of ways including direct observation, supervisor's reports, project work, samples and questioning. Questioning techniques should not require language, literacy and numeracy skills beyond those required in this unit of competency. The candidate must have access to all tools, equipment, materials and documentation required. The candidate must be permitted to refer to any relevant workplace procedures, product and manufacturing specifications, codes, standards, manuals and reference materials.

Evidence Guide cont/d			HSC Requirements and Advice
Consistency of performance	Required skills	Required knowledge	Key Terms and Concepts
Assessors must be satisfied that the candidate can competently and consistently perform all elements of the unit as specified by the criteria, including required knowledge, and be capable of applying the competency in new and different situations and contexts.	Look for evidence that confirms skills in: <ul style="list-style-type: none"> • reading and following information on standard operating procedures • following verbal instructions • selecting hand tools appropriate to the task • using hand tools safely • identifying hand tool defects and marking for repair • maintaining/sharpening hand tools using appropriate techniques • storing hand tools in accordance with manufacturers'/standard operating procedures. 	Look for evidence that confirms knowledge of: <ul style="list-style-type: none"> • applications of different hand tools in a general engineering context • common faults and/or defects in hand tools • procedures for marking unsafe or faulty tools for repair • routine maintenance requirements for a range of hand tools • storage location and procedures for a range of hand tools • hazards and control measures associated with using hand tools • use and application of personal protective equipment • safe work practices and procedures. 	<ul style="list-style-type: none"> • faults and/or defects • hand tools • hazards • job specification/s • manufacturers' specifications • occupational health and safety (OHS) • personal protective equipment (PPE) • reporting and recording • routine maintenance • safety requirements • safe work practices and procedures • selection and application of hand tools • signs of poor performance/inefficiency • standard operating procedures (SOP) • storage • task requirements.

Elements	Performance criteria	Range Statement	HSC Requirements and Advice
1 Use hand tools	<p>1.1 <i>Hand tools</i> are selected appropriate to the task requirements.</p>	<p>The range statement provides information about the context in which the unit of competency is carried out. The variables [in bold] and scope [dot points] cater for different work requirements, work practices and knowledge between States, Territories and the Commonwealth, and between organisations and workplaces. The range statement relates to the unit as a whole and provides a focus for assessment. Text in italics in the performance criteria is explained here.</p> <p>The following variables may be present and <i>may include</i>, but are not limited to, the examples listed under the scope. All work is undertaken to relevant legislative requirements, where applicable.</p> <p>Hand tools</p> <ul style="list-style-type: none"> • hacksaws, hammers, punches, screwdrivers, sockets, wrenches, scrapers, chisels, gouges, wood planes and files of all cross-sectional shapes and types. 	<p>Learning experiences for the HSC must address:</p> <p>A basic knowledge of a range of hand tools including:</p> <ul style="list-style-type: none"> • name • characteristics • use • limitations • hazard controls • maintenance. <p>Hand tools including:</p> <ul style="list-style-type: none"> • saw • hammer • punch • screwdriver • socket • wrench • scraper • chisel • file • spanner • pliers • tap and die • tension wrench. <p>Considerations for the selection of hand tools including:</p> <ul style="list-style-type: none"> • skills/training • time • cost • occupational health and safety (OHS) requirements • appropriateness for purpose.
	<p>1.2 Hand tools are used to produce desired outcomes to <i>job specifications</i> which may include finish, tension, size or shape.</p>	<p>Job specifications</p> <ul style="list-style-type: none"> • finish, tension, size or shape, etc. 	<p>Learning experiences for the HSC must address:</p> <p>A definition of:</p> <ul style="list-style-type: none"> • job specification/s. <p>Knowledge of the use/application of a range of hand tools in a general engineering context to produce desired outcomes, including:</p>
			<ul style="list-style-type: none"> • adjusting, dismantling, assembling and finishing of

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	1.3 All safety requirements are adhered to before, during and after use.		<p>items/components</p> <ul style="list-style-type: none"> • finishing, cutting and scraping of metallic and non-metallic material. <p>Learning experiences for the HSC must address:</p> <p>A basic understanding OHS legislation.</p> <p>An awareness of safe work practices and procedures including:</p> <ul style="list-style-type: none"> • OHS induction training (general, work activity and site-specific) • selection, use and maintenance of personal protective equipment (PPE) • selection of appropriate tools for the task • correct use, maintenance and storage of tools, equipment and machinery • correct handling, application, transport and storage of hazardous and non-hazardous materials • safe posture (sitting, standing, bending and lifting) • correct manual handling (lifting and transferring) • hazard identification and risk control • procedures to follow in the event of an emergency • basic first aid training and access to first aid kits • correct use of fire fighting equipment <ul style="list-style-type: none"> - fire blanket - fire extinguishers - fire hydrant and hose • effective communication and teamwork • adherence to work instructions, workplace policies and standard operating procedures • housekeeping/clean-up procedures with due consideration to OHS and the environment. <p>Use and application of a range of PPE including:</p> <ul style="list-style-type: none"> • footwear • head protection • gloves • protective clothing • respirator • face mask/shield
			<ul style="list-style-type: none"> • hearing protection • eye protection.

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	<p>1.4 Unsafe or faulty tools are identified and marked for repair according to designated procedures before, during and after use.</p>		<p>Importance of correct fitting PPE.</p> <p>Safe work practices for using tools and equipment including:</p> <ul style="list-style-type: none"> • following standard operating procedure (SOP) and manufacturer's specifications before, during and after use • risk management (identifying hazards and implementing control measures) • correct manual handling • safe handling, application and storage of hazardous substances • appropriate use of PPE • regular servicing and maintenance of tools and equipment • selection of appropriate tool for use. <p>Learning experiences for the HSC must address:</p> <p>Identification of faulty hand tools including:</p> <ul style="list-style-type: none"> • malfunctions • worn, broken or missing components. <p>An awareness of the signs of poor performance and inefficiency including:</p> <ul style="list-style-type: none"> • quality of end product • appearance • amount of maintenance required • time taken to complete the job. <p>Identification of common faults and/or defects in hand tools.</p> <p>Reporting of serious faults including:</p> <ul style="list-style-type: none"> • verbal notification to appropriate personnel • recording on job card/maintenance log. <p>Personnel to whom problems should be reported:</p> <ul style="list-style-type: none"> • supervisor/manager • supplier/manufacturer.
			<p>Procedures for marking and reporting unsafe or faulty tools for repair.</p>

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	1.5 <i>Routine maintenance</i> of tools, including hand sharpening is undertaken according to standard operational procedures, principles and techniques.	Routine maintenance <ul style="list-style-type: none"> • cleaning, lubricating, tightening, simple tool repairs, hand sharpening and adjustments using engineering principles, tools, equipment and procedures. 	Learning experiences for the HSC must address: Awareness of routine maintenance requirements for a range of hand tools including: <ul style="list-style-type: none"> • lubrication • safety checks • cleaning and decontamination • tightening and adjustment • replacement of consumable components • repair/replacement of worn, malfunctioning or damaged components/parts • sharpening. Maintenance records including: <ul style="list-style-type: none"> • manual • electronic.
	1.6 Hand tools are stored safely in appropriate location according to standard operational procedures and manufacturers' recommendations.		Learning experiences for the HSC must address: Issues relating to the storage of hand tools and equipment including: <ul style="list-style-type: none"> • security • climatic effects • OHS considerations • stability • ease of access. Knowledge of methods by which hand tools are stored and accessed.