

Training Package	Automotive Industry Retail, Service and Repair (AUR05)	HSC Requirements and Advice
Unit title	Service engines and associated engine components (outdoor power equipment)	
Unit code	Unit descriptor This unit covers the competence to service engines and engine components of small engines appropriate to outdoor power equipment. The unit includes identification and confirmation of work requirement, preparation for work, completion and servicing and testing of engine operations and completion of work finalisation processes, including, clean-up and documentation. For service and repair of light/heavy vehicle engines see AURT201170A Inspect and service engines.	HSC Indicative Hours 20
	AURP201570A	

Evidence Guide

The evidence guide identifies critical aspects, knowledge and skills to be demonstrated to confirm competence for this unit. This is an integral part of the assessment of competence and should be read in conjunction with the Range Statement.

Critical aspects of evidence	Underpinning knowledge
<p>It is <u>essential</u> that competence is fully observed and there is ability to transfer competence to changing circumstances and to respond to unusual situations in the critical aspects of:</p> <ul style="list-style-type: none"> • observing safety procedures and requirements • communicating effectively with others involved in or affected by the work • selecting servicing methods and techniques appropriate to the circumstances • completing preparatory activity in a systematic manner • servicing of a range of engines and associated components to workplace and manufacturer/component supplier requirements • completing servicing of engine and associated components within workplace timeframes • completing workplace records. 	<p>A working knowledge of:</p> <ul style="list-style-type: none"> • OH&S regulations/requirements, equipment, material and personal safety requirements • construction and operating principles of two and four stroke spark ignition engines and four stroke compression ignition engines • types and layout of service/repair manuals (hard copy and electronic) • servicing procedures • different servicing requirements for different engines • minor adjustment procedures • technical information • types of lubricants, application and methods of lubrication • work organisation and planning processes • enterprise quality processes.

Evidence Guide cont/d

Context of assessment	Method of assessment	Specific resource requirements for this unit
<p>The application of competence <u>is to</u> be assessed in the workplace or simulated worksite.</p> <p>Assessment <u>is to</u> occur using standard and authorised work practices, safety requirements and environmental constraints.</p> <p>Assessment <u>is to</u> comply with regulatory requirements, including, Australian Standards.</p>	<p>Assessment <u>must</u> satisfy the endorsed assessment guidelines of the Automotive industry’s RS&R [Retail, Service & Repair] Training Package.</p> <p>Assessment methods <u>must</u> confirm consistency and accuracy of performance together with application of underpinning knowledge.</p> <p>Assessment <u>must</u> be by direct observation of tasks, with questioning on underpinning knowledge and it must also reinforce the integration of key competencies.</p> <p>Assessment <u>may</u> be applied under project related conditions (real or simulated) and require evidence of process.</p> <p>Assessment <u>must</u> confirm a reasonable inference that competence is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances.</p> <p>It is <i>preferable</i> that assessment reflects a process rather than an event and occurs over a period of time to cover varying quality circumstances. Evidence of performance <u>may</u> be provided by customers, team leaders/members or other persons subject to agreed authentication arrangements.</p>	<p>The following resources <u>should</u> be made available:</p> <ul style="list-style-type: none"> • workplace location or simulated workplace • material relevant to servicing of outdoor power equipment engines • equipment, hand and power tooling appropriate to servicing of outdoor power equipment engines • activities covering mandatory task requirements • specifications and work instructions. <p align="center">Relationship to other units</p> <p>Competence in this unit may be assessed in conjunction with other functional units which together form part of the holistic work role.</p>

Specific key competencies, underpinning and employability skills required to achieve the performance criteria

These include a number of processes learned throughout work and life, which are required in most jobs. Some of these are covered by the national key competencies, although others may be added. The details below highlight how these competencies are applied in the attainment of this unit.

Application of the key competencies in this unit are to satisfy the nominated level in which:

Level 1 – relates to working effectively within set conditions and processes;

Level 2 – relates to management or facilitation of conditions or processes; and

Level 3 – relates to design, development and evaluation of conditions or process.

How will the candidate apply the following key competency in this unit? The candidate will need to:

Collect, analyse and organise information	Research and interpretive skills sufficient to locate, interpret and apply manufacturer/component supplier procedures, workplace policies and procedures. Analytical skills for identification and analysis of technical information.	Level 2
Communicate ideas and information	Plain English literacy and communication skills in relation to dealing with customers and team members. Questioning and active listening skills for example when obtaining information from customers. Oral communication skills sufficient to convey information and concepts to customers.	Level 1
Plan and organise activities	As applied to own work activities, including, making good use of time and resources, sorting out priorities and monitoring own performance.	Level 1
Work with others and in a team	Interacting effectively with other persons both on a one to one basis and in groups, including, understanding and responding to the needs of a customer and working effectively as a member of a team to achieve a shared goal.	Level 1
Use mathematical ideas and techniques	Use mathematical ideas and techniques to correctly calculate time, assess tolerances, apply accurate measurements, calculate material requirements and establish quality checks.	Level 1
Solve problems	Establish safe and effective work processes which anticipate and/or resolve problems and downtime, to systematically develop solutions to avoid or minimise reworking and avoid wastage.	Level 1
Use technology	Use workplace technology related to servicing of outdoor power equipment engines, including, use of measuring equipment, computerised technology, use of communication devices and reporting/recording of results.	Level 1

Element	Performance Criteria	Range Statement
1 Prepare to service two and four stroke engines	1.1 OH&S requirements, including, State/Territory regulatory requirements and personal protection needs are observed throughout the work.	<p>The Range Statement provides advice to interpret the scope and context of this unit of competence, allowing for differences between enterprises and workplaces. It relates to the unit as a whole and facilitates holistic assessment. The following variables may be present for this particular unit:</p> <p>Unit scope</p> <ul style="list-style-type: none"> this unit of competence <u>applies to</u> outdoor power equipment engines which <i>may</i> be stationary or mobile, air and liquid cooled, overhead and side valve, two and four stroke spark ignition and four stroke compression ignition engines methods <u>are to</u> include servicing and minor adjustments. <p>Unit context</p> <ul style="list-style-type: none"> work <u>requires</u> individuals to demonstrate some judgement and problem-solving skills in managing own work activities and contributing to a productive team environment work <u>is</u> carried out in accordance with award provisions. <p>Safety (OH&S)</p> <ul style="list-style-type: none"> OH&S requirements <u>are to</u> be in accordance with legislation/regulations/ codes of practice and enterprise safety policies and procedures. This <i>may</i> include protective clothing and equipment, use of tooling and equipment, workplace environment and safety, handling of material, use of fire fighting equipment, enterprise first aid, hazard control and hazardous material and substances personal protective equipment <u>is to</u> include that prescribed under legislation/ regulation/codes of practice and workplace policies and practices safe operating procedures <u>are to</u> include, but are not limited to the conduct of operational risk assessment and treatments associated with vehicular movement, toxic substances, electrical safety, machinery movement and operation, manual and mechanical lifting and shifting, working in proximity to others and site visitors emergency procedures <u>are to</u> include, but not be limited to emergency shutdown and stopping of equipment, extinguishing fires, enterprise first aid requirements and site evacuation. <p>Environmental requirements</p> <ul style="list-style-type: none"> environmental requirements <u>are to</u> include but are not limited to waste management, noise, dust and clean up management. <p>Quality requirements</p> <ul style="list-style-type: none"> quality requirements <u>are to</u> include, but are not limited to regulations, including, Australian Standards, internal company quality policy and
	1.2 Procedures and information are identified and sourced.	
	1.3 Technical and tool requirements for servicing and repair are identified and support equipment is identified and prepared.	
2 Service engines and engine components	2.1 Work to be carried out is identified and agreed to.	
	2.2 Information is accessed and interpreted from workshop manuals or service guides.	
	2.3 Methods for the conduct of service are implemented in accordance with workplace procedures and manufacturer/ component supplier specifications.	
	2.4 Engines and/or components are serviced within workplace guidelines and procedures.	
	2.5 Lubricants are accessed and applied to engines.	
	2.6 Engines are started and run up to operating temperature and checked for leaks, abnormal noises and pressures where applicable.	
	2.7 Workplace documentation is completed and dealt with relevant to service and repair outcomes.	
	2.8 Service operations are completed within established industry guidelines and timeframes.	
	2.9 Service is completed without causing damage to component or system.	

Element	Performance Criteria	Range Statement
3 Prepare engines for delivery to customer	3.1 Repair work carried out is documented and delivered to appropriate persons.	<p>standards and enterprise operations and procedures.</p> <p>Statutory/regulatory authorities</p> <ul style="list-style-type: none"> statutory/regulatory authorities <i>may</i> include Federal, State/Territory and local authorities administering applicable acts, regulations and codes of practice. <p>Tooling and equipment</p> <ul style="list-style-type: none"> tooling and equipment <i>may</i> include hand tooling and lubricating equipment. <p>Materials</p> <ul style="list-style-type: none"> materials <i>may</i> include spare parts, lubricants, fluids and cleaning materials. <p>Communications</p> <ul style="list-style-type: none"> communications <u>are to</u> include, but are not limited to verbal and visual instructions and fault reporting and may include site specific instructions, written instructions, plans or instructions related to job/task, telephones and pagers. <p>Information</p> <ul style="list-style-type: none"> information sources <i>may</i> include, but are not limited to: <ul style="list-style-type: none"> - verbal or written and graphical instructions, signage, work schedules/plans/specifications, work bulletins, memos, material safety data sheets, diagrams or sketches - safe work procedures related to servicing of outdoor power equipment engines - regulatory/legislative requirements pertaining to outdoor power equipment - engineer's design specifications and instructions - organisation work specifications and requirements - instructions issued by authorised enterprise or external persons - Australian Standards.
	3.2 Final inspection is made to ensure protective guards, cowlings and safety features are in place.	
	3.3 Engines are cleaned to workplace expectations.	