

Training Package	Automotive Industry Retail, Service and Repair (AUR05)	HSC Requirements and Advice
Unit title	Select and use bearings, seals, gaskets, sealants and adhesives	
Unit code	Unit descriptor	HSC Indicative Hours 15
AURT200368A	<p>This unit covers the competence required to carry out the selection and use of bearings, seals, gaskets, sealants and adhesives relevant to the vehicle industry.</p> <p>The unit includes identification and confirmation of work requirement, preparation for work, installation of bearings, seals, gaskets, use of sealants and adhesives and completion of work finalisation processes, including documentation.</p>	

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 methods and techniques appropriate to the circumstances • completing preparatory activity in a systematic manner • selecting and installing the following bearings to workplace and manufacturer/component supplier requirements: <ul style="list-style-type: none"> - plain - anti friction - adjusting/pre loading taper roller bearings • selecting and using a minimum of three different types of lip seals and ‘O’ rings to workplace and manufacturer/component supplier requirements • selecting and applying two different types of gaskets to manufacturer/component supplier requirements • selecting and applying hardening and non hardening sealants to manufacturer/component supplier requirements • selecting and applying a polymer (silicone) adhesives to manufacturer/component supplier requirements • vehicle/component is presented to customer in compliance with workplace requirements. 	<p>A working knowledge of:</p> <ul style="list-style-type: none"> • OH&S and environmental regulations/requirements, equipment, material and personal safety requirements • dangers of working with sealants and adhesives • operating principles of bearings, seals, gaskets and their relationship to other components • types, characteristics, uses and limitations of sealants and adhesives • types and layout of service/repair manuals (hard copy and electronic) • bearings, seals and gaskets installation procedures • sealant and adhesives application techniques • enterprise quality procedures • work organisation and planning processes.

Evidence Guide cont/d

Context of assessment	Method of assessment	Specific resource requirements for this unit
<p>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 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 <u>should</u> be made available:</p> <ul style="list-style-type: none"> • workplace location or simulated workplace • material relevant to the installation of bearings, seals and gaskets • material relevant to the selection and use of sealants and adhesives • equipment, hand and power tooling appropriate to installation of bearings, seals and gaskets • activities covering mandatory task requirements • specifications and work instructions.
		<p>Relationship to other units</p>
		<p>Competence in this unit <u>may</u> 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	Apply research and interpretive skills sufficient to locate, interpret and apply manufacturer/component supplier procedures, workplace policies and procedures. Apply analytical skills required for identification and analysis of technical information.	Level 1
Communicate ideas and information	Apply plain English literacy and communication skills in relation to dealing with customers and team members. Apply questioning and active listening skills for example when obtaining information from customers. Apply oral communication skills sufficient to convey information and concepts to customers.	Level 1
Plan and organise activities	Apply planning and organising skills to own work activities, including making good use of time and resources, sorting out priorities and monitoring one's own performance.	Level 1
Work with others and in a team	Interact 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 the selection and use of bearings, seals, gaskets, sealants and adhesives, including the use of measuring equipment, specialist tooling and equipment, and communication devices and the reporting/documenting of results.	Level 1

Element	Performance Criteria	Range Statement
1 Prepare to select and use bearings, seals, gaskets, sealants and adhesives	1.1 Nature and scope of work requirements are identified and confirmed.	<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"> bearings <u>are to</u> include plain (bushes and bearing inserts) and anti-friction (ball and roller) seals <u>are to</u> include lip, face and 'O' ring (dynamic and static) gaskets <u>are to</u> include special papers, cork, and composite material types used for cylinder head (heat and pressure), cooling system and transmission system sealants <u>are to</u> include hardening and non hardening types which may be used with another seal (e.g. special papers) or as the only seal adhesives <u>are to</u> include polymers (silicone) which may be used for glass (windscreens) engine and transmission components. <p>Unit context</p> <ul style="list-style-type: none"> work <u>requires</u> individuals to demonstrate discretion, 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 materials and substances personal protective equipment <u>is to</u> include that prescribed under legislation/ regulations/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 related to this unit <u>are to</u> include, but are not limited to emergency shutdown and stopping of equipment, extinguishing fires, enterprise first aid requirements and site evacuation.
	1.2 OH&S requirements, including individual State/Territory regulatory requirements and personal protection needs are observed throughout the work.	
	1.3 Procedures and information such as workshop manuals and specifications, and tooling required, are sourced.	
	1.4 Method options are analysed and those most appropriate to the circumstances are selected and prepared.	
	1.5 Technical requirements for testing and installation are sourced and support equipment is identified and prepared.	
	1.6 Warnings in relation to working with sealants and adhesives are observed.	
2 Select and use sealants	2.1 OH&S requirements, including individual State/Territory regulatory requirements and personal protection needs are observed throughout the work.	
	2.2 Sealants and adhesives selected are those most appropriate for the work requirement.	
	2.3 Sealants and adhesives are used in accordance with manufacturer/ component supplier instructions.	
	2.4 Sealants and adhesives are stored in accordance with manufacturer/component supplier instructions.	
3 Prepare to install bearings, seals and gaskets	3.1 OH&S requirements, including individual State/Territory regulatory requirements and personal protection needs are observed throughout the work.	
	3.2 Procedures and information required are identified and sourced.	

Element	Performance Criteria	Range Statement
	3.3 Technical and tool requirements for installation are identified and support equipment is identified and prepared.	<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.
4 Carry out installation of bearings, seals and gaskets	4.1 Methods for the installation are implemented in accordance with workplace procedures and manufacturer/ component supplier specifications.	<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 standards and enterprise operations and procedures.
	4.2 Adjustments made during the service and/or repair are in accordance with manufacturer/component supplier specifications.	<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 acts, regulations and codes of practice.
5 Prepare vehicle/component for use or storage	5.1 Selection and installation documentation is completed.	<p>Tooling and equipment</p> <ul style="list-style-type: none"> tooling and equipment <i>may</i> include hand tooling, meters, gauges and load testing devices.
	5.2 Final inspection is made to ensure protective guards, safety features and cowlings are in place.	<p>Materials</p> <ul style="list-style-type: none"> materials <i>may</i> include bearings, seals, gaskets, sealants, adhesives and cleaning materials.
	5.3 Final inspection is made to ensure work is to workplace expectations.	<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 <i>may</i> include site specific instructions, written instructions, plans or instructions related to job/task, telephones and pagers.
	5.4 Equipment is cleaned for use or storage to workplace expectations.	<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 the selection and use of bearings, seals, gaskets, sealants and adhesives - regulatory/legislative requirements pertaining to the automotive industry, including Australian Design Rules - engineer's design specifications and instructions - organisation work specifications and requirements - instructions issued by authorised enterprise or external persons - Australian Standards.
	5.5 Job card is processed in accordance with workplace procedures.	