



Australian Government

AURTTA3018 Carry out diagnostic procedures

Release 1

AURTTA3018 Carry out diagnostic procedures

Modification History

Release	Comment
Release 1	Replaces AURT366108A Carry out diagnostic procedures Unit code updated to meet policy requirements Reference to OHS legislation replaced with new WHS legislation Licensing statement added to unit descriptor

Unit Descriptor

Unit descriptor	This unit covers the competence required to diagnose component/equipment faults from different symptoms and to nominate repair action. Licensing, legislative, regulatory or certification requirements may apply to this unit in some jurisdictions. Users are advised to check with the relevant regulatory authority.
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Application of the Unit

Application of the unit	Work requires individuals to demonstrate judgement and problem-solving skills in managing own work activities and contributing to a productive team environment.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare to diagnose faults	1.1.Information is accessed from appropriate sources 1.2.Differentiate between "symptoms" and "causes" 1.3.Identify fault diagnosis as a process 1.4.Familiarisation of system(s) from the area of the fault's origin
2. Apply technology to isolate fault(s)	2.1.Diagnosis strategy is developed that can be used to determine a fault within the component/equipment 2.2.Meters/gauges/measuring equipment is applied to isolate fault 2.3.Identification of fault(s) are made from test results 2.4.Findings are confirmed by an alternate route/plan 2.5.Faults are diagnosed without causing damage to workplace property, component or equipment 2.6.Inspections are carried out according to industry regulations/guidelines, WHS legislation, legislation and enterprise procedures/policies
3. Recommend rectification method(s)	3.1.Report of findings is completed in workplace approved format 3.2.Rectification strategy is identified 3.3.Consequences of ignoring strategy are identified 3.4.Any faults in conflict with roadworthiness or safe operation of component/equipment are immediately brought to the attention of the supervisor for action
4. Component/equipment is prepared for customer use	4.1.Work schedule documentation is completed 4.2.Final inspection is made to ensure safety features are in place 4.3.Final inspection is made to ensure work is to workplace expectations 4.4.Job card is completed and delivered to appropriate persons

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- apply research and interpretive skills sufficient to locate, interpret and apply manufacturer/component supplier procedures, workplace policies and procedures
- apply analytical skills for identification and analysis of technical 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
- apply planning and organising skills to work activities, including making good use of time and resources, sorting out priorities and monitoring own performance
- 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
- use mathematical ideas and techniques to correctly calculate time, assess tolerances, apply accurate measurements, calculate material requirements and establish quality checks
- capacity to apply problem-solving strategies in purposeful ways, both in situations where the problem and solution are clearly evident and in situations requiring critical thinking and a creative approach to achieve an outcome
- use workplace technology related to the diagnosis of faults, including the use of specialist tooling and equipment, measuring equipment, computerised technology and communication devices and the documenting/recording of results

Required knowledge

A working knowledge of:

- WHS regulations/requirements, equipment, material and personal safety requirements
- diagnostic procedures and problem-solving techniques
- documenting procedures
- symptom and cause differentiation
- documenting responsibilities
- work organisation and planning processes
- enterprise quality procedures

Evidence Guide

EVIDENCE GUIDE	
<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>It is essential 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 • conducting diagnosis of a range of faults in accordance with workplace requirements to test and verify symptoms • interpret results • confirm diagnosis of fault(s) • diagnosis carried out to manufacturer/component supplier requirements • complete diagnosis within workplace timeframes • component/equipment presentation to customer in compliance with workplace requirements
Context of, and specific resources for assessment	<p>Application of competence is to be assessed in the workplace or simulated worksite</p> <p>Assessment is to occur using standard and authorised work practices, safety requirements and environmental constraints</p> <p>Assessment is to comply with regulatory requirements, including Australian Standards</p> <p>The following resources should be made available:</p> <ul style="list-style-type: none"> • workplace location or simulated workplace • material relevant to diagnosis of faults • equipment, hand and power tooling appropriate to the diagnosis of faults • activities covering mandatory task requirements • specifications and work instructions
Method of assessment	<p>Assessment must satisfy the endorsed assessment guidelines of the automotive industry's RS&R Training Package</p>

EVIDENCE GUIDE	
	<p>Assessment methods must confirm consistency and accuracy of performance together with application of underpinning knowledge</p> <p>Assessment must be by direct observation of tasks, with questioning on underpinning knowledge and it must also reinforce the integration of key competencies</p> <p>Assessment may be applied under project related conditions and require evidence of process</p> <p>Assessment must 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 preferable that assessment reflects a process rather than an event and occurs over a period of time to cover varying quality circumstances. Evidence of performance may be provided by customers, team leaders/members or other persons subject to agreed authentication arrangements</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>
Guidance information for assessment	

Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
Diagnose problems	<p>Diagnosis is a process of elimination, fault find and fault isolation</p>
Diagnostic methods	<p>Diagnostic methods are to include:</p> <ul style="list-style-type: none"> removal and replacement, dismantling,

RANGE STATEMENT	
	adjusting <ul style="list-style-type: none"> • visual and aural identification and testing • component/equipment performance comparison • on-and off-site, indoor and outdoor and on-and off-shore diagnosis
WHS	WHS requirements are to be in accordance with legislation/regulations/codes of practice and enterprise safety policies and procedures. This may 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	Personal protective equipment is to include that prescribed under legislation/regulation/codes of practice and workplace policies and practices
Safe operating procedures	Safe operating procedures are to include, but are not limited to 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	Emergency procedures related to this unit are to include but may not be limited to emergency shutdown and stopping of equipment, extinguishing fires, enterprise first aid requirements and site evacuation
Environmental requirements	Environmental requirements are to include but are not limited to waste management, noise, dust and clean-up management
Quality requirements	Quality requirements are to include, but are not limited to regulations, including Australian Standards, internal company quality policy and standards and enterprise operations and procedures
Statutory/regulatory authorities	Statutory/regulatory authorities may include Federal, State/Territory and local authorities

RANGE STATEMENT	
	administering acts, regulations and codes of practice
Tooling and equipment	Tooling and equipment may include computer software, computer hardware, specific tooling and equipment used for dismantling, testing and diagnosis, meters, gauges and measuring equipment
Materials	Materials may include minor spare parts and consumables and cleaning materials
Communications	Communications are to include, but are not limited to verbal and visual instructions and fault documenting and may include site specific instructions, written instructions, plans or instructions related to job/task, telephones and pagers
Information/documents	<p>Sources of information/documents may include:</p> <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 diagnosis of faults • regulatory/legislative requirements pertaining to automotive industry, including Australian Design Rules, Environment Protection Regulations (Diesel Fuels) and National Environment Protection For Diesel Vehicle Guidelines • engineer's design specifications and instructions • organisation work specifications and requirements • instructions issued by authorised enterprise or external persons • Australian Standards

Unit Sector(s)

Unit sector	Mechanical Miscellaneous
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Co-requisite units

Not applicable.

Competency field

Competency field	Technical
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