Australian Government

Department of Education, Employment and Workplace Relations

AUMATK4005 Calibrate measuring equipment in automotive development

Release: 1

AUMATK4005 Calibrate measuring equipment in automotive development

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit describes the application of the required skills and knowledge to calibrate mechanical/electrical/gas measuring equipment utilised in Automotive Development. No licensing, legislative, regulatory or certification requirements apply to this unit at the time of publication.

Application of the Unit

Application of the unit	The unit applies to the automotive and related component manufacturing environment and involves application of skills and knowledge to be used within the scope of the person's job and authority.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

Employability skills	This unit contains Employability Skills.

Elements and Performance Criteria Pre-Content

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

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare calibration equipment for testing	1.1. Applicable ***organisational requirements*** relevant to the ***calibration of measuring equipment in automotive development*** are verified and complied with throughout the work activity 1.2. ***Instructions***, plans and/or workplace check sheets are read and interpreted to identify processes and materials to complete work tasks 1.3. Calibration equipment is checked for functional operation 1.4. Appropriate checks are made of components, leads, fasteners etc for wear, loose connections or other faults 1.5. The testing sequence and specified procedures for the tests are determined in accordance with relevant national and international standards and procedures and manufacturers' instructions 1.6. The required certified standards are assembled, checked for currency and readied for the calibration process
2. Calibrate equipment	2.1. Calibration equipment is operated with recognised standard and readings recorded 2.2. Calibration equipment is adjusted in accordance with instructions to adjust reading to standard being measured 2.3. Calibration equipment is re-tested to validate adjusted reading
3. Complete work processes	3.1. Calibration equipment is re-tagged with currency and standard of calibration 3.2. Evidence of wear, unserviceability, malfunction or out-of-tolerance adjustments detected is reported, and any necessary action taken 3.3. Documentation including logs and reports are updated and recorded in accordance with instructions 3.4. Standards are returned to storage/ready-use position 3.5. Equipment and tools are cleaned, inspected for serviceable condition and stored at the completion of the process in accordance with organisational procedures 3.6. Work area is cleaned and restored in accordance with organisational procedures

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level, required for this unit.

Required skills

- speak clearly and directly in order to communicate with audiences of all varying technical backgrounds
- apply teamwork to a range of situations to achieve efficient processes
- solve problems particularly in teams in order to meet performance indicators
- show initiative in adapting to changing work conditions or contexts particularly when working across a variety of work areas
- access, interpret and apply information on relevant organisation policies, procedures and instructions, particularly to guidelines for testing sequences and requirements
- manage time when planning, preparing and organising work priorities
- take responsibility for organising own work priorities.

Required knowledge

- relevant Occupational Health and Safety and Environmental legislation, regulations, standards and codes of practice and organisation policies and procedures needed to carry out work in a manner which ensures the safety of people, equipment and the environment.
- an understanding of the industry/national/international standards structure
- planning for calibration
- evaluation techniques
- types of tools, equipment and procedures for their safe use, operation, maintenance and adjustment of calibration equipment.
- established communication channels and protocols
- problem identification and resolution methods
- procedures for the recording, reporting and maintenance of organisation records and information.

Evidence Guide

EVIDENCE GUIDE	
The Evidence Guide provides advice on assessment and must be read in conjunction with the Performance Criteria, Required Skills and Knowledge, the Range Statement and the Assessment Guidelines for this Training Package.	
Overview of assessment	

Critical aspects for assessment and evidence required to demonstrate competency in this unit	Evidence of the following is essential:
	• compliance with relevant legislation, regulations, standards, codes of practice and established safe practices and organisation policies and procedures for calibration of automotive calibration measuring equipment
	• working and communicating effectively and positively with others involved in the work
	• applying, within authority, the requirements of the job or work role in relation to:
	  • preparing for calibration
	  • performing calibration
	  • use of calibration standards
	  • preparing reports of results
	  • achieving work quality goals
	• completing work area housekeeping requirements including the documentation of project activity and process outcomes.

Context of and specific resources for assessment	• assessment of the competency should take place in a safe working environment in a passenger motor vehicle manufacturing plant or simulated environment using tools/equipment/machinery required for the production process without undue disruption to the production process • assessment is to occur under standard and authorised work practices, safety requirements and environmental constraints.
Method of assessment	A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit: • assessment methods must confirm consistency and accuracy of performance (over time and in a range of organisation relevant contexts) together with application of underpinning knowledge • assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application • assessment may be applied under project related conditions (real or simulated) and require evidence of process

EVIDENCE GUIDE	
	• assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances.

Range Statement

RANGE STATEMENT	
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 in the Performance Criteria is detailed below. Add any 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.	
Organisational requirements may include:	• access and equity principles and practices • environmental management (waste disposal, recycling and re-use guidelines) • emergency and evacuation procedures • equipment use procedures • ethical standards • legal obligations • maintenance and storage procedures • OHS requirements • organisational and site guidelines • policies and procedures relating to own role and responsibility • procedural manuals • quality assurance guidelines • quality and continuous improvement processes and standards • recording and reporting guidelines.
Calibration of measuring equipment in automotive development may include:	• the use of recognised external standards to insure that measuring equipment is calibrated to reflect those standards when in use. The measuring equipment may include mechanical/electrical/gas measuring equipment used in Automotive Development and may include dynamometers. Standards may include certified organisational, industry, national or international standards.
Instructions may include:	• workplace procedures relating to the use and operation of tools and equipment • departmental requirements • workplace instructions, including job sheets, plans, specifications, drawings and designs • workplace procedures relating to reporting and communications • manufacturers' instructions for the use of equipment and materials • industry, national and/or international standards.

Unit Sector(s)

Unit sector	Technical - Tools and Equipment

Competency field

Competency field	Manufacturing - Common

Co-requisite units

Not applicable.