



Australian Government

MEM20012 Service and repair mechanical automotive locking systems

Release: 1

MEM20012 Service and repair mechanical automotive locking systems

Modification History

Release 1. Supersedes and is equivalent to MEM20012A Service and repair mechanical automotive locking systems

Application

This unit of competency defines the skills and knowledge required to identify service and repair requirements for mechanical automotive locking systems on commercial and private use vehicles.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Band:

This unit has dual status and is to be regarded as both a Specialisation Band A unit and Specialisation Band B unit for progression to C5 (AQF level V).

Unit Weight: 4

Pre-requisite Unit

MEM11011	Undertake manual handling
MEM13015	Work safely and effectively in manufacturing and engineering
MEM16006	Organise and communicate information
MEM18001	Use hand tools
MEM18002	Use power tools/hand held operations
MEM20001	Produce keys
MEM20002	Assemble and test lock mechanisms
MEM20006	Maintain and service mechanical locking devices

Competency Field

Locksmithing

Elements and Performance Criteria

Elements describe the essential outcomes.

Performance criteria describe the performance needed to demonstrate achievement of the element.

- | | | | |
|---|--|-----|--|
| 1 | Determine job requirements | 1.1 | Follow standard operating procedures (SOPs) |
| | | 1.2 | Comply with work health and safety (WHS) requirements at all times |
| | | 1.3 | Select and use appropriate personal protective equipment (PPE) in accordance with SOPs |
| | | 1.4 | Identify job requirements from specifications, job sheets or work instructions |
| | | | |
| 2 | Identify service and repair requirements | 2.1 | Establish ownership and verify in accordance with organisational and industry procedures |
| | | 2.2 | Obtain system and component specifications and other relevant information from appropriate sources and in accordance with organisational and customer requirements |
| | | 2.3 | Establish nature of damage in accordance with organisational procedures, established inspection/diagnostic techniques and original specifications |
| | | 2.4 | Establish service and repair requirements and other information relevant to task in accordance with customer needs, organisational and manufacturer specifications and legislation, codes, regulations and standards |
| | | | |
| 3 | Repair, replace and service automotive locking system | 3.1 | Identify risks and hazards and make area secure |
| | | 3.2 | Apply specific isolation and safety measures with special regard to associated equipment |
| | | 3.3 | Select tools, equipment, materials and consumables, check for serviceability and use |
| | | 3.4 | Inspect lock assemblies and components and remove, repair, service and replace as appropriate and practicable, in accordance with SOPs, industry practices and factors impacting on feasibility of repair |

Elements describe the essential outcomes.

Performance criteria describe the performance needed to demonstrate achievement of the element.

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|---|-----------------------------------|-----|---|
| | | 3.5 | Inspect sub-assemblies and assemblies, test and adjust as necessary for compliance to original factory assembly and functioning |
| 4 | Finalise servicing process | 4.1 | Check function of entire locking system for compliance with operational specifications and adjust, as necessary |
| | | 4.2 | Complete documentation and process in accordance with legislative, assignment and organisational requirements |
| | | 4.3 | Clean work area, tools and equipment and store in accordance with SOPs |
| | | 4.4 | Clean vehicle and return to serviceable condition according to customer and organisational requirements |

Foundation Skills

This section describes those required skills (reading, writing, oral communication and numeracy) that are essential to workplace performance in this unit of competency.

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

This field allows for different work environments and conditions that may affect performance. Essential operating conditions that may be present (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included.

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PPE includes one (1) or more of the following:

- face shields, goggles and safety glasses
- hearing protection
- dust masks and respirators
- high visibility vests or clothing
- head protection
- sun protection, hats and sun screen
- gloves and knee pads
- safety footwear
- witches hats
- warning signs and warning tapes
- temporary safety barriers
- fire extinguisher
- first aid kit

Appropriate sources of information include one (1) or more of the following:

- catalogues
- manufacturer manuals
- drawings
- detailed/technical sketches
- computer software/internet
- colleagues/industry experts
- associated data sheets

Other information includes one (1) or more of the following:

- schedules
- timeframes
- access and site information
- products
- installation and upgrade requirements
- specific client requests
- materials
- costings
- warranties and service information
- legislation, codes and regulatory requirements
- WHS requirements

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Customer requirements include one (1) or more of the following:

- function and capabilities
- access issues
- service and maintenance requirements
- product operation and warranty information
- costings

Risks and hazards include one (1) or more of the following:

- accidental triggering of supplemental restraint systems (SRS) (air bags)
- unique dangers arising from working on the roadside
- non-compliance with manufacturer recommendations, materials handling, chemical and environmental
- physical hazards

Associated equipment includes one (1) or more of the following:

- air bags and other SRS equipment
- steering locking devices
- anti-theft devices

Lock assemblies and components include one (1) or more of the following:

- in-line pin
- single and double sided wafer
- 2 and 4 track
- tibbe (rotating disc)
- dimple
- sidebar
- split wafer
- new and other mechanisms

Tools and equipment include one (1) or more of the following:

- hand tools
- power tools and accessories
- security driver bits
- fixing tools
- special-purpose equipment
- trim removal tools
- fibre optic scope
- soldering iron
- vacuum cleaner

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Materials and consumables include one (1) or more of the following:

- lubricants
- adhesives and sealants
- cleaning materials
- wire and cable
- insulation tape/shrink tube/electrical connectors
- solder
- electronic components

Documentation includes one (1) or more of the following:

- historical records
- procedures and measurements for opening specific vehicles
- job sheets
- invoices
- warranties

Unit Mapping Information

Release 1. Supersedes and is equivalent to MEM20012A Service and repair mechanical automotive locking systems

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b7050d37-5fd0-4740-8f7d-3b7a49c10bb2>

Assessment Requirements for MEM20012 Service and repair mechanical automotive locking systems

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Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy the requirements of the elements and performance criteria on at least two (2) occasions and include:

- following work instructions, standard operating procedures (SOPs) and safe work practices
- establishing ownership of vehicle contents prior to commencing service and repair
- interpreting information specific for servicing and repairing mechanical automotive locking systems
- questioning, confirming and clarifying customer requirements
- identifying the type of locking components and checking functioning of locking systems
- tracing faults and using appropriate tools and equipment to service and repair mechanical automotive locking systems
- identifying actual and potential risks and hazards
- repairing/replacing/servicing locking assemblies using appropriate tools, equipment and procedures
- cleaning vehicle in accordance with original presentation, client requirements, industry standards and SOPs
- completing all documentation in accordance with SOPs.

Knowledge Evidence

Evidence required to demonstrate the required knowledge for this unit must be relevant to and satisfy the requirements of the elements and performance criteria and include knowledge of:

- safe work practices and procedures and use of personal protective equipment (PPE)
- attachment methods for window winders, internal handles, snibs, trims, cylinders, locks and external handles
- system and component specifications
- sources of specifications and other relevant information for mechanical automotive locking systems
- components of locking system
- principles of system and component function
- operating principles and technical terminology of specific locks
- common design problems and faults arising from vandalism, misuse and wear

- checks and tests to confirm service requirements
- organisational procedures for establishing service requirements
- procedures to establish and verify vehicle ownership and reasons for verifying ownership
- operating principles, release positions and isolation techniques for air bags
- factors impacting on feasibility of repair or replacement
- dismantling procedures for a range of automotive locks and reasons for care and precision
- procedures for replacing worn and damaged parts, removing foreign objects and lubricating, packing and sealing components
- organisational requirements for cleaning and storage
- documentation and recording procedures.

Assessment Conditions

- Assessors must:
 - have vocational competency in servicing and repairing mechanical automotive locking systems at least to the level being assessed with relevant industry knowledge and experience
 - satisfy the assessor requirements in the *Standards for Registered Training Organisations 2015* or its replacement and comply with the *National Vocational Education and Training Regulator Act 2011*, its replacement or equivalent legislation covering VET regulation in a non-referring state/territory as the case requires
- Where possible assessment must occur in operational workplace situations. Where this is not possible or where personal safety or environmental damage are limiting factors, assessment must occur in a sufficiently rigorous simulated environment that reflects realistic operational workplace conditions. This must cover all aspects of workplace performance, including environment, task skills, task management skills, contingency management skills and job role environment skills
- Conditions for assessment must include access to all tools, equipment, materials and documentation required, including relevant workplace procedures, product and manufacturing specifications
- Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

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