



Australian Government

MEM20013 Service automotive transponder systems

Release: 1

MEM20013 Service automotive transponder systems

Modification History

Release 1. Supersedes and is equivalent to MEM20013A Service automatic transponder systems

Application

This unit of competency defines the skills and knowledge required to identify, analyse, encode and re-encode (programme) automotive transponder security 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: 2

Pre-requisite Unit

MEM13015	Work safely and effectively in manufacturing and engineering
MEM16006	Organise and communicate information
MEM18001	Use hand tools
MEM20001	Produce keys

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

Elements describe the essential outcomes.		Performance criteria describe the performance needed to demonstrate achievement of the element.	
2	Identify service and repair requirements	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
		2.1	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
3	Service automotive transponder system	2.3	Establish nature of damage in accordance with organisational procedures, established inspection/diagnostic techniques and original specifications
		2.4	Establish service requirements and other information relevant to task in accordance with customer needs, organisational and manufacturer specifications and legislation, codes, regulations and standards
		3.1	Identify risks and hazards and make area secure
		3.2	Apply specific isolation and safety measures with special regard to associated equipment
4	Program transponder keys	3.3	Select tools, equipment, materials and consumables, check for serviceability and use in accordance with manufacturers' specifications and SOPs
		4.1	Identify personal limitations in programming and seek assistance from appropriate sources
		4.2	Establish programming requirements in accordance with SOPs and supplier require
		4.3	Programme keys to correct specifications

Elements describe the essential outcomes.

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

4.4 Test system function to ensure correct operation

5 Finalise servicing process

5.1 Complete documentation and process in accordance with legislative, assignment and organisational requirements

5.2 Clean work area, tools and equipment and store in accordance with SOPs

5.3 Clean vehicle and return to serviceable condition

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.

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

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.

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

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

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
- codes
- WHS requirements

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:

- SRS
- electronic immobilisers
- steering locking devices
- anti-theft devices

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

- hand tools
- specialist diagnostic equipment
- encoding equipment

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

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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 MEM20013 Service automotive transponder 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 and verifying ownership in accordance with organisational and industry procedures
- interpreting information specific for servicing automotive transponder systems
- questioning, confirming and clarifying customer requirements
- recognising personal limitations in assessing requirements for automotive transponder systems and seeking assistance from appropriate person(s) in accordance with SOPs
- identifying automotive locking components and associated equipment and checking functioning of locking systems
- tracing faults and using appropriate tools and equipment to service automotive transponder systems
- identifying actual and potential risks and hazards
- establishing program requirements, programming keys to correct specification, and testing system for conformance
- cleaning worksite in accordance with 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)
- system and component specifications and principles of operation
- sources of specifications and other relevant information for automotive transponder systems
- types of transponders and technical terminology used
- 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
- operation and function of transponder and engine immobiliser systems
- 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
- key blanks to suit model and mechanical/electronic part of lock
- different types of transponder technologies
- programming and operating procedures for encoder/diagnostic machine
- documentation and recording procedures.

Assessment Conditions

- Assessors must:
 - have vocational competency in servicing automatic transponder 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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