



Australian Government

MEM27012 Maintain mobile plant suspension systems

Release: 1

MEM27012 Maintain mobile plant suspension systems

Modification History

Release 1. Supersedes and is equivalent to MEM18040B Maintain suspension systems

Application

This unit of competency defines the skills and knowledge required to assess, maintain and repair/replace suspension systems of all types of wheeled and/or tracked plant/vehicles.

Where suspension systems are required to be maintained on track type undercarriage see unit MEM27014 Diagnose and rectify automatic transmissions.

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

Band: A

Unit Weight: 4

Pre-requisite Unit

MEM09002	Interpret technical drawing
MEM11011	Undertake manual handling
MEM12023	Perform engineering measurements
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
MEM18055	Dismantle, replace and assemble engineering components

Competency Field

Fixed and mobile plant

Elements and Performance Criteria

Elements describe the essential outcomes.

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

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|---|------------------------------------|-----|---|
| 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 | Use appropriate personal protective equipment (PPE) in accordance with SOPs |
| | | 1.4 | Identify job requirements from specifications, drawings, job sheets or work instructions |
| | | | |
| 2 | Assess suspension systems | 2.1 | Apply principles of operation and terminology to alignment and suspension systems |
| | | 2.2 | Assess components for security, wear and faults and determine corrective action |
| | | 2.3 | Assess component parts and determine the need for repair or replacement |
| | | 2.4 | Test suspension arrangements, control arms/links, dampening and control devices for correct operation |
| | | 2.5 | Assess axle alignment/tracking and determine variance from specification |
| | | 2.6 | Test auto/manual levelling devices for performance to specifications |
| | | | |
| 3 | Maintain suspension systems | 3.1 | Align axles to specification |
| | | 3.2 | Adjust ride height to specification |
| | | 3.3 | Re-gas suspension system to specification |
| | | 3.4 | Remove/replace suspension components using appropriate tools, equipment and techniques |
| | | 3.5 | Record all service and rectification activities |

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

No range of conditions provided for this unit.

Unit Mapping Information

Release 1. Supersedes and is equivalent to MEM18040B Maintain suspension 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 MEM27012 Maintain mobile plant suspension 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
- identifying and interpreting specifications, charts, lists, drawings and other applicable reference documents to maintain suspension systems
- inspecting the suspension components for wear, faults and security
- testing suspension arrangements, control arms/links and dampening devices for correct operation
- checking axle alignment/tracking for compliance with specifications and identifying variations of axle alignment from specification
- undertaking calculations and numerical operations associated with maintaining suspension systems
- testing automatic/manual levelling devices for correct operation
- aligning axles, adjusting the ride height and re-gassing the suspension system to specifications
- removing/replacing suspension components using appropriate tools, equipment and techniques
- recording/reporting all service and rectification work activities 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)
- operation of suspension systems and the effects of steering geometry and alignment
- procedures for:
 - checking suspension system components for wear, faults, security and conformance to specification and tools, techniques and equipment
 - aligning axles and specifications that apply
 - adjusting ride height and specifications that apply
 - re-gassing suspension systems and precautions to be taken
 - removing and replacing suspension systems and precautions to be taken

- parameter determining suitability of repair or replacement of components and component parts
- action to be taken to correct non-conformance to specification
- tools, techniques and equipment required to maintain and repair suspension systems and reasons for selection.

Assessment Conditions

- Assessors must:
 - have vocational competency in maintaining suspension 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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