



Australian Government

Assessment Requirements for MEM27022 Maintain, fault find and repair traction drive mechanics

Release: 1

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Modification History

Release 1: New unit

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 perform engine repair or replacement
- testing procedures for traction drive components
- checking traction drive and equipment performance against specifications
- checking components and parts for abnormal wear or defects and identifying whether to reuse, repair or replace components and parts
- aligning shafts from engine to alternator or generator
- replacement of worn or faulty parts
- obtaining and recording measurements and interpreting readings for replacement or reuse as being under or over size
- assembly and disassembly of traction drive components using appropriate tools, equipment and techniques.

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)
- tools, techniques and equipment to be used and reasons for selection
- criteria for identifying components for reuse or replacement
- traction system layout and principles, including:
 - types of engines (prime movers) and operating principles and power output
 - relationship of alternator/generator speed/load to engine performance
 - power path to motors, including role of engine, alternators/generators, inverters and rectifiers, and dynamic retarding, including function of cooling grid and blower, and wheel motors
- controls and instrumentation, including systems and controls for remote operation and monitoring

- action to be taken when abnormal wear or defects are observed in the traction drive components
- test instruments and tools used for traction drive service and maintenance.

Assessment Conditions

- Assessors must:
 - have vocational competency in maintaining, fault finding and repairing traction drive mechanics 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.

Links

Companion Volume implementation guides are found in VETNet -

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