



Australian Government

Assessment Requirements for MEM27024

Diagnose and rectify mobile plant hydrostatic systems

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 using different types of mobile plant hydrostatic systems and include:

- following work instructions, standard operating procedures (SOPs) and safe work practices
- identifying and interpreting specifications, charts, lists, drawings, design rules and other applicable reference documents to mobile plant hydrostatic systems
- performing diagnostic testing procedures for hydrostatic transmissions, including:
 - flow and pressure testing
 - measuring case drains
 - internal and external fluid leaks
 - abnormal noises and operation
 - scan tools and/or multimeter testing
- undertaking calculation and numerical operations associated with diagnosing and rectifying closed circuit fluid power systems
- checking hydrostatic system components for wear and clearance
- removing, refitting, adjusting and aligning hydrostatic system components
- selecting and using appropriate test equipment to test components for compliance to specifications
- interpreting fault codes and data from test equipment and control modules
- identifying faulty components visually and by using and adapting appropriate testing equipment and identifying components for reuse or replacement
- removing and refitting components to hydrostatic assembly and selecting replacement parts using manufacturer catalogues and data
- adjusting components using appropriate tools, techniques and equipment
- recording/reporting all service/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)

- different pump and motor configurations and their advantages and disadvantages in mobile applications, including:
 - close coupled (motor and pump back to back units)
 - split units (separate motor and pump) single and double
 - multiple pump/motor layouts
- method of operation and assembly/disassembly procedures for axial, bent axis and radial pumps
- pump control methods, including:
 - mechanical
 - mechanical servo
 - pilot pressure
 - electronic servo
 - pressure/limitation and displacement control
- operating principles of charge pumps, including construction, circuitry, case flushing and cooling and heating functions
- functions and types of control valves used in hydrostatic/closed circuit systems
- flow amplifiers and functions
- effect of engine speed and performance on hydrostatic system
- methods for checking hydrostatic system components for wear and clearance
- procedures used to remove, refit, adjust and align hydrostatic system components
- recording requirements for test and rectification activities
- appropriate action to correct the faulty components
- test equipment to be used in checking/testing mobile plant hydrostatic systems for correct operation and reasons for selection
- tools, techniques and equipment used in maintaining and repair hydrostatic system assemblies.

Assessment Conditions

- Assessors must:
 - have vocational competency in diagnosing and rectifying mobile plant hydrostatic 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.

Links

Companion Volume implementation guides are found in VETNet -

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