



Australian Government

MSMRV391 Diagnose recreational vehicle electrical faults

Release: 1

MSMRV391 Diagnose recreational vehicle electrical faults

Modification History

Release 1. Newly created unit.

Application

This unit describes the skills and knowledge required to diagnose electrical faults in recreational vehicles and report the outcomes to the customer and/or supervisor with recommendations about the next steps. Faults may require specialist or technical expertise.

The unit includes diagnosing faults with electrical systems and equipment, but only those that are extra-low-voltage: not exceeding 50 V AC or 120 V ripple-free DC, as defined in AS/NZS3000. The unit does not address diagnosing faults in mechanical components: propulsion, suspension, steering and braking systems.

The unit applies to a person working in a recreational vehicle service and repair facility who undertakes routine tasks according to job instructions, plans/specifications and procedures and uses discretion and judgement in selecting equipment, services and contingency measures. They work with a high degree of self-direction and limited supervision. They apply known solutions to routine problems and report non-routine problems according to procedures. They are responsible for their output and have limited responsibility for the output of others.

No licensing or certification requirements exist at the time of publication. Relevant legislation, industry standards and codes of practice within Australia must be applied.

Elements and Performance Criteria

Elements	Performance Criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Identify fault	1.1 Identify job requirements from workplace instructions 1.2 Communicate with the customer and relevant other people to find out about the fault, its frequency, the customer's operating practices and any issues with related equipment 1.3 Check the service history to verify the manufacturer's maintenance and service requirements have been met 1.4 Identify hazards and hazard controls and check the hazard controls are in place and operating 1.5 Conduct a visual inspection to identify possible causes of the fault according to workplace procedures
2. Perform diagnostic	2.1 Identify relevant diagnostic tests according to workplace procedures

Elements	Performance Criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
tests	2.2 Select and check tools and equipment for relevant diagnostic tests are ready to use 2.3 Confirm test procedures with appropriate personnel as required, and obtain any necessary permissions to conduct tests 2.4 Carry out diagnostic tests according to workplace procedures 2.5 Identify possible causes of the fault from diagnostic test results
3. Document faults and proposed solutions	3.1 Record information about the fault and test results according to workplace procedures 3.2 Identify proposed solutions to rectify faults based on information found 3.3 Communicate findings to the workplace supervisor and customer and confirm the next steps

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance but not explicit in the performance criteria.

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

Unit Mapping Information

No equivalent unit.

Links

Companion volume implementation guides are found in VETNet – -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=d1287d36-dff4-4e9f-ad2c-9d6270054027>

Assessment Requirements for MSMRV391 Diagnose recreational vehicle electrical faults

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Performance Evidence

There must be evidence that the candidate has completed the tasks set out in the elements and performance criteria and has demonstrated the ability to diagnose recreational vehicle electrical faults on at least three occasions.

Knowledge Evidence

There must be evidence the candidate knows:

- requirements relevant to the performance criteria of:
 - *AS/NZS 5601.2 Gas installations LP Gas installations in caravans and boats for non-propulsive purposes*
 - *AS/NZS 3001 Electrical installations - Transportable structures and vehicles including their site supplies*
 - the *Road Vehicle Standards Act 2018*
 - Australian design rules
- types of technical information relevant to diagnosing electrical faults in recreational vehicles and how to interpret that information
- manufacturer's instructions (including for installation, use, service, troubleshooting and repair) for and commonly reported electrical faults with:
 - vehicle, solar and 240 V charging systems
 - appliances including refrigerators, lights and air-conditioners
 - solar panels
 - batteries including lithium, absorbed glass mat, gel cell and wet cell batteries
 - fridges
 - Bluetooth and wi-fi systems
 - slide-out systems
- diagnostic tests for commonly reported electrical faults in recreational vehicles, including the applicability and use of remote diagnostics technology
- which tools and equipment to use when diagnosing electrical faults in recreational vehicles
- workplace policies and procedures relevant to their job role and responsibilities including for:
 - diagnosing electrical faults in recreational vehicles
 - communication and reporting

- quality assurance
- work health and safety, including personal protective equipment
- work planning
- hazards that might arise in the work environment and their controls
- the most common issues that can arise when diagnosing recreational vehicle electrical faults and how to avoid and respond to them
- how to identify if an electrical fault has been diagnosed correctly in a recreational vehicle.
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Assessment Conditions

Skills must have been demonstrated in the workplace or a simulated environment that reflects workplace conditions and contingencies. The following conditions must be met for this unit:

- use of suitable facilities, equipment and resources required to diagnose recreational vehicle faults including:
 - recreational vehicles with faulty equipment and systems
 - diagnostic tools and equipment
 - job instructions and workplace procedures.

Assessors of this unit must satisfy the NVR/AQTF mandatory competency requirements for assessors.

Links

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