

1. Title	Repair faults in control and protection device of diesel engines and generators
2. Code	EMCUOR309A
3. Range	Repair faults in control and protection device of diesel engines and generators in servicing stations or external sites.
4. Level	3
5. Credit	9
6. Competency	<p style="text-align: center;"><u>Performance Requirements</u></p> <p>6.1      Composition and working principles of control and protection device of diesel engines and generators</p> <p style="padding-left: 100px;">◆ Understand the composition and working principles of control and protection device of diesel engines and generators</p> <p>6.2      Find and repair faults in control and protection device of diesel engines and generators</p> <p style="padding-left: 100px;">◆ Repair faults in control equipment of diesel engines and generators</p> <ul style="list-style-type: none"> <li>• Check the control equipment of diesel engines and generators, including the following, to find out the root of fault according to the signs of fault by applying the working principles of control equipment of diesel engines and generators: <ul style="list-style-type: none"> <li>› Speed controller of the diesel engine</li> <li>› Magnetic field control circuit and equipment of the generator</li> <li>› Load regulator of the generator and its control circuit</li> <li>› Control circuit of the auxiliary generator</li> <li>› Control circuit of the battery unit</li> <li>› Circuit breaker and relay</li> </ul> </li> <li>• Repair the fault after finding out the faulty equipment or component</li> </ul>

	<ul style="list-style-type: none"> <li>◆ Repair the fault in protection device of diesel engines and generators <ul style="list-style-type: none"> <li>• Repair the protection device of diesel engines and generators, including: <ul style="list-style-type: none"> <li>▸ Engine and generator overspeed protection circuit</li> <li>▸ Engine overheat alarm</li> <li>▸ Water thermometer</li> <li>▸ Generator overload protector</li> </ul> </li> <li>• Measure data output of the generator</li> <li>• Repair the fault after finding out the faulty equipment or component</li> </ul> </li> </ul> <p>6.3 Professionalism in repairing control and protection device of diesel engines and generators</p> <ul style="list-style-type: none"> <li>◆ Repair the control and protection device of diesel engines and generators according to the safety regulations and code of practice</li> <li>◆ Write a simple repair report according to the damage of the control and protection device of diesel engines and generators</li> </ul>
7. Assessment Criteria	<p>The integrated outcome requirements of this unit of competency are:</p> <ul style="list-style-type: none"> <li>(i) Capable to find out the fault in the control and protection device of a diesel engine within a reasonable period of time according to the symptoms of fault;</li> <li>(ii) Capable to find out the fault in the control and protection device of a generator within a reasonable period of time according to the symptoms of fault;</li> <li>(iii) Capable to handle and eliminate effectively the fault in the control and protection device of diesel engines and generators; and</li> <li>(iv) Capable to write simple repair reports.</li> </ul>
8. Remarks	<p>This unit of competency is suitable for training electrical and mechanical engineering personnel involving in the work of diesel generator. The credit value of this unit of competency is set on the presumption that the person already possesses basic competency of repairing control and protection device of diesel engines and generators.</p>