

1. Title	Repair electrical devices for electric traction control system
2. Code	EMCUMA302A
3. Range	Repair devices for electric traction control system, with the use of electrical and pneumatic equipment, at servicing stations or work sites.
4. Level	3
5. Credits	6
6. Competency	<p style="text-align: center;"><u>Performance Requirements</u></p> <p>6.1 Principles of devices for electric traction control system ♦ Understand the structure and principles of devices for electric traction control system</p> <p>6.2 Methods of repairing electrical devices for electric traction control system</p> <ul style="list-style-type: none"> <li>♦ Repair DC traction motor <ul style="list-style-type: none"> <li>• Apply repairing techniques in maintenance of DC traction motors, including commutators, brushes and brush holders, winding, bearing and insulation devices, according to instructions</li> <li>• Measure and replace brushes; grind brush springs and adjust their strength</li> <li>• Test the performance of DC motors</li> </ul> </li> <li>♦ Repair AC traction motors <ul style="list-style-type: none"> <li>• Apply repairing techniques in maintenance of AC traction motors, including checking and repairing winding, bearing and insulation devices, according to instructions</li> <li>• Test the performance of AC motors</li> </ul> </li> <li>♦ Repair the control circuit and equipment of traction motors <ul style="list-style-type: none"> <li>• Check and maintain control equipment, including forward/reverse switches, contactors and relays, according to repairing instructions</li> <li>• Perform visual inspection of the control circuit of a traction motor</li> <li>• Check and maintain transmission gear and gearboxes according to repairing instructions</li> </ul> </li> </ul>
7. Assessment Criteria	<p>The integrated outcome requirements of this unit of competency are:</p> <p>(i) Capable to repair DC traction motors and adjust the strength of their brush springs correctly and effectively according to instructions;</p> <p>(ii) Capable to repair DC motors, measure the resistance of winding and test the motor performance correctly and effectively according to repairing instructions; and</p> <p>(iii) Capable to repair the control circuits and equipment of traction motors correctly and effectively according to instructions.</p>
8. Remarks	The credit value of this unit of competency is set on the presumption that the person already possesses basic electrical and mechanical knowledge.