

1. Title	Maintenance brake systems and equipment for trains
2. Code	EMRAMA304A
3. Range	Maintain brake systems for trains at train maintenance centres according to repairing instructions by applying maintenance techniques for mechanical, pneumatic and electrical equipment.
4. Level	3
5. Credits	6
6. Competency	<p style="text-align: center;"><u>Performance Requirements</u></p> <p>6.1 Working principles of brake systems and equipment of trains and their maintenance standards</p> <ul style="list-style-type: none"> <li>◆ Understand the structure and working principles of the brake systems and equipment of trains including <ul style="list-style-type: none"> <li>• Brake actuators and associated mechanical devices</li> <li>• Parking brakes</li> <li>• Pneumatic brake systems</li> <li>• Brake control devices</li> <li>• Wheel slide protection devices</li> </ul> </li> <li>◆ Understand the scope and standards for different levels of maintenance</li> </ul> <p>6.2 Method and procedures of maintaining brake systems and equipment of trains</p> <ul style="list-style-type: none"> <li>◆ Able to read maintenance instructions and select suitable information for use</li> <li>◆ Capable to maintain mechanical devices of brake systems according to maintenance instructions by applying maintenance techniques for mechanical and pneumatic equipment</li> <li>◆ Capable to maintain and test the pipe line control equipment and pipes of pneumatic brake systems according to repairing instructions by applying repairing techniques for pneumatic equipment</li> <li>◆ Capable to maintain electrical equipment and circuits of pneumatic brake systems according to maintenance instructions by applying maintenance techniques for electrical equipment and circuits</li> <li>◆ Capable to make effective use of typical tools and instruments for maintaining electrical, mechanical, and pneumatic equipment</li> </ul> <p>6.3 Professionalism in maintaining the brake systems and equipment of trains</p> <ul style="list-style-type: none"> <li>◆ Capable to follow the requirements of maintenance instructions to ensure that the procedures and quality of maintenance are up to standard</li> <li>◆ Understand the safety guidelines and codes of practice for train engineering in handling maintenance for the brake systems and equipment of trains</li> </ul>

7. Assessment Criteria	<p>The integrated outcome requirement of this unit of competency is:</p> <ul style="list-style-type: none"> <li>(i) Capable to service and test the brakes and parking brake correctly and efficiently and align the brake lining to the right position according to maintenance instructions; and</li> <li>(ii) Capable to service and test the pipe line control equipment and wheel slide protection devices of pneumatic brake systems correctly and efficiently according to repairing instructions.</li> </ul>
8. Remarks	<p>The credit value of this unit of competency is set on the presumption that the person already possesses basic electrical, mechanical and pneumatic knowledge.</p>