

1. Title	Repair the faults in pneumatic systems of trains
2. Code	EMRAOR304A
3. Range	Identify and repair the faults in pneumatic systems and equipment at train maintenance centres or during operation of trains.
4. Level	3
5. Credits	6
6. Competency	<p style="text-align: center;"><u>Performance Requirements</u></p> <p>6.1 Working principles of pneumatic systems and equipment of trains and basic fault finding techniques</p> <ul style="list-style-type: none"> <li>◆ Understand the structure and working principles of the pneumatic systems of trains</li> <li>◆ Understand the structure and working principles of the pneumatic equipment of trains, including <ul style="list-style-type: none"> <li>• Air compressors and control circuits</li> <li>• Pipe network and fittings</li> <li>• Various kinds of valves</li> <li>• Pressure regulators</li> <li>• Pressure gauges</li> <li>• Pneumatic-operated equipment</li> <li>• Equipment to maintain the compressed air quality</li> </ul> </li> <li>◆ Be familiar with the control circuits and pneumatic pipe lines of the pneumatic systems of trains</li> <li>◆ Master the basic fault finding techniques</li> </ul> <p>6.2 Methods and procedures of identifying and repairing the faults in pneumatic systems and equipment of trains</p> <ul style="list-style-type: none"> <li>◆ Able to read the electrical and pneumatic engineering drawings and check the circuits and pneumatic pipe lines systematically and efficiently</li> <li>◆ Check the air compressing systems and control circuits to find the root causes of faults according to the fault symptoms</li> <li>◆ Check the various pneumatic pipe line regulating equipment and fittings to find the root causes of faults according to the fault symptoms</li> <li>◆ Check the pneumatic control equipment to find the root causes of faults according to the fault symptoms</li> <li>◆ Check the equipment to maintain the compressed air quality to find the root causes of faults according to the fault symptoms, including <ul style="list-style-type: none"> <li>• Dryers</li> <li>• Filters</li> <li>• Automatic drain valves</li> </ul> </li> <li>◆ Repair the faults after identifying the fault equipment or components</li> <li>◆ Use general electrical and pneumatic device repairing and testing instruments and tools efficiently</li> </ul>

	<p>6.3 Professionalism in repairing faults in pneumatic systems and equipment of trains</p> <ul style="list-style-type: none"> <li>◆ Understand the safety guidelines as required by the law and codes of practice in removing faults in pneumatic systems and equipment of trains</li> </ul>
<p>7. Assessment Criteria</p>	<p>The integrated outcome requirement of this unit of competency is:</p> <ul style="list-style-type: none"> <li>(i) Capable to identify the faults in the air compressor control circuits within a reasonable period of time according to the fault symptoms;</li> <li>(ii) Capable to identify the faults in the pipe line network of pneumatic systems within a reasonable period of time according to the fault symptoms; and</li> <li>(iii) Capable to identify the faults in the equipment to maintain the compressed air quality within a reasonable period of time according to the fault symptoms.</li> </ul>
<p>8. Remarks</p>	<p>The credit value of this unit of competency is set on the presumption that the person already possesses basic knowledge of pneumatic and electrical equipment.</p>