

1. Title	Maintain electrical systems for electric trains
2. Code	EMRAMA303A
3. Range	Maintain electrical systems for electric trains at train maintenance centres according to maintenance instructions by applying maintenance techniques for electrical and pneumatic 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 electrical systems and equipment of electric trains and their maintenance standards</p> <ul style="list-style-type: none"> ◆ Understand the structure and working principles of the electrical systems and equipment of electric trains ◆ Understand the scope and standards for different levels of maintenance <p>6.2 Method and procedures of maintaining electrical systems and equipment of electric trains</p> <ul style="list-style-type: none"> ◆ Able to read maintenance instructions and select suitable information for use ◆ Capable to maintain power collecting devices such as pantographs, lighting arrestors and sparking gaps, etc. according to maintenance instructions by applying maintenance techniques for electrical and pneumatic equipment ◆ Capable to maintain circuit breakers and relays according to maintenance instructions by applying maintenance techniques for electrical and pneumatic equipment ◆ Capable to filter insulating oil of main transformer and test the dielectric strength and gas content of insulating oil ◆ Capable to make effective use of tools and instruments commonly used for maintaining electrical, mechanical, pneumatic and air-conditioning equipment <p>6.3 Professionalism in maintaining the electrical systems and equipment of electric trains</p> <ul style="list-style-type: none"> ◆ Capable to follow the requirements of maintenance instructions to ensure that the procedures and quality of maintenance are up to standard ◆ Understand the safety guidelines and codes of practice for railway engineering in handling maintenance for the electrical systems and equipment of electric trains

7. Assessment Criteria	The integrated outcome requirement of this unit of competency is: (i) Capable to service, adjust and test the electrical systems of trains correctly and efficiently according to maintenance instructions and using methods in compliance with the safety guidelines and codes of practice.
8. Remarks	The credit value of this unit of competency is set on the presumption that the person already possesses basic electrical, mechanical and pneumatic knowledge.