

**SKILLS FRAMEWORK FOR PUBLIC TRANSPORT
TECHNICAL SKILLS AND COMPETENCIES (TSC) REFERENCE DOCUMENT**

TSC Category	Rail Systems Maintenance					
TSC	Rolling Stock Auxiliary Systems Maintenance					
TSC Description	Implement preventive and corrective maintenance activities of rolling stock auxiliary systems					
TSC Proficiency Description	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
	PTP-RSM-1027-1.1	PTP-RSM-2027-1.1	PTP-RSM-3027-1.1	PTP-RSM-4027-1.1		
	Carry out scheduled preventive maintenance work on rolling stock auxiliary systems	Conduct corrective maintenance on rolling stock auxiliary systems	Troubleshoot faulty rolling stock auxiliary systems to locate faults and recommend rectification methods	Diagnose root causes of rolling stock auxiliary systems failure and review maintenance plans to prevent fault recurrence		
Knowledge	<ul style="list-style-type: none"> Operating principles, functions and features of rolling stock auxiliary systems Types of rolling stock auxiliary systems that includes: <ul style="list-style-type: none"> Lighting systems Fire protection systems Door control systems Public Address (PA) systems Passenger Information System (PIS) Types of components in rolling stock auxiliary systems Procedures for servicing rolling stock auxiliary equipment in accordance to organisational maintenance procedure, Work Instructions (WI) and/or Original Equipment Manufacturer (OEM) technical manuals Types and usage of tools and equipment for carrying out preventive 	<ul style="list-style-type: none"> Operating principles, functions and features of rolling stock auxiliary systems Types of rolling stock auxiliary systems that includes: <ul style="list-style-type: none"> Lighting systems Fire protection systems Door control systems Public Address (PA) systems Passenger Information System (PIS) Electrical, mechanical and pneumatic rolling stock auxiliary system concepts Common failures of rolling stock auxiliary systems Procedures to dismantle repair, replace, and re-assemble rolling stock auxiliary components Procedures to identify rolling stock auxiliary systems faults Types and usage of tools and equipment for 	<ul style="list-style-type: none"> Engineering and working principles of rolling stock auxiliary systems Common fault symptoms in rolling stock auxiliary systems Methods of locating and rectifying faults Types and usage of troubleshooting techniques, equipment and tools Safety guidelines for usage of tools and equipment to execute troubleshooting on rolling stock auxiliary systems 	<ul style="list-style-type: none"> Factors affecting rolling stock auxiliary systems and components performance Failure investigation and prevention methods Methods and tools for diagnostic analysis Organisational maintenance procedures, Work Instructions (WI) and Original Equipment Manufacturer (OEM) technical recommendations Types and methods of functional tests on rolling stock auxiliary systems Functional relationships between rolling stock auxiliary systems, other rolling stock components, plant equipment and the overall rail system 		

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	<p>maintenance on rolling stock auxiliary systems</p> <ul style="list-style-type: none"> • Safety guidelines on use of tools and equipment for preventive maintenance on rolling stock auxiliary systems • Types and usage of Personal Protective Equipment (PPE) for rolling stock auxiliary systems maintenance • Organisational maintenance documentation and fault reporting procedures 	<p>carrying out corrective maintenance on rolling stock auxiliary systems</p> <ul style="list-style-type: none"> • Safety guidelines on use of tools and equipment for corrective maintenance on rolling stock auxiliary systems • Types and usage of Personal Protective Equipment (PPE) for rolling stock auxiliary systems maintenance • Organisational maintenance documentation and fault reporting procedures 				
Abilities	<ul style="list-style-type: none"> • Perform preparation work to conduct maintenance on rolling stock auxiliary systems • Follow organisational procedures, WI and/or OEM technical manuals to carry out preventive maintenance on rolling stock auxiliary systems • Perform functionality checks on rolling stock auxiliary systems • Adhere to tools and equipment operating and safety guidelines to rolling stock auxiliary systems • Record rolling stock auxiliary systems maintenance activities and report occurrences of potential faults identified 	<ul style="list-style-type: none"> • Interpret work orders and prepare for corrective maintenance • Apply fault identification procedures to determine causes of rolling stock auxiliary systems faults • Dismantle faulty rolling stock auxiliary systems and components for corrective maintenance • Carry out rectification, repair and/or replacement of faulty rolling stock auxiliary components • Reassemble and reinstate rolling stock auxiliary systems • Perform functional tests to determine serviceability of rolling stock auxiliary systems • Apply operating and safety measures in operating tools and equipment during maintenance work • Record and collate documentation of rolling 	<ul style="list-style-type: none"> • Use troubleshooting tools, equipment and methods to locate and analyse causes of rolling stock auxiliary system faults • Recommend corrective actions for identified faults on rolling stock auxiliary systems • Implement procedures on safe usage of tools and equipment during maintenance work • Analyse maintenance work documented for rolling stock auxiliary systems to identify possible workflow improvements so as to prevent fault recurrence 	<ul style="list-style-type: none"> • Establish structured failure investigation and specify functional testing requirements • Apply failure investigation methods to diagnose root cause failure of rolling stock auxiliary systems • Review organisational rolling stock auxiliary systems maintenance procedures • Propose new and/or enhanced maintenance plans and/or WI in reference to OEM technical recommendations • Monitor overall maintenance progress of rolling stock auxiliary systems to ascertain effectiveness of maintenance plan • Develop solutions by analysing diagnostic data to prevent faults and failures recurrence 		

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		stock auxiliary systems maintenance work		<ul style="list-style-type: none"> • Develop troubleshooting, rectification and fault analysis methods • Develop test procedures for system performance checks • Coordinate rolling stock auxiliary systems maintenance in conjunction with other rail systems maintenance needs 		
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