

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

TSC Category	Automotive Maintenance					
TSC	Bus Electrical and Electronic Systems Maintenance					
TSC Description	Implement corrective and preventive maintenance of bus electrical and electronic systems					
TSC Proficiency Description	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
	PTP-AMT-1005-1.1	PTP-AMT-2005-1.1	PTP-AMT-3005-1.1	PTP-AMT-4005-1.1		
	Carry out scheduled preventive maintenance and serviceability checks on bus electrical and electronic systems	Conduct corrective maintenance on bus electrical and electronic systems	Troubleshoot faulty bus electrical and electronic systems to locate faults and recommend rectification methods	Diagnose root causes of recurring faults on bus electrical and electronic systems to resolve systemic failure issues		
Knowledge	<ul style="list-style-type: none"> System layout and operating functions of bus electrical and electronic architecture Types of components and parts of bus electrical and electronic systems and sub-systems Electrical and electronics principles Procedures for preventive maintenance on bus electrical and electronic systems in accordance to organisational procedures, Work Instructions (WI) and/or Original Equipment Manufacturer (OEM) technical manuals Procedures for inspection and serviceability checks of bus electrical and electronic systems Types of maintenance supplies, spare parts and consumables for bus electrical and electronic systems maintenance 	<ul style="list-style-type: none"> System layout and operating functions of bus electrical and electronic architecture Types of components and parts of bus electrical and electronic systems and sub-systems Electrical and electronics principles Types of faults for bus electrical and electronic systems Procedures and methods to disassemble, repair and/or replace faulty bus electrical and electronic components Functional test procedures on bus electrical and electronic systems Types of maintenance supplies, spare parts and consumables for bus electrical and electronic systems maintenance Types and safe usage of tools and equipment for 	<ul style="list-style-type: none"> Operating principles of bus electrical and electronic systems Types of troubleshooting and rectification techniques for bus electrical and electronic systems maintenance Types of fault identification methods for bus electrical and electronic systems Signs of defective or degraded components and parts within bus electrical and electronic systems Safety guidelines on usage of tools and equipment to troubleshoot bus electrical and electronic systems 	<ul style="list-style-type: none"> Operating principles of bus electrical and electronic systems Types and causes of systemic failures on bus electrical and electronic systems Types of failure investigation and prevention methods Types of diagnostic equipment and tools Diagnostic procedures for bus electrical and electronic systems and components Organisational maintenance procedures, Work Instructions (WI) and Original Equipment Manufacturer (OEM) technical recommendations Methods to develop maintenance WI 		

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	<ul style="list-style-type: none"> Types and safe usage of tools and equipment for performing preventive maintenance work Types and usage of Personal Protective Equipment (PPE) Organisational maintenance documentation and fault reporting procedures 	<ul style="list-style-type: none"> performing corrective maintenance work Types and usage of Personal Protective Equipment (PPE) Organisational maintenance documentation and fault reporting procedures 				
Abilities	<ul style="list-style-type: none"> Prepare tools, equipment, materials and checklists required for preventive maintenance tasks Carry out scheduled preventive maintenance tasks on bus electrical and electronic systems according to organisation procedures, WI and/or OEM technical manuals Inspect the condition and serviceability of bus electrical and electronic systems Follow organisation procedures, WI and/or OEM technical manual instructions on safe handling of tools and equipment during maintenance work Document maintenance activities performed on bus electrical and electronic systems Report occurrences of faults and defects identified 	<ul style="list-style-type: none"> Interpret work orders to determine corrective maintenance tasks Coordinate the preparation of resources required for corrective maintenance activities Recognise defective components and parts on bus electrical and electronic systems for corrective maintenance work Disassemble bus electrical and electronic systems for corrective maintenance Carry out repair and/or replacement of faulty components and parts Reassemble and reinstate bus electrical and electronic systems Perform functionality tests on bus electrical and electronic systems Apply operating and safety measures during maintenance work Collate and document maintenance activities performed on bus 	<ul style="list-style-type: none"> Implement troubleshooting procedures to investigate causes of faults in bus electrical and electronic systems Recommend corrective actions to defects identified on bus electrical and electronic systems Implement procedures on safe usage of tools and equipment during maintenance work Analyse maintenance activities documented for bus electrical and electronic systems to identify maintenance workflow improvements 	<ul style="list-style-type: none"> Establish failure investigation and specify functional testing requirements Perform fault analysis to address systemic failures on bus electrical and electronic systems Identified on bus electrical and electronic systems Review data gathered from diagnostic procedures to recommend rectification solutions for recurring faults identified on bus electrical and electronic systems Analyse performance of bus electrical and electronic systems to evaluate effectiveness of recommended rectification solutions Review corrective and preventive maintenance regime of bus electrical and electronic systems to ascertain effectiveness of maintenance procedures Propose new and/or enhanced bus electrical 		

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		electrical and electronic systems		and electronic systems maintenance WI in reference to OEM technical recommendations		
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