

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

TSC Category	Rail Systems Maintenance					
TSC	Rolling Stock Bogie Maintenance					
TSC Description	Implement preventive and corrective maintenance activities of rolling stock bogie					
TSC Proficiency Description	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6
	PTP-RSM-1028-1.1	PTP-RSM-2028-1.1	PTP-RSM-3028-1.1	PTP-RSM-4028-1.1		
	Carry out scheduled preventive maintenance on rolling stock bogie	Conduct corrective maintenance on rolling stock bogie	Troubleshoot faulty rolling stock bogie components to locate faults and recommend rectification methods	Diagnose root causes of rolling stock bogie failure and review maintenance plans to prevent fault recurrence		
Knowledge	<ul style="list-style-type: none"> Operating principles, functions and features of rolling stock bogie systems and components Types of rolling stock bogie components that includes: <ul style="list-style-type: none"> Suspension and shock absorption equipment Levelling devices Wheel set, axle Bogie frame Wheel profiles Procedures for servicing rolling stock bogie in accordance to organisational procedures, Work Instructions (WI) and/or Original Equipment Manufacturer (OEM) technical manuals Types and usage of tools and equipment for carrying out preventive maintenance on rolling stock bogie Safety guidelines on use of tools and equipment for preventive maintenance on rolling stock bogie 	<ul style="list-style-type: none"> Operating principles, functions and features of rolling stock bogie systems and components Types of rolling stock bogie components that includes: <ul style="list-style-type: none"> Suspension and shock absorption equipment Levelling devices Wheel set, axle Bogie frame Wheel profiles Rolling stock bogie mechanical drawing Common wears and failures of rolling stock bogie Procedures for conducting system performance checks and identifying faults on rolling stock bogie Procedures to dismantle rectify, repair and/or replace faulty rolling stock bogie components, and re-assemble Types and usage of tools and equipment for carrying out corrective maintenance 	<ul style="list-style-type: none"> Rolling stock bogie schematic drawings Common fault symptoms in rolling stock bogie Methods of locating and rectifying faults Principles of collision and derailment Types and usage of troubleshooting techniques, equipment and tools Safety guidelines for usage of tools and equipment to execute troubleshooting on rolling stock bogie systems 	<ul style="list-style-type: none"> Factors affecting rolling stock bogie systems and components performance Wheel-rail interaction principles Rolling stock running behaviour in curves and straight tracks Mechanics of materials used in rolling stock bogies Principles of collision and derailment 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 bogie and components Functional relationships between rolling stock bogie, other rolling stock systems, plant equipment 		

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	<ul style="list-style-type: none"> Types and usage of Personal Protective Equipment (PPE) for rolling stock bogie maintenance Organisational maintenance documentation and fault reporting procedures 	<ul style="list-style-type: none"> Safety guidelines on use of tools and equipment for corrective maintenance on rolling stock bogie Types and usage of Personal Protective Equipment (PPE) for rolling stock bogie maintenance Organisational maintenance documentation and fault reporting procedures 		and the overall rail system		
Abilities	<ul style="list-style-type: none"> Perform preparation work to conduct maintenance on rolling stock bogie Follow organisational maintenance procedures, WI and/or OEM technical manuals to carry out preventive maintenance on rolling stock bogie Perform functionality checks on rolling stock bogie systems and components Adhere to safety guidelines and operating instructions for tools and equipment during maintenance work Record rolling stock bogie 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 faults in rolling stock bogie systems Dismantle rolling stock bogie components for corrective maintenance Carry out rectification, repair and/or replacement of faulty components Perform wheel profiling to ensure proper wheel-rail interface Reassemble and reinstate rolling stock bogie components Perform functional tests of rolling stock bogie Adhere to safety procedures when performing maintenance work Record and collate documentation of rolling stock bogie maintenance work 	<ul style="list-style-type: none"> Use troubleshooting tools, equipment and methods to locate and analyse causes of rolling stock bogie faults Recommend corrective actions for identified faults on rolling stock bogie system and components Implement procedures on safe usage of tools and equipment during maintenance work Analyse maintenance work documented for rolling stock bogie 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 bogie Review organisational rolling stock bogie maintenance procedures Propose new and/or enhanced maintenance procedures and/or WI in reference to OEM technical recommendations Monitor overall maintenance progress of rolling stock bogie to ascertain effectiveness of maintenance procedures Develop solutions by analysing diagnostic data to prevent faults and failures recurrence Develop troubleshooting, rectification and fault analysis methods Develop test procedures for system performance checks 		

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				<ul style="list-style-type: none">• Coordinate rolling stock bogie maintenance with other rail systems maintenance needs		
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