

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

<b>TSC Category</b>	Rail Systems Maintenance					
<b>TSC</b>	Lift Systems Maintenance					
<b>TSC Description</b>	Implement preventive and corrective maintenance of lift systems					
<b>TSC Proficiency Description</b>	<b>Level 1</b>	<b>Level 2</b>	<b>Level 3</b>	<b>Level 4</b>	<b>Level 5</b>	<b>Level 6</b>
	<b>PTP-RSM-1016-1.1</b>	<b>PTP-RSM-2016-1.1</b>	<b>PTP-RSM-3016-1.1</b>	<b>PTP-RSM-4016-1.1</b>		
	Carry out scheduled maintenance work on lift systems	Conduct corrective maintenance on lift systems	Troubleshoot faulty lift systems to locate faults and recommend rectification methods	Diagnose root causes of lift systems failure and review maintenance plans to prevent fault recurrence		
<b>Knowledge</b>	<ul style="list-style-type: none"> <li>Types, functions, configurations, operating principles and safety features of lift systems</li> <li>Procedures for servicing lift systems in accordance to organisational procedures, Work Instruction (WI) and/or Original Equipment Manufacturer (OEM) technical manuals</li> <li>Safety guidelines on use of tools and equipment for preventive maintenance on lift systems</li> <li>Types and usage of Personal Protective Equipment (PPE) for lift systems maintenance</li> <li>Organisational maintenance documentation and fault reporting procedures</li> <li>Building Maintenance and Strata Management requirements</li> <li>Risk assessment procedures</li> </ul>	<ul style="list-style-type: none"> <li>Types, functions, configurations, operating principles and safety features of lift systems</li> <li>Schematic and control diagrams of lift systems</li> <li>Risk assessment procedures</li> <li>Lift systems fault indicators and response procedures</li> <li>Procedures to dismantle, repair, replace and reassemble lift components</li> <li>Procedures for conducting system performance checks and identifying faults on lift systems</li> <li>Safety guidelines on use of tools and equipment for corrective maintenance on lift systems</li> <li>Types and usage of Personal Protective Equipment (PPE) for lift systems maintenance</li> <li>Organisational maintenance documentation and fault reporting procedures</li> <li>Lift rescue procedures</li> </ul>	<ul style="list-style-type: none"> <li>Fundamentals of electronic and electrical instrumentation and controls</li> <li>Operating principles and applications of microcontroller</li> <li>Operating principles of electro-mechanical systems</li> <li>Common fault symptoms in lift systems</li> <li>Methods of locating and rectifying faults</li> <li>Types of troubleshooting techniques, equipment and tools</li> <li>Safety guidelines for usage of tools and equipment to execute troubleshooting on lift systems</li> <li>Functional relationships between lift systems and fire alarm systems</li> <li>Building Maintenance and Strata Management requirements</li> </ul>	<ul style="list-style-type: none"> <li>Factors affecting lift system performance</li> <li>Failure investigation and prevention methods</li> <li>Methods and tools for diagnostic analysis</li> <li>Procedures for defect diagnosis and root cause analysis</li> <li>Types and methods of operational and functional test</li> <li>Organisational maintenance procedures, Work Instruction (WI) and Original Equipment Manufacturer (OEM) technical recommendations</li> <li>Functional relationships between lift systems and the overall rail system</li> <li>Building Maintenance and Strata Management requirements</li> </ul>		

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		<ul style="list-style-type: none"> <li>• Building Maintenance and Strata Management requirements</li> </ul>				
<p><b>Abilities</b></p>	<ul style="list-style-type: none"> <li>• Perform preparation work to conduct preventive maintenance on lift systems</li> <li>• Follow organisational procedures, WI and/or OEM technical manuals to carry out preventive maintenance on lift systems</li> <li>• Perform serviceability checks on lift systems</li> <li>• Adhere to safety guidelines and operating instructions for tools and equipment during maintenance work</li> <li>• Record lift systems maintenance activities and report occurrences of faults identified</li> </ul>	<ul style="list-style-type: none"> <li>• Interpret work orders and prepare for corrective maintenance</li> <li>• Apply first line recovery in response to lift systems faults and alarms</li> <li>• Apply fault identification procedures to determine causes of lift systems faults</li> <li>• Dismantle faulty lift components for corrective maintenance</li> <li>• Carry out repair and/or replacement of faulty components</li> <li>• Reassemble and reinstate lift systems</li> <li>• Perform functional tests to determine operability of the lift systems</li> <li>• Apply operating and safety measures in operating tools and equipment during maintenance work</li> <li>• Record and collate documentation of lift systems maintenance work</li> </ul>	<ul style="list-style-type: none"> <li>• Use troubleshooting tools, equipment and methods to locate and analyse causes of lift systems faults</li> <li>• Recommend corrective actions for identified faults on lift systems</li> <li>• Implement procedures on safe usage of tools and equipment during maintenance work</li> <li>• Analyse maintenance work documented for lift systems to identify possible workflow improvements to prevent fault recurrence</li> </ul>	<ul style="list-style-type: none"> <li>• Establish structured failure investigation and specify functional testing requirements</li> <li>• Perform fault tree analyses to diagnose root cause failure of lift systems</li> <li>• Review organisational lift systems maintenance procedures</li> <li>• Propose new and/or enhanced maintenance procedures, WI in reference to OEM technical recommendations</li> <li>• Monitor overall maintenance progress of lift systems to ascertain effectiveness of maintenance procedures</li> <li>• Develop solutions by analysing diagnostic data to prevent faults and failures recurrence</li> <li>• Develop troubleshooting, rectification and fault analysis methods</li> <li>• Develop test procedures for system performance checks</li> <li>• Coordinate lift systems maintenance with other rail systems maintenance needs</li> </ul>		