<table>
<thead>
<tr>
<th>TSC Category</th>
<th>Rail Systems Maintenance</th>
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<tbody>
<tr>
<td>TSC</td>
<td>Train Supervisory System Maintenance</td>
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<tr>
<td>TSC Description</td>
<td>Implement preventive and corrective maintenance activities of train supervisory system</td>
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### TSC Proficiency Description

<table>
<thead>
<tr>
<th>TSC Proficiency Description</th>
<th>Level 1</th>
<th>Level 2</th>
<th>Level 3</th>
<th>Level 4</th>
<th>Level 5</th>
<th>Level 6</th>
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<tbody>
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<td>PTP-RSM-1041-1.1</td>
<td>PTP-RSM-2041-1.1</td>
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<tr>
<td>Carry out scheduled maintenance work on train supervisory system</td>
<td>Conduct corrective maintenance on train supervisory system</td>
<td>Troubleshoot faulty train supervisory system to locate faults and recommend rectification methods</td>
<td>Diagnose root causes of train supervisory system failure and review maintenance plans to prevent fault recurrence</td>
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### Knowledge

- Operating principles and functions of train supervisory system
- Components of train supervisory system
- Procedures for servicing train supervisory system equipment in accordance with organisational maintenance procedures, Work Instructions (WI) and/or Original Equipment Manufacturer (OEM) technical manuals
- Types of tools and equipment for carrying out preventive maintenance on train supervisory system
- Safety guidelines on use of tools and equipment for preventive maintenance on train supervisory system
- Organisational maintenance documentation and fault reporting procedures
- Schematic diagrams of train supervisory system
- Schematic diagrams of train supervisory system components
- Procedures to dismantle, repair, replace, and reassemble train supervisory system components
- Types of tools and equipment for carrying out corrective maintenance on train supervisory system
- Methods of power isolation
- Safety guidelines on use of tools and equipment for corrective maintenance on train supervisory system
- Factors affecting equipment and system performance
- Failure investigation and prevention methods
- Methods and tools for diagnostic analysis
- Organisational maintenance procedures, Work Instructions (WI) and/or Original Equipment Manufacturer (OEM) technical recommendations
- Types and methods of continuity and functional tests on train supervisory system equipment
- Functional relationships between train supervisory system, other signalling systems and overall rail system

### Abilities

- Perform preparation work to conduct
- Interpret work orders and prepare for corrective maintenance
- Use troubleshooting tools, equipment and methods to locate and
- Establish structured failure investigation and
• Follow organisational procedures, WI and/or OEM technical manuals to carry out preventive maintenance on train supervisory system
• Perform serviceability checks on train supervisory system
• Adhere to safety guidelines and operating instructions for tools and equipment during maintenance activities
• Record train supervisory system maintenance activities and report occurrences of faults identified

• Apply power isolation procedures during train supervisory system maintenance
• Normalise software faults on train supervisory system
• Dismantle faulty components in train supervisory system equipment and components for corrective maintenance
• Carry out rectification, repair and/or replacement of faulty components
• Reassemble and reinstate train supervisory system
• Perform functionality tests on train supervisory system
• Apply operating and safety measures in operating tools and equipment during maintenance work
• Record and collate documentation of train supervisory system maintenance activities

• Analyse causes of train supervisory system equipment faults
• Apply fault identification procedures to determine causes of train supervisory system
• Perform system software reconfiguration and/or upgrade
• Recommend corrective actions for identified faults on train supervisory system
• Deploy power isolation processes during train supervisory system maintenance
• Implement procedures on safety usage of tools and equipment during maintenance work
• Analyse maintenance work documented for train supervisory system to identify possible workflow improvements
• Specify functional testing requirements
• Apply failure investigation methods to diagnose root cause failure of train supervisory system
• Review organisational train supervisory system maintenance procedures and/or WI
• Propose new and/or enhance maintenance procedures and/or WI in reference to OEM recommendations
• Monitor overall maintenance progress of train supervisory system to determine system performance reliability and effectiveness
• Perform system software restoration and/or upgrade
• Perform fault tree analyses on train supervisory system
• Develop solutions by analysing diagnostic data to prevent faults and failures recurrence
• Develop troubleshooting, rectification and fault analysis methods and techniques
• Develop test procedures for system performance checks
• Coordinate train supervisory system maintenance with other rail systems maintenance needs