

1. Title	Maintain and repair water-based fire service mechanical installations									
2. Code	EMFSOR301A									
3. Range	Carry out maintenance and repair of water-based fire service mechanical installations independently at repair workshops or work sites according to repair instructions and standards.									
4. Level	3									
5. Credit	6									
6. Competency	<p style="text-align: center;"><u>Performance Requirements</u></p> <table border="0"> <tr> <td style="vertical-align: top;">6.1</td> <td style="vertical-align: top;">Construction and operating principles of water-based fire service mechanical installations</td> <td style="vertical-align: top;"> <ul style="list-style-type: none"> <li>◆ Understand the functions and operating principles of various types of water-based fire service mechanical installations, including:               <ul style="list-style-type: none"> <li>• sprinkler system</li> <li>• Fire hydrant/hose reel system</li> <li>• Drencher system</li> <li>• Deluge system</li> <li>• Water spray system</li> </ul> </li> </ul> </td> </tr> <tr> <td style="vertical-align: top;">6.2</td> <td style="vertical-align: top;">Repair and maintenance methods and procedures of water-based fire service mechanical installations</td> <td style="vertical-align: top;"> <ul style="list-style-type: none"> <li>◆ Master the procedures and methods of maintenance and repair of various types of fixed water-based fire service systems and mechanical installations, including the procedures of inspection, repair and testing</li> <li>◆ Instruct subordinates to carry out maintenance and repair safely and of high quality</li> <li>◆ Examine the damage condition of accessories independently, such as water tanks, pipes, pumps, switches, fire hydrants, fire service inlets, according to repair instructions</li> <li>◆ Diagnose the problems and repair or replace damaged accessories</li> <li>◆ Select, use and maintain general workshop equipment and tools for class 2 fire service mechanical installation contractors</li> <li>◆ Use appropriate testing equipment to conduct functional tests independently after repair</li> </ul> </td> </tr> <tr> <td style="vertical-align: top;">6.3</td> <td style="vertical-align: top;">Professionalism in maintenance and repair of water-based fire service mechanical installations</td> <td style="vertical-align: top;"> <ul style="list-style-type: none"> <li>◆ Carry out maintenance and repair of water-based fire service mechanical installations independently according to repair instructions and specifications</li> <li>◆ Undertake maintenance and repair work of water-based fire service mechanical installations according to safety guidelines required by the law and codes of practice</li> </ul> </td> </tr> </table>	6.1	Construction and operating principles of water-based fire service mechanical installations	<ul style="list-style-type: none"> <li>◆ Understand the functions and operating principles of various types of water-based fire service mechanical installations, including:               <ul style="list-style-type: none"> <li>• sprinkler system</li> <li>• Fire hydrant/hose reel system</li> <li>• Drencher system</li> <li>• Deluge system</li> <li>• Water spray system</li> </ul> </li> </ul>	6.2	Repair and maintenance methods and procedures of water-based fire service mechanical installations	<ul style="list-style-type: none"> <li>◆ Master the procedures and methods of maintenance and repair of various types of fixed water-based fire service systems and mechanical installations, including the procedures of inspection, repair and testing</li> <li>◆ Instruct subordinates to carry out maintenance and repair safely and of high quality</li> <li>◆ Examine the damage condition of accessories independently, such as water tanks, pipes, pumps, switches, fire hydrants, fire service inlets, according to repair instructions</li> <li>◆ Diagnose the problems and repair or replace damaged accessories</li> <li>◆ Select, use and maintain general workshop equipment and tools for class 2 fire service mechanical installation contractors</li> <li>◆ Use appropriate testing equipment to conduct functional tests independently after repair</li> </ul>	6.3	Professionalism in maintenance and repair of water-based fire service mechanical installations	<ul style="list-style-type: none"> <li>◆ Carry out maintenance and repair of water-based fire service mechanical installations independently according to repair instructions and specifications</li> <li>◆ Undertake maintenance and repair work of water-based fire service mechanical installations according to safety guidelines required by the law and codes of practice</li> </ul>
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<p>7. Assessment Criteria</p>	<p>The integrated outcome requirements of this unit of competency are:</p> <ul style="list-style-type: none"> <li>(i) Capable to carry out maintenance and repair of water-based fire service mechanical installations independently; and</li> <li>(ii) Capable to undertake maintenance and repair work of water-based fire service mechanical installations according to codes of practice.</li> </ul>
<p>8. Remarks</p>	<p>The credit value of this unit of competency is set on the presumption that the person already possesses elementary knowledge and skill in repairing and maintaining water-based fire service mechanical installations.</p>