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| 1. Title      | Composite aeronautical components fabrication and repair at room temperature   |
| 2. Code       | EMAMWS403A   |
| 3. Range      | Composite aeronautical component repair and fabrication are usually carried out on the aircraft in the hangar.<br>Room temperature is that where materials are cured below 65 degrees Celsius (150 degrees Fahrenheit)   |
| 4. Level      | 4  |
| 5. Credit     | 9  |
| 6. Competency | <p style="text-align: center;"><u>Performance Requirement</u></p> <p>6.1 Preparation</p> <ul style="list-style-type: none"> <li>◆ Able to review the documents and procedures.</li> <li>◆ Able to set up the work environment in accordance with the procedures, e.g. publications, materials, tooling, equipment, safety equipment, environmental conditions established</li> <li>◆ Able to plan the fabrication and repair task in accordance with the procedures, e.g. inspection, damage determination</li> <li>◆ Able to obtain and check the resources for serviceability or status in accordance with the procedures, e.g. tools, equipment, safety equipment, publications, materials</li> <li>◆ Able to produce the repair or manufacturing sketches to meet specifications.</li> <li>◆ Able to make preparation for the component in accordance with manufacturer's instructions, e.g. cleaned, disassembled, support tooling attached, damage removed, surface prepared.</li> </ul> |

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|  | <p data-bbox="371 629 694 763">6.2 Lay up fabrication and repair materials</p> <ul style="list-style-type: none"> <li data-bbox="735 241 1481 327">◆ Able to assemble, prepare, position and support the tooling for lay up.</li> <li data-bbox="735 349 1481 483">◆ Able to make preparation for the equipment for use in accordance with manufacturer's instructions,e.g. operate, calibrate</li> <li data-bbox="735 506 1481 591">◆ Able to secure the work area to prevent disruption to lay up process.</li> <li data-bbox="735 629 1481 714">◆ Able to make preparation for the materials in accordance with the procedures.</li> <li data-bbox="735 736 1481 822">◆ Able to apply the materials in accordance with the procedures.</li> <li data-bbox="735 844 1481 929">◆ Able to apply and control the pressure in accordance with specifications.</li> <li data-bbox="735 952 1481 1037">◆ Able to control the cure time and temperature in accordance with specifications.</li> <li data-bbox="735 1059 1481 1144">◆ Able to remove the tooling and support equipment without causing damage.</li> <li data-bbox="735 1167 1481 1355">◆ Able to verify the component serviceability in accordance with the procedures,e.g. inspecting, troubleshooting, obtaining specialist advice.</li> <li data-bbox="735 1377 1481 1512">◆ Able to initiate the further fabrication and/or repair work for non-conforming work in accordance with the procedures.</li> <li data-bbox="735 1534 1481 1619">◆ Able to seal the composite material edges in accordance with the procedures.</li> <li data-bbox="735 1641 1481 1830">◆ Able to finish the component and restore the surface in accordance with specifications and procedures,e.g. potting and filling, surface finishing, edge trimming and sealing.</li> <li data-bbox="735 1852 1481 1937">◆ Able to perform inspections in accordance with the procedures.</li> </ul> |
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|                        | <p>6.3 Professional approach</p> <ul style="list-style-type: none"> <li>◆ Able to complete the documentation in accordance with the procedures.</li> <li>◆ Able to complete the task within the stipulated duration.</li> <li>◆ Able to handle the unused items, parts, and materials are disposed of in accordance with the procedures, e.g. serviceable, unserviceable, surplus, waste, scrap, hazardous.</li> <li>◆ Able to understand the legislative requirements, aviation authority requirements, manufacturers' publications and the maintenance organizations' approved maintenance practices and requirements.</li> <li>◆ Able to complete the task in the work area in accordance with the procedures, e.g. tool control, cleanliness, tidiness, return of publications, preparation for next activity, return of aircraft and systems to normal.</li> <li>◆ Able to check the resources for serviceability and return them to service or storage in accordance with the procedures, e.g. tools, equipment, safety equipment, procedures.</li> </ul> |
| 7. Assessment Criteria | <p>The integral outcome requirement of this UoC are:</p> <ul style="list-style-type: none"> <li>(i) Able to make preparation for fabrication and repair of composite aeronautical components at room temperature.</li> <li>(ii) Able to lay up the fabrication and repair materials.</li> <li>(iii) Able to restore the components and prepare components for use.</li> <li>(iv) Able to complete all the requirements associated with the task.</li> </ul>   |
| 8. Remarks             | Ref: NZQA – 4023  |