

1. Title	Aeronautical printed circuit boards etching
2. Code	EMAMAV463A
3. Range	Aeronautical printed circuit boards etching is usually carried out in a specialist bay or workshop.
4. Level	4
5. Credit	6
6. Competency	<p style="text-align: center;"><u>Performance Requirement</u></p> <p>6.1 Working principles</p> <ul style="list-style-type: none"> <li>◆ Understand the working principles for the aeronautical printed circuit boards etching.</li> </ul> <p>6.2 Methods and procedures</p> <ul style="list-style-type: none"> <li>◆ Able to review the maintenance documents and procedures to decide on maintenance task,e.g. confirm fault, repair, modify</li> <li>◆ Able to prepare the work area, obtain and check the resources for serviceability or status in accordance with the procedures,e.g. publications, materials, tools, equipment, safety equipment, environmental conditions established.</li> <li>◆ Able to prepare the board substrate material for fabrication in accordance with the procedures,e.g. clean, inspect, check specification.</li> <li>◆ Able to mask the substrate material in accordance with the procedures,e.g. clean, photo-sensitize, expose, develop.</li> <li>◆ Able to inspect the masked board in accordance with the procedures,e.g. inspect using standards, specifications, precision measuring equipment.</li> </ul>

	<ul style="list-style-type: none"> <li>◆ Able to rectify the non-conformities found during masking in accordance with the procedures,e.g. repair, rework.</li> <li>◆ Able to prepare the board and etchant bath for etching in accordance with the procedures,e.g. clean, check bath temperature and chemical composition.</li> <li>◆ Able to etch the board in accordance with the procedures,e.g. time, temperature.</li> <li>◆ Able to inspect the etched board in accordance with the procedures,e.g. remove resist, visual inspection.</li> <li>◆ Able to finish the etched board to required standard in accordance with the procedures,e.g. drill eyelet holes, tin, serial number.</li> <li>◆ Able to perform inspections in accordance with the procedures,e.g. independent, progressive.</li> </ul>
6.3 Professional approach	<ul style="list-style-type: none"> <li>◆ Able to understand the legislative requirements, aviation authority requirements, manufacturers' publications and the maintenance organizations' approved maintenance practices and requirements in carrying out the task.</li> <li>◆ Able to complete the task within the stipulated duration.</li> <li>◆ Able to prepare the board for use, storage or transit in accordance with the procedures,e.g. inhibiting, packing.</li> </ul>

	<ul style="list-style-type: none"> <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, publications.</li> <li>◆ Able to handle the unused parts and materials in accordance with the procedures, e.g. serviceable, unserviceable, surplus, waste, scrap, hazardous.</li> <li>◆ Able to complete the documentation in accordance with the procedures, e.g. labels, work cards, release notes.</li> <li>◆ Able to return the work area in a state which enables the next task to begin in accordance with the procedures.</li> </ul>
7. Assessment Criteria	<p>The integral outcome requirement of this UoC is:</p> <p>(i) Able to fabricate the aeronautical printed circuit boards by masking, etching and documenting the work.</p>
8. Remarks	Ref: NZQA - 4065