1. Title	Aeronautical component parts repair and/or fabrication by welding
2. Code	EMAMWS472A
3. Range	Fabrication or repair of aeronautical component parts in an aircraft hangar or workshop during the aircraft non-flight time. This is carried out on site in aircraft or in a laboratory/workshop environment.
4. Level	4
5. Credit	8
6. Competency	<u>Performance Requirement</u> 6.1 Knowledge ♦ Understand the principles concerning welding, including : • uses and application of welding • relation between welding parameters and weld quality 6.2 Weld aeronautical materials,e.g. pipe, sheet metal, plate metal ♦ Able to confirm the component identity with documentation by comparing serial and part numbers. ♦ Able to review the documents and procedures,e.g. repair, fabricate ♦ Able to make preparation for the work area and obtain the resources in accordance with the procedures,e.g. publications, materials, tools, safety equipment, environmental conditions established. ♦ Able to isolate, minimize or eliminate hazards in accordance with the procedures,e.g. electrical, radiation (arc, flame), fire, explosion, ventilation, compressed gas, confined space, chemical.

	♦ Able to set up and maintain equipment in accordance with the procedures,e.g. power source, shielding gas supply, torch assembly, purge equipment. ♦ Able to identify and prepare parent metal for welding in accordance with the procedures,e.g. cleaning, edge preparation, surface preparation (e.g.: grinding, filing), preheating. ♦ Able to execute welding effectively to join aeronautical materials in fabrication or repair work. ♦ Able to identify weld requirements from specifications. ♦ Able to use control measures to minimize distortion in accordance with the procedures,e.g. avoid over welding, fit-up, clean, joint preparation, weld sequence, heat sinks. ♦ Able to deposit welds to meet specifications in accordance with the procedures. ♦ Able to purge joint in accordance with the procedures. ♦ Able to cool joint in accordance with the procedures. ♦ Able to perform inspections in accordance with the procedures,e.g. independent, duplicate, progressive. ♦ Able to identify non-conformities in accordance with the procedures. ♦ Able to rectify the non-conformities in accordance with the procedures.

	6.3 Professional approach	♦ 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. ♦ Able to complete the task within the stipulated duration. ♦ Able to prepare the welded part for use, storage or transit in accordance with the procedures,e.g. inhibiting, blanking, packing. ♦ Able to check the resources for serviceability and return the resources in accordance with the procedures,e.g. tools, equipment, safety equipment, publications. ♦ Able to handle the unused parts and materials in accordance with the procedures,e.g. serviceable, unserviceable, surplus, waste, scrap, hazardous. ♦ Able to complete the documentation in accordance with the procedures,e.g. labels, work cards, release note, log books, certification. ♦ Able to left the work environment in a state which enables the next task to begin in accordance with the procedures.
7. Assessment Criteria	The integral outcome requirement of this UoC is: (i) Able to fabricate and repair the aeronautical components using gas tungsten arc and/or plasma arc welding processes. This unit standard supplements general engineering unit standards enabling people to meet aeronautical welding standards.	

8. Remarks	(Ref: HKAR-66 Module 6.1-6.3 & 7.15) The Credit in this UoC is on the assumption of the person already possessed basic knowledge in soldering. Ref: NZQA - 4035