1. Title	Aircraft variable pitch propellers and propeller systems maintenance
2. Code	EMAMBA403A
3. Range	Assembly work or repair of propellers and propeller systems in an aircraft hangar or workshop during the aircraft grounded time.
4. Level	4
5. Credit	9
6. Competency	Performance Requirement 6.1 Construction of propellers ♦ Understand the construction and operating principles of the propellers, including : • Blade element theory • construction of propellers • mechanism of pitch control 6.2 Methods and procedures ♦ Able to review the maintenance documents and procedures to decide on maintenance task. ♦ Able to obtain and check the resources for serviceability in accordance with the procedures,e.g. publications, tools, equipment, safety equipment, materials. ♦ Able to confirm the system to be maintained is matched with the aircraft registration and documentation. ♦ Able to prepare the systems for the application of power and system operation in accordance with the procedures,e.g. cockpit controls match component positions, clearances, isolation tags, warning signs.

	♦ Able to prepare the ground and/or support equipment for aircraft propellers and propeller systems maintenance activities in accordance with the procedures. ♦ Able to conduct propeller maintenance,e.g. static and dynamic balance, blade tracking, pitch control systems, ice protection systems, assessment of damages. ♦ Able to determine the serviceability in accordance with the procedures,e.g. inspect, assess, test. ♦ Able to locate the defects using troubleshooting techniques appropriate to the defects indications in accordance with the procedures,e.g. vibration, performance, over speed, damage. ♦ Able to report and record the defects in accordance with the procedures. ♦ Able to rectify the propellers and propeller systems defects by the approved method in accordance with the procedures,e.g. repair, replace, modify, adjust, dynamically balance. ♦ Able to procure replacement propeller and/or parts and verify their authenticity and serviceability in accordance with the procedures,e.g. identify, inspect. ♦ Able to test the propellers and propeller systems to verify their serviceability in accordance with the procedures. ♦ Able to perform inspections 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 check the resources for serviceability and returned to service or storage in accordance with the procedures,e.g. tools, equipment, safety equipment. ♦ Able to complete the task in the work area in accordance with the procedures,e.g. tool control, cleanliness, tidiness, return of publications, systems and aircraft left for next activity. ♦ Able to handle the leftover parts and materials in accordance with the procedures,e.g. serviceable, unserviceable, surplus, waste, scrap, hazardous, replaced propeller. ♦ Able to complete the documentation in accordance with the procedures.
7. Assessment Criteria	The integral outcome requirements of this UoC are: (i) Able to make preparation for the maintenance of aircraft variable pitch propellers and propeller systems. (ii) Able locate the defects in propellers and propeller systems. (iii) Able to restore the airworthiness of propellers and propeller systems. (iv) Able to complete all the requirements associated with the task. (v) Able to fit and remove, and disassemble the propellers for shipment.	

8. Remarks	(Ref: HKAR-66 Module 7.5 & 17) The Credit in this UoC is on the assumption of the person already possessed foundation knowledge in the basic aerodynamics. Ref: NZQA - 3409 Ref: NZQA - 3408