

1. Title	Aircraft fixed pitch propeller assembly repair and/or overhaul
2. Code	EMAMWS446A
3. Range	The repair and/or overhaul activity is usually carried out in a specialist bay or workshop. This unit standard covers aircraft fixed pitch wooden and metal propellers
4. Level	4
5. Credit	9
6. Competency	<p style="text-align: center;"><u>Performance Requirement</u></p> <p>6.1 Construction of propellers</p> <ul style="list-style-type: none"> <li>◆ Understand the construction and operating principles of the propellers, including : <ul style="list-style-type: none"> <li>• Blade element theory</li> <li>• construction of propellers</li> <li>• mechanism of pitch control</li> </ul> </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, overhaul, modify.</li> <li>◆ Able to confirm the propeller identity with documentation by comparing serial and part numbers.</li> <li>◆ Able to make preparation for the work area and obtain and check the resources in accordance with the procedures,e.g. publications, materials, tools, equipment, safety equipment, environmental conditions established.</li> <li>◆ Able to make preparation for the combustion section for repair and/or overhaul in accordance with the procedures,e.g. clean, inspect, assess economics of carrying out repair or overhaul.</li> </ul>

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|  | <ul style="list-style-type: none"><li>◆ Able to determine and record the next task in accordance with the procedures, e.g. locate defects, repair, overhaul, test, adjust, complete the task.</li><li>◆ Able to locate defects using troubleshooting techniques appropriate to the defects indications in accordance with the procedures.</li><li>◆ Able to report and record defects found during troubleshooting in accordance with the procedures.</li><li>◆ Able to disassemble the propeller in accordance with the procedures, e.g. clean, label, preserve, segregate.</li><li>◆ Able to report and record the defects found during disassembly in accordance with the procedures, e.g. dimensions, damage, corrosion, blade angles, surface finish, contouring.</li><li>◆ Able to determine and record the rectification action in accordance with the procedures.</li><li>◆ Able to procure the spare parts and verify their authenticity and serviceability in accordance with the procedures, e.g. identify, inspect.</li><li>◆ Able to rectify the defects in accordance with the procedures, e.g. replace parts, modify, blend, scurf, contour, adjust angles and/or dimensions, balance, polish, straighten bent or twisted blades.</li></ul> |
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6.3 Professional approach

- ◆ Able to assemble the component in accordance with the procedures.
- ◆ Able to perform inspections in accordance with the procedures.
- ◆ Able to prepare the propeller for testing in accordance with the procedures.
- ◆ Able to test and adjust the propeller in accordance with the procedures, e.g. troubleshoot, functionally test, calibrate, adjust, document adjustments and performance
- ◆ Able to perform inspections after the test in accordance with the procedures.
- ◆ Able to prepare the propeller for use, storage or transit in accordance with the procedures, e.g. locking, inhibiting, blanking, packing
- ◆ Able to check the resources for serviceability and returned to service or storage 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.
- ◆ Able to leave the work area in a state which enables the next task to begin in accordance with the procedures.

<p>7. Assessment Criteria</p>	<p>The integral outcome requirement of this UoC are:</p> <ul style="list-style-type: none"> <li>(i) Able to make preparation for the repair and/or overhaul of aircraft fixed pitch propeller assemblies.</li> <li>(ii) Able locate the defects.</li> <li>(iii) Able to repair and/or overhaul the propellers.</li> <li>(iv) Able to test and adjust the propellers.</li> <li>(v) Able to complete all the requirements associated with the task.</li> </ul>
<p>8. Remarks</p>	<p>(Ref: HKAR-66 Module 7.5 &amp; 17)</p> <p>The Credit in this UoC is on the assumption of the person already possessed foundation knowledge in the basic aerodynamics.</p> <p>Ref: NZQA - 3414</p>