

1. Title	Aircraft variable pitch propeller assembly repair and/or overhaul
2. Code	EMAMWS455A
3. Range	The repair and/or overhaul activity is usually carried out in a specialist bay or workshop, e.g. blades, hubs, spinners, pitch change units and mechanisms, de-icing component.
4. Level	4
5. Credit	9
6. Competency	<p style="text-align: center;"><u>Performance Requirement</u></p> <p>6.1 Knowledge</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 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 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> </ul>

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|  | <ul style="list-style-type: none"><li>◆ Able to prepare the propeller for repair and/or overhaul in accordance with the procedures,e.g. clean, inspect, assess economics of carrying out repair or overhaul.</li><li>◆ Able to locate the defects using troubleshooting techniques appropriate to the defects indications in accordance with the procedures.</li><li>◆ Able to report and record the 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. blade angles, dimensions, surface finish, corrosion, contouring, damage.</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 dimensions, balance, polish, straighten bent or twisted blades, repair pitch control components.</li></ul> |
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	<p data-bbox="371 465 619 555">6.3 Test and adjustment</p> <ul style="list-style-type: none"> <li data-bbox="738 241 1484 331">◆ Able to assemble the propeller in accordance with the procedures.</li> <li data-bbox="738 349 1484 439">◆ Able to perform inspections in accordance with the procedures.</li> <li data-bbox="738 465 1484 555">◆ Able to prepare the propeller for testing in accordance with the procedures.</li> <li data-bbox="738 573 1484 819">◆ Able to test and adjust the propeller in accordance with the procedures, e.g. troubleshoot, functionally test, calibrate, adjust, document adjustments and performance.</li> <li data-bbox="738 837 1484 927">◆ Able to perform the inspections in accordance with the procedures.</li> </ul> <p data-bbox="371 958 639 1048">6.4 Professional approach</p> <ul style="list-style-type: none"> <li data-bbox="738 958 1484 1263">◆ 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 data-bbox="738 1281 1484 1370">◆ Able to complete the task within the stipulated duration.</li> <li data-bbox="738 1388 1484 1585">◆ Able to prepare the propeller for use, storage or transit in accordance with the procedures, e.g. locking, inhibiting, blanking, packing.</li> <li data-bbox="738 1603 1484 1800">◆ 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> </ul>
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	<ul style="list-style-type: none"> <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.</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 are:</p> <ul style="list-style-type: none"> <li>(i) Able to make preparation for the repair and/or overhaul of aircraft variable pitch propeller assemblies.</li> <li>(ii) Able locate the defects.</li> <li>(iii) Able to repair and/or overhaul the components.</li> <li>(iv) Able to test and adjust the components.</li> <li>(v) Able to complete all the requirements associated with the task.</li> </ul>
8. Remarks	<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 - 3424</p>