

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"> ◆ Understand the construction and operating principles of the propellers, including : <ul style="list-style-type: none"> • Blade element theory • construction of propellers • mechanism of pitch control <p>6.2 Methods and procedures</p> <ul style="list-style-type: none"> ◆ Able to review the maintenance documents and procedures to decide on maintenance task,e.g. confirm fault, repair, overhaul, modify. ◆ Able to confirm the propeller identity with documentation by comparing serial and part numbers. ◆ 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. ◆ 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.

- | | |
|--|---|
| | <ul style="list-style-type: none">◆ Able to determine and record the next task in accordance with the procedures,e.g. locate defects, repair, overhaul, test, adjust, complete the task.◆ Able to locate defects using troubleshooting techniques appropriate to the defects indications in accordance with the procedures.◆ Able to report and record defects found during troubleshooting in accordance with the procedures.◆ Able to disassemble the propeller in accordance with the procedures,e.g. clean, label, preserve, segregate.◆ 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.◆ Able to determine and record the rectification action in accordance with the procedures.◆ Able to procure the spare parts and verify their authenticity and serviceability in accordance with the procedures,e.g. identify, inspect.◆ 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. |
|--|---|

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"> (i) Able to make preparation for the repair and/or overhaul of aircraft fixed pitch propeller assemblies. (ii) Able locate the defects. (iii) Able to repair and/or overhaul the propellers. (iv) Able to test and adjust the propellers. (v) Able to complete all the requirements associated with the task.
<p>8. Remarks</p>	<p>(Ref: HKAR-66 Module 7.5 & 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>