

1. Title	Aircraft piston powerplant ignition systems maintenance	
2. Code	EMAMBG425A	
3. Range	Maintenance of aircraft piston engine ignition systems is usually carried out in an aircraft hangar or workshop during the aircraft grounded time. This unit of competency covers the aircraft piston engine ignition systems	
4. Level	4	
5. Credit	4	
6. Competency	<p style="text-align: center;"><u>Performance Requirement</u></p> <p>6.1 Working principles</p> <ul style="list-style-type: none"> ◆ Understand the working principles for the starting and ignition systems of piston engines, including: <ul style="list-style-type: none"> • procedures for starting and ground run-up • construction and operation of magneto and spark plugs etc <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. ◆ 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. 	

6.3 Professional approach

- ◆ Able to prepare the ground and/or support equipment for aircraft engine ignition systems maintenance activities in accordance with the procedures.
- ◆ Able to determine the serviceability in accordance with the procedures, e.g. inspect, troubleshoot, assess, test.
- ◆ Able to report and record the defects in accordance with the procedures.
- ◆ Able to rectify the defects by the approved method in accordance with the procedures, e.g. repair, replace, modify, adjust, calibrate, lubricate.
- ◆ Able to procure the replacement parts and verify their authenticity and serviceability in accordance with the procedures, e.g. identify, inspect.
- ◆ Able to test the aircraft engine ignition systems to verify their serviceability in accordance with the procedures.
- ◆ Able to perform inspections in accordance with the procedures.
- ◆ 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 follow instruction manuals to repair and maintain the starting and ignition systems.

	<ul style="list-style-type: none"> ◆ Able to complete the documentation in accordance with the procedures. ◆ 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 check the resources for serviceability and returned to service or storage in accordance with the procedures, e.g. tools, equipment, safety equipment. ◆ Able to handle the unused parts and materials in accordance with the procedures, e.g. serviceable, unserviceable, surplus, waste, scrap, hazardous.
<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 maintenance of aircraft engine ignition systems. (ii) Able locate the defects in engine ignition systems. (iii) Able to restore the airworthiness of engine ignition systems. (iv) Able to complete all the requirements associated with the maintenance task.
<p>8. Remarks</p>	<p>(Ref: HKAR-66 Module 14, 15.13, 15.21, 16.1, 16.5 & 16.12)</p> <p>The Credit in this UoC is on the assumption of the person already possessed foundation knowledge in the constructional arrangement and operation of piston engines.</p> <p>Ref: NZQA - 4001</p>