AIRFRAME-AND-POWERPLANT MECHANIC

RAPIDS: 0005D	O*NET/SOC: 49-3011.00	REVISION DATE: 09/2019

TRADE DESCRIPTION: Diagnose, adjust, repair, or overhaul aircraft engines and assemblies, such as hydraulic and pneumatic systems. Includes helicopter and aircraft engine specialists.

TASK PERFORMANCE: Demonstrate knowledge and skills for qualifying as Journeyman. Applicable Job Qualification Requirements will be used as a guide in performing tasks and demonstrating knowledge in the following skill areas. Actual work time must be recorded in the Work Experience Log; each skill area must be completed.

Applicable Ratings/MOS/NEC

USMC MOS: 6023, 6062, 6092, 6113, 6114, 6116, 6122, 6123, 6124, 6132, 6153, 6154, 6156, 6173, 6174, 6176, 6212, 6213, 6216, 6217, 6218, 6222, 6223, 6226, 6227, 6242, 6252, 6253, 6256, 6257, 6258, 6282, 6283, 6286, 6287, 6288

USCG: AMT

USN: AD, AM, AME, AWF

USA MOS: 15B, 15D, 15E, 15G, 15H, 15J, 15N, 15R, 15S, 15T, 15U, 15Y

Related Instruction:

Trade related On-The-Job-Training (OJT) or Any Trade related schools/courses totaling 360 or more hours.

Additional Requirement:

None

Total Hours: 5**000**

Skill	Description	Hours
A	**INSPECTIONS & TROUBLESHOOTING**	**1000**

	-- Conduct routine and special inspections as required by regulations. -- Inspect airframes for wear, or other defects. -- Examine and inspect aircraft components, including landing gear, hydraulic systems, and deicers to locate cracks, breaks, leaks, or other problems. -- Inspect completed work to certify that maintenance meets standards and that aircraft are ready for operation. -- Read and interpret pilot's descriptions of problems to diagnose causes.	
B	**CORROSION CONTROL** -- Clean, strip, prime, and sand structural surfaces and materials to prepare them for bonding. -- Cure bonded structures, using portable or stationary curing equipment. -- Check for corrosion, distortion, and invisible cracks in the fuselage, wings, and tail, using x-ray and magnetic inspection equipment. -- Prepare and paint aircraft surfaces.	**400**
C	**TESTING & MEASUREMENT** -- Test operation of engines and other systems, using test equipment such as ignition analyzers, compression checkers, distributer timers, and ammeters. -- Measure the tension of control cables. -- Measure parts for wear, using precision instruments. -- Accompany aircraft on flights to make in-flight adjustments and corrections. -- Locate and mark dimensions and reference lines on defective or replacement parts, using templates, scribes, compasses, and steel rules. -- Determine repair limits for engine hot section parts.	**400**
D	**SERVICING & PREVENTATIVE MAINTENANCE** -- Clean, refuel, and change oil in line service aircraft. -- Service and maintain aircraft and related apparatus by performing activities such as flushing crankcases, cleaning screens, and lubricating moving parts. -- Obtain fuel and oil samples and check them for contamination.	**1000**
E	**MAINTENANCE FORMS, RECORDS, PUBLICATIONS & REQUISITION** -- Maintain repair logs, documenting all preventive and corrective aircraft maintenance.	**400**

	-- Read and interpret maintenance manuals, service bulletins, and other specifications to determine the feasibility and method of repairing or replacing malfunctioning or damaged components. -- Inventory and requisition or order supplies, parts, materials, and equipment.	
F	**MAINTENANCE** --Maintain, repair, and rebuild aircraft structures, functional components, and parts such as wings and fuselage, rigging, hydraulic units, oxygen systems, fuel systems, electrical systems, gaskets, and seals. -- Assemble and install electrical, plumbing, mechanical, hydraulic, and structural components and accessories, using hand or power tools. -- Disassemble engines and inspect parts, such as turbine blades and cylinders, for corrosion, wear, warping, cracks, and leaks, using precision measuring instruments, x-rays, and magnetic inspection equipment. -- Reassemble engines following repair or inspection and reinstall engines in aircraft. -- Replace or repair worn, defective, or damaged components, using hand tools, gauges, and testing equipment. -- Modify aircraft structures, space vehicles, systems, or components, following drawings, schematics, charts, engineering orders, and technical publications. -- Install and align repaired or replacement parts for subsequent riveting or welding, using clamps and wrenches. -- Remove or install aircraft engines, using hoists, engine stands, or forklift trucks. -- Trim and shape replacement body sections to specified sizes and fits and secure sections in place, using adhesives, hand tools, and power tools. -- Fabricate defective sections or parts, using metal fabricating machines, saws, brakes, shears, and grinders. -- Remove or cut out defective parts or drill holes to gain access to internal defects or damage, using drills and punches.	**1800**