

## Aircraft Mechanics and Service Technicians

- ☉ Education/Training Required: Postsecondary vocational training
- ☉ Annual Earnings: \$47,310
- ☉ Growth: 13.4%
- ☉ Annual Job Openings: 11,000
- ☉ Self-Employed: 3.0%
- ☉ Part-Time: 1.8%

Diagnose, adjust, repair, or overhaul aircraft engines and assemblies, such as hydraulic and pneumatic systems. Read and interpret maintenance manuals, service bulletins, and other specifications to determine the feasibility and method of repairing or replacing malfunctioning or damaged components. Inspect completed work to certify that maintenance meets standards and that aircraft are ready for operation. Maintain repair logs, documenting all preventive and corrective aircraft maintenance. Conduct routine and special inspections as required by regulations. Examine and inspect aircraft components, including landing gear, hydraulic systems, and de-icers, to locate cracks, breaks, leaks, or other problem. Inspect airframes for wear or other defects. 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. Measure the tension of control cables. Replace or repair worn, defective, or damaged components, using hand tools, gauges, and testing equipment. Measure parts for wear, using

precision instruments. Assemble and install electrical, plumbing, mechanical, hydraulic, and structural components and accessories, using hand tools and power tools. Test operation of engines and other systems, using test equipment such as ignition analyzers, compression checkers, distributor timers, and ammeters. Obtain fuel and oil samples and check them for contamination. Reassemble engines following repair or inspection and re-install engines in aircraft. Read and interpret pilots' descriptions of problems in order to diagnose causes. 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. Locate and mark dimensions and reference lines on defective or replacement parts, using templates, scribes, compasses, and steel rules. Clean, strip, prime, and sand structural surfaces and materials to prepare them for bonding. Service and maintain aircraft and related apparatus by performing activities such as flushing crankcases, cleaning screens, and lubricating moving parts.

**LEVEL OF ACTIVITY (out of 100)—General Physical Activity:** 62.6. **Sitting:** 36.1. **Outdoors:** 31.5.

**SKILLS**—Repairing; Equipment Maintenance; Operation Monitoring; Installation; Troubleshooting; Operation and Control; Quality Control Analysis; Complex Problem Solving.

**GOE—Interest Area:** 13. Manufacturing. **Work Group:** 13.14. Vehicle and Facility Mechanical Work. **Other Jobs in This Work Group:** Aircraft Structure, Surfaces, Rigging, and Systems Assemblers; Automotive Body and Related Repairers; Automotive Glass Installers and Repairers; Automotive Master Mechanics;

Automotive Service Technicians and Mechanics; Automotive Specialty Technicians; Bus and Truck Mechanics and Diesel Engine Specialists; Farm Equipment Mechanics; Fiberglass Laminators and Fabricators; Mobile Heavy Equipment Mechanics, Except Engines; Motorboat Mechanics; Motorcycle Mechanics; Outdoor Power Equipment and Other Small Engine Mechanics; Rail Car Repairers; Recreational Vehicle Service Technicians; Tire Repairers and Changers. **PERSONALITY TYPE:** Investigative. Investigative occupations frequently involve working with ideas and require an extensive amount of thinking. These occupations can involve searching for facts and figuring out problems mentally.

**EDUCATION/TRAINING PROGRAM(S)**—Agricultural Mechanics and Equipment/Machine Technology; Aircraft Powerplant Technology/Technician; Airframe Mechanics and Aircraft Maintenance Technology/Technician. **RELATED KNOWLEDGE/COURSES**—**Mechanical Devices:** Machines and tools, including their designs, uses, repair, and maintenance. **Design:** Design techniques, tools, and principles involved in production of precision technical plans, blueprints, drawings, and models. **Physics:** Physical principles and laws and their interrelationships and applications to understanding fluid, material, and atmospheric dynamics and mechanical, electrical, atomic, and subatomic structures and processes. **Chemistry:** The chemical composition, structure, and properties of substances and of the chemical processes and transformations that they undergo. This includes uses of chemicals and their danger signs, production tech-

niques, and disposal methods. **Engineering and Technology:** The practical application of engineering science and technology. This includes applying principles, techniques, procedures, and equipment to the design and production of various goods and services. **Transportation:** Principles and methods for moving people or goods by air, rail, sea, or road, including the relative costs and benefits.

**WORK ENVIRONMENT**—Noisy; contaminants; cramped work space, awkward positions; standing; using hands on objects, tools, or controls; bending or twisting the body.

## Aircraft Structure, Surfaces, Rigging, and Systems Assemblers

- ☪ Education/Training Required: Long-term on-the-job training
- ☪ Annual Earnings: \$43,990
- ☪ Growth: 7.8%
- ☪ Annual Job Openings: 4,000
- ☪ Self-Employed: 0.0%
- ☪ Part-Time: 1.7%

Assemble, fit, fasten, and install parts of airplanes, space vehicles, or missiles, such as tails, wings, fuselage, bulkheads, stabilizers, landing gear, rigging and control equipment, or heating