



AIRCRAFT MECHANICS 47.0600.50

TECHNICAL STANDARDS

An Industry Technical Standards Validation Committee developed and validated these standards on February 23, 2012. The Arizona Career and Technical Education Quality Commission, the validating authority for the Arizona Skills Standards Assessment System, endorsed these standards on May 16, 2012. Modifications were made in June 2024, to better align standards with the FAA requirements.

Note: Arizona's Professional Skills are taught as an integral part of the Aircraft Mechanics program.

The Technical Skills Assessment for Aircraft Mechanics is available SY2024-2025.

Note: In this document i.e. explains or clarifies the content and e.g. provides examples of the content that must be taught.

STANDARD 1.0 PERFORM ELECTRICAL MAINTENANCE AND REPAIR

- 1.1 Calculate and measure electrical power
- 1.2 Measure voltage, current, resistance, and continuity
- 1.3 Determine the relationship of voltage, current, and resistance in electrical circuits
- 1.4 Read and interpret aircraft electrical circuit diagrams, including solid-state devices and logic functions

STANDARD 2.0 PREPARE AIRCRAFT DRAWINGS

- 2.1 Identify aircraft drawings and symbols and interpret system schematics
- 2.2 Draw sketches of repairs and alterations
- 2.3 Interpret graphs and charts in order to maintain and repair systems

STANDARD 3.0 WEIGH AND BALANCE AIRCRAFT

- 3.1 Perform weight and balance calculations, weigh aircraft, and record data

STANDARD 4.0 MAINTAIN AND REPAIR FLUID LINES AND FITTINGS

- 4.1 Fabricate and install rigid fluid lines
- 4.2 Fabricate and install flexible fluid lines
- 4.3 Fabricate a flareless-fitting-tube connection

STANDARD 5.0 INSPECT AND IDENTIFY AIRCRAFT MATERIALS AND PROCESSES

- 5.1 Fabricate a cable assembly using a swaged-end fitting
- 5.2 Identify aircraft hardware and materials
- 5.3 Perform precision measurements
- 5.4 Inspect and check welds
- 5.5 Install safety wire

STANDARD 6.0 PERFORM GROUND OPERATION AND SERVICES

- 6.1 Identify types of fires and fire extinguishers
- 6.2 Identify safety practices in aircraft fueling and handling
- 6.3 Identify aircraft ground movement procedures
- 6.4 Identify procedures for securing aircraft in a variety of conditions

STANDARD 7.0 PERFORM AIRCRAFT CLEANING AND CORROSION CONTROL

- 7.1 Identify and select aircraft cleaning materials
- 7.2 Identify types of aircraft corrosion
- 7.3 Identify corrosion removal techniques
- 7.4 Identify corrosion treatment techniques
- 7.5 Prepare metal and composite surface for painting

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STANDARD 8.0 PREPARE AIRCRAFT MAINTENANCE FORMS AND RECORDS, INTERPRET PUBLICATIONS AND REGULATIONS

- 8.1 Write descriptions of work performed using typical aircraft maintenance records
- 8.2 Complete required maintenance forms, records, and inspection reports
- 8.3 Apply information from maintenance publications
- 8.4 Determine whether a given repair or alteration is major or minor
- 8.5 Explain the difference between “approved data” and “acceptable data”

STANDARD 9.0 APPLY PHYSICS TO AVIATION

- 9.1 Convert temperature units
- 9.2 Calculate force, area, pressure in a specific application
- 9.3 Use and understand the principles of theory of flight
- 9.4 Calculate horsepower
- 9.5 Identify changes in pressure and velocity as a fluid passes through a venturi

STANDARD 10.0 IMPLEMENT INSPECTION CONCEPTS AND TECHNIQUES

- 10.1 Identify and select nondestructive testing processes
- 10.2 Inspect aircraft for compliance with an Airworthiness Directive
- 10.3 Perform a tap test on a composite component