| **Skills** | **Airman Certification Standards—General** | **Description of qualifying work experience** |
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| **I. General** | **Subject A. Fundamentals of Electricity and Electronics** |  |
| AM.I.A.S1 | Perform circuit continuity test. |  |
| AM.I.A.S2 | Measure voltage. |  |
| AM.I.A.S3 | Measure current. |  |
| AM.I.A.S4 | Measure resistance. |  |
| AM.I.A.S5 | Test a switch or relay. |  |
| AM.I.A.S6 | Test a fuse or circuit breaker. |  |
| AM.I.A.S7 | Read and interpret aircraft electrical circuit diagrams, and symbols, including solid state devices and logic functions. |  |
| AM.I.A.S8 | Troubleshoot a circuit. |  |
| AM.I.A.S9 | Identify symbols used in electrical and electronic schematic diagrams (e.g., grounds, shields, resistors, capacitors, fuses, circuit breakers, batteries, diodes, transistors, and integrated circuits). |  |
| AM.I.A.S10 | Demonstrate how to test for short-circuit and open-circuit conditions. |  |
| AM.I.A.S11 | Measure voltage drop across a resistor. |  |
| AM.I.A.S12 | Determine or measure for open electrical circuits. |  |
| AM.I.A.S13 | Inspect an aircraft battery. |  |
| AM.I.A.S14 | Service an aircraft battery. |  |
|  | **Subject B. Aircraft Drawings** |  |
| AM.I.B.S1 | Draw a sketch of a repair or alteration. |  |
| AM.I.B.S2 | Identify the meaning of lines and symbols used in an aircraft drawing. |  |
| AM.I.B.S3 | Interpret dimensions used in an aircraft drawing. |  |
| AM.I.B.S4 | Identify changes on an aircraft drawing. |  |
| AM.I.B.S5 | Determine material requirements from an aircraft drawing. |  |
| AM.I.B.S6 | Interpret graphs and charts |  |
|  | **Subject C. Weight and Balance** |  |
| AM.I.C.S1 | Research and explain the procedures for weighing an aircraft. |  |
| AM.I.C.S2 | Perform weight and balance calculations. |  |
| AM.I.C.S3 | Calculate ballast weight shift and required weight location. |  |
| AM.I.C.S4 | Check aircraft weighing scales for calibration. |  |
| AM.I.C.S5 | Calculate weight and balance for an aircraft after an equipment change. |  |
| AM.I.C.S6 | Compute forward and aft loaded CG limit. |  |
| AM.I.C.S7 | Create a maintenance record for a weight and balance change. |  |
| AM.I.C.S8 | Compute the empty weight and empty weight CG of an aircraft. |  |
| AM.I.C.S9 | Calculate the moment of an item of equipment. |  |
| AM.I.C.S10 | Identify tare items. |  |
| AM.I.C.S11 | Locate weight and balance information. |  |
| AM.I.C.S12 | Locate datum. |  |
| AM.I.C.S13 | Locate weight and balance placarding and limitation requirements for an aircraft. |  |
| AM.I.C.S14 | Revise an aircraft equipment list after equipment change. |  |
| AM.I.C.S15 | Calculate the change needed to correct an out of balance condition. |  |
| AM.I.C.S16 | Determine an aircraft’s CG range using aircraft specifications, Type Certificate Data Sheets (TCDSs), and aircraft listings. |  |
| AM.I.C.S17 | Calculate a weight change and complete required records. |  |
|  | **Subject D. Fluid Lines and Fittings** |  |
| AM.I.D.S1 | Fabricate a rigid line with a flare and a bend. |  |
| AM.I.D.S2 | Install an aircraft rigid line. |  |
| AM.I.D.S3 | Install an aircraft flexible hose. |  |
| AM.I.D.S4 | Perform a rigid line or flexible hose inspection. |  |
| AM.I.D.S5 | Identify installation and security requirements for rigid lines and flexible hoses. |  |
| AM.I.D.S6 | Identify fluid lines, pneumatic lines, and fittings. |  |
| AM.I.D.S7 | AM.I.D.S7 |  |
| AM.I.D.S8 | Fabricate a flareless-fitting-tube connection. |  |
|  | **Subject E. Aircraft Materials, Hardware, and Processes** |  |
| AM.I.E.S1 | Install safety wire on nuts, bolts, and turnbuckles. |  |
| AM.I.E.S2 | Determine and properly torque aircraft hardware. |  |
| AM.I.E.S3 | Inspect and check welds. |  |
| AM.I.E.S4 | Identify aircraft materials and hardware based on manufacturer’s markings. |  |
| AM.I.E.S5 | Select and install aircraft bolts. |  |
| AM.I.E.S6 | Make precision measurements with an instrument that has a Vernier scale. |  |
| AM.I.E.S7 | Check the concentricity of a shaft. |  |
| AM.I.E.S8 | Identify aircraft control cable components. |  |
| AM.I.E.S9 | Fabricate a cable assembly using a swaged-end fitting. |  |
| AM.I.E.S10 | Select the correct aluminum alloy for a structural repair. |  |
| AM.I.E.S11 | Identify rivets by physical characteristics. |  |
| AM.I.E.S12 | Determine suitability of materials for aircraft repairs. |  |
| AM.I.E.S13 | Distinguish between heat-treated and non-heat-treated aluminum alloys. |  |
| AM.I.E.S14 | Check for proper calibration of a micrometer. |  |
|  | **Subject F. Ground Operations and Servicing** |  |
| AM.I.F.S1 | Perform a foreign object damage control procedure. |  |
| AM.I.F.S2 | Connect external power to an aircraft. |  |  |
| AM.I.F.S3 | Prepare an aircraft for towing. |  |
| AM.I.F.S4 | Use appropriate hand signals for the movement of aircraft. |  |
| AM.I.F.S5 | Inspect an aircraft fuel system for water and foreign object debris (FOD) contamination. |  |
| AM.I.F.S6 | Identify different grades of aviation fuel. |  |
| AM.I.F.S7 | Select an approved fuel for an aircraft. |  |
| AM.I.F.S8 | Prepare an aircraft for fueling |  |
| AM.I.F.S9 | Follow a checklist to start up or shut down an aircraft reciprocating or turbine engine. |  |
| AM.I.F.S10 | Identify procedures for extinguishing fires in an engine induction system. |  |
| AM.I.F.S11 | Secure an aircraft. |  |
| AM.I.F.S12 | Locate and explain procedures for securing a turbine-powered aircraft after engine shutdown |  |
|  | **Subject G. Cleaning and Corrosion Control** |  |
| AM.I.G.S1 | Perform a portion of an aircraft corrosion inspection. |  |
| AM.I.G.S2 | Identify, select, and use aircraft corrosion prevention/cleaning materials. |  |
| AM.I.G.S3 | Apply corrosion prevention/coating materials. |  |
| AM.I.G.S4 | Inspect finishes and identify defects. |  |
| AM.I.G.S5 | Inspect an aircraft compartment for corrosion. |  |
| AM.I.G.S6 | Identify procedures to clean and protect plastics. |  |
| AM.I.G.S7 | Determine location and size requirements for aircraft registration numbers. |  |
| AM.I.G.S8 | Prepare composite surface for painting. |  |
| AM.I.G.S9 | Identify finishing materials and appropriate thinners. |  |
| AM.I.G.S10 | Layout and mask a surface in preparation for painting. |  |
| AM.I.G.S11 | Prepare metal surface for painting. |  |
| AM.I.G.S12 | Determine what paint system can be used on a given aircraft. |  |
| AM.I.G.S13 | Apply etch solution and conversion coating. |  |
| AM.I.G.S14 | Identify types of protective finishes. |  |
|  | **Subject H. Mathematics** |  |
| AM.I.H.S1 | Determine the square root of given numbers. |  |
| AM.I.H.S2 | Compute the volume of a cylinder. |  |
| AM.I.H.S3 | Compute the area of a wing. |  |
| AM.I.H.S4 | Calculate the volume of a shape, such as a baggage compartment or fuel tank. |  |
| AM.I.H.S5 | Convert between fractional and decimal numbers. |  |
| AM.I.H.S6 | Compare two numerical values using ratios. |  |
| AM.I.H.S7 | Compute compression ratio. |  |
| AM.I.H.S8 | Compute the torque value when converting from inch-pounds to foot-pounds or from foot-pounds to  inch-pounds. |  |
|  | **Subject I. Regulations, Maintenance Forms, Records, and Publications** |  |
| AM.I.I.S1 | Complete an FAA Form 337 for a major repair or alteration. |  |
| AM.I.I.S2 | Examine an FAA Form 337 for accuracy. |  |
| AM.I.I.S3 | Determine an aircraft's inspection status by reviewing the aircraft's maintenance records. |  |
| AM.I.I.S4 | Complete an aircraft maintenance record entry for the compliance of a reoccurring AD for a  specific airframe, aircraft engine, appliance, or propeller. |  |
| AM.I.I.S5 | Compare an equipment list for an aircraft to equipment installed. |  |
| AM.I.I.S6 | Locate applicable FAA aircraft specifications and FAA TCDS for an aircraft or component. |  |
| AM.I.I.S7 | Complete an aircraft maintenance record entry for return to service. |  |
| AM.I.I.S8 | Determine applicability of an AD. |  |
| AM.I.I.S9 | Check a Technical Standard Order (TSO) or part manufacturing authorization for the proper markings. |  |
| AM.I.I.S10 | Use a manufacturer’s illustrated parts catalog to locate a specific part number and applicability. |  |
| AM.I.I.S11 | Locate supplemental type certificates applicable to a specific aircraft. |  |
| AM.I.I.S12 | Determine the conformity of aircraft instrument range markings and placarding. |  |
| AM.I.I.S13 | Determine approved replacement parts for installation on a given aircraft. |  |
| AM.I.I.S14 | Determine maximum allowable weight of a specific aircraft. |  |
| AM.I.I.S15 | Determine whether a given repair or alteration is major or minor. |  |
| AM.I.I.S16 | Determine applicability of approved data for a major repair |  |
| AM.I.I.S17 | Explain the difference between “approved data” (required for major repair/alteration) and  “acceptable data” (required for minor repair/alteration). |  |
| AM.I.I.S18 | Complete a 100-hour inspection aircraft maintenance record entry. |  |
|  | **Subject J. Physics for Aviation** |  |
| AM.I.J.S1 | Convert temperature units (e.g., from Celsius to Fahrenheit). |  |
| AM.I.J.S2 | Determine density altitude. |  |
| AM.I.J.S3 | Determine pressure altitude. |  |
| AM.I.J.S4 | Calculate force, area, or pressure in a specific application. |  |
| AM.I.J.S5 | Demonstrate the mechanical advantage of various types of levers. |  |
| AM.I.J.S6 | Design an inclined plane on paper, indicating the mechanical advantage. |  |
| AM.I.J.S7 | Identify changes in pressure and velocity as a fluid passes through a venturi. |  |
| AM.I.J.S8 | Calculate horsepower. |  |
|  | **Subject K. Inspection Concepts and Techniques** |  |
| AM.I.K.S1 | Use Vernier calipers. |  |
| AM.I.K.S2 | Use micrometers. |  |
| AM.I.K.S3 | Use measurement gauges. |  |
| AM.I.K.S4 | Perform a visual inspection. |  |
| AM.I.K.S5 | Perform a dye penetrant inspection. |  |
| AM.I.K.S6 | Inspect aircraft for compliance with an AD. |  |
| AM.I.K.S7 | Identify NDT methods for composite, surface metal, and subsurface metal defects. |  |
| AM.I.K.S8 | Perform a tap test on a composite component. |  |
|  | **Subject L. Human Factors** |  |
| AM.I.L.S1 | File a Malfunction or Defect Report. |  |
| AM.I.L.S2 | Brief a shift turnover for continuity of work. |  |
| AM.I.L.S3 | Locate information regarding human factors errors. |  |