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Aviation Mechanic
General, Airframe, and Powerplant
Airman Certification Standards

Effective Date: TBD

Flight Standards Service
Washington, DC 20591

Acknowledgments

The U.S. Department of Transportation, Federal Aviation Administration (FAA), Airman Testing Standards Branch, developed this Airman Certification Standards (ACS) document with the assistance of the aviation community. The FAA gratefully acknowledges the valuable support from the many individuals and organizations who contributed their time and expertise to assist in this endeavor.

Availability

This ACS is available for download from www.faa.gov. Please send comments regarding this document to AFS630comments@faa.gov.

Material in FAA-S-ACS-1 will be effective **TBD**. All previous editions of the Aviation Mechanic General, Aviation Mechanic Airframe, and Aviation Mechanic Powerplant Practical Test Standards (FAA-S-8081-26, FAA-S-8081-27, and FAA-S-8081-28) will be obsolete as of this date for Aviation Mechanic applicants.

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Foreword

The FAA has published the Aviation Mechanic – General, Airframe, and Powerplant ACS document to communicate the aeronautical knowledge, risk management, and skill standards for Aviation Mechanic certification. This ACS incorporates and supersedes the previous editions of the following documents:

- FAA-S-8081-26A, Aviation Mechanic General Practical Test Standards (with Change 1, dated 4/27/15);
- FAA-S-8081-27A, Aviation Mechanic Airframe Practical Test Standards (with Change 1, dated 4/27/15, and Change 2, dated 9/29/15);
- FAA-S-8081-28A, Aviation Mechanic Powerplant Practical Test Standards (with Change 1, dated 4/27/15); and
- FAA-G-8082-3A, Aviation Maintenance Technician-General, Airframe, and Powerplant Knowledge Test Guide (dated September 2008).

NOTE: "Aviation Mechanic" and "Aviation Maintenance Technician (AMT)" are used interchangeably when referring to an airman holding an Aviation Mechanic certificate with an Airframe and/or Powerplant rating.

The FAA views the ACS as the foundation of its transition to a more integrated and systematic approach to airman certification. The ACS is part of the Safety Management System (SMS) framework that the FAA uses to mitigate risks associated with airman certification training and testing. Specifically, the ACS, associated guidance, and test question components of the airman certification system are constructed around the four functional components of an SMS:

- Safety Policy that defines and describes aeronautical knowledge, risk management and skill as integrated components of the airman certification system;
- Safety Risk Management processes through which both internal and external stakeholders identify changes in regulations, safety recommendations, or other factors. These changes are then evaluated to determine whether they require modification of airman testing and training materials;
- Safety Assurance processes to ensure the prompt and appropriate incorporation of changes arising from new regulations and safety recommendations; and
- Safety Promotion in the form of ongoing engagement with both external stakeholders (e.g., the aviation maintenance and training industry) and FAA policy divisions.

The FAA has developed this ACS and its associated guidance in collaboration with a diverse group of aviation training experts. The goal is to drive a systematic approach to all components of the airman certification system, including knowledge test question development and conduct of the oral and practical test. The FAA acknowledges and appreciates the many hours that these aviation experts have contributed toward this goal. This degree of collaboration, a hallmark of a robust safety culture, strengthens and enhances aviation safety at every level of the airman certification system.

Rick Domingo
Executive Director, Flight Standards Service

Revision History

Document#	Description	Revision Date
FAA-S-8081-26A	Aviation Mechanic General Practical Test Standards (Change 1)	April 27, 2015
FAA-S-8081-27A	Aviation Mechanic Airframe Practical Test Standards (Changes 1 and 2)	September 29, 2015
FAA-S-8081-28A	Aviation Mechanic Powerplant Practical Test Standards (Change 1)	April 27, 2015
FAA-S-ACS-1	Aviation Maintenance Technician – General, Airframe, and Powerplant Airman Certification Standards	TBD

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Introduction

Airman Certification Standards Concept

The goal of the airman certification process is to ensure the applicant possesses the knowledge, ability to manage risks, and basic skills consistent with the privileges of the certificate or rating being exercised. The Airman Certification Standards (ACS) concept forms a more comprehensive standard for what an applicant must know, consider, and do for the safe conduct and successful completion of each subject to be tested on the knowledge exam and oral and practical tests.

In fulfilling its responsibilities for the airman certification process, the FAA Flight Standards Service (AFS) plans, develops, and maintains materials related to airman certification training and testing. The FAA knowledge test measures the minimum standard of aeronautical knowledge required by Title 14 of the Code of Federal Regulations (14 CFR) part 65. Other materials, such as handbooks in the FAA-H-8083 series, provide guidance to applicants on aeronautical knowledge, risk management, and associated skills, including the knowledge and skill required to identify hazards and mitigate risks.

Safe operations on today's aircraft require integration of aeronautical knowledge, risk management, and skill standards. To accomplish these goals, the FAA drew upon the expertise of organizations and individuals across the aviation and training community to develop the ACS. The ACS defines the elements of knowledge and skill for each airman certificate or rating defined in 14 CFR part 65.

Through the oral and practical portion of the test, the FAA evaluators will assess the applicant's application of the knowledge, risk management, and skill in the subject area. The oral questioning may continue throughout the entire practical test. For some topics, the evaluator will ask the applicant to describe or explain. For other items, the evaluator will assess the applicant's understanding by providing a scenario that requires the applicant to appropriately apply and/or correlate knowledge and demonstrate skill as required for the circumstances of the given scenario.

Note: As used in the ACS, an evaluator is any person authorized to conduct airman testing (e.g., an FAA aviation safety inspector (ASI) or designated mechanic examiner (DME)).

Compliance with these procedures makes certain that airman applicants meet a satisfactory level of competency and workmanship required for certification. Each applicant is required to demonstrate a minimum satisfactory competency level, regardless of his/her previous education or background.

Evaluators will adhere to the following standards is mandatory when evaluating an applicant's test performance for an FAA Airframe and/or Powerplant Certificate:

- 14 CFR part 65, section 65.79
- General Aviation Airman Designee Handbook, FAA Order 8900.2 (as revised)
- Applicable ACS

All applicants for an FAA Aviation Maintenance Technician Certificate must qualify by meeting the prescribed requirements as stated in 14 CFR part 65, section 65.77. They must additionally pass a knowledge tests, and the oral and practical tests for the certificate and/or rating(s) sought, in accordance with 14 CFR part 65, sections 65.75 and 65.77.

Note: FAA knowledge tests contain topics that include the maintenance, repair, alteration, and inspection of aviation products and relevant FAA regulations.

Commented [WS(1): 9/19/18: Per F2F-17 A/W SG discussion, references to 8900.2 will need to be updated or removed by March 2019.

Using the ACS

Title 49 U.S. Code Subpart III, Chapter 447 is the foundation for the FAA's safety regulations. The FAA requires that all practical tests be conducted in accordance with the appropriate AMT ACS and the policies and standardized procedures set forth in the current version of [FAA Order 8900.2, General Aviation Airman Designee Handbook](#).

Note: An evaluator conducting an oral and/or practical test must not test more than one applicant at a time.

Definitions within:

- **Knowledge**—(FAA knowledge exam, oral) elements are indicated by use of the words "Exhibits knowledge in...."
- **Risk**—(oral, practical) elements are indicated by the use of the words "Determine, Identify, Creates..."
- **Skill**—(practical) elements are indicated by the use of the words "Demonstrates the skill to perform...."

The ACS consists of [three Sections \(General, Airframe, and Powerplant\)](#). Each Section includes **Subjects** appropriate to that Section and consistent with 14 CFR part 65. Each Subject begins with an **Objective** stating what the applicant should know, consider, and/or do. The ACS then lists the aeronautical knowledge, risk management, and skill elements relevant to the specific Subjects, along with the conditions and standards for acceptable performance. The ACS uses **Notes** to emphasize special considerations. The ACS uses the terms "will" and "must" to convey directive (mandatory) information. The term "may" denotes items that are recommended but not required. The **References** for each Subject indicate the source material for Subject elements. For example, in Subjects such as "Fundamentals of Electricity and Electronics" (AM.I.A.K1), the applicant must be prepared for questions on electron theory presented in the references for that Subject.

Each Subject in the ACS is coded according to a scheme that includes four elements. For example:

AM.I.A.K1:

- AM** = Aviation Mechanic ACS
- I** = Section (General)
- A** = Subject (Fundamentals of Electricity and Electronics)
- K1** = Knowledge Element 1 (Electron theory (conventional flow vs. electron flow).)

Knowledge test questions are linked to the ACS codes, which will soon replace the system of Learning Statement Codes (LSC). After this transition occurs, the airman knowledge test report will list an ACS code that correlates to a specific Subject element for a given Section and Subject. At that time, remedial instruction and re-testing will be specific, targeted, and based on specified learning criteria.

The current knowledge test management system does not have the capability to print ACS codes. Until a new test management system is in place, the LSC (e.g., "AMG," "AMA," and "AMP" codes) will continue to be displayed on the Airman Knowledge Test Report (AKTR).

Each ACS code is tied to a unique Subject element in the ACS itself. Because of this fundamental difference, there is no one-to-one correlation between LSC (AMG, AMA, AMP) codes and ACS codes.

Because all active knowledge test questions for the General (AMG), Airframe (AMA), and Powerplant (AMP) knowledge tests have been aligned with the corresponding ACS, evaluators can continue to use Learning Statement codes in conjunction with the ACS for the time being. The evaluator should look up the learning statement code(s) on the applicant's AKTR in the Learning Statement Reference Guide. After noting the subject area(s), the evaluator can use the corresponding Subject(s) in the ACS to narrow the scope of material for retesting, and to evaluate the applicant's understanding of that material in the context of the appropriate ACS Subject.

Except as provided by 14 CFR 65.80, the applicant must pass the knowledge tests before taking the oral and practical test.

The FAA encourages applicants and instructors to use the ACS when preparing for knowledge, tests. The FAA will revise the ACS as circumstances require.

Commented [WS(2): 2/28/19: Jackie Spanitz: Depending on the timing of release of this ACS and the PSI TMS schedule, we may be able to remove these paragraphs.

I. General

Subject	A. Fundamentals of Electricity and Electronics
References	FAA-H-8083-30, AC 43.13-1
Objective	To determine that the applicant exhibits satisfactory knowledge, risk management, and skills associated with basic electricity applicable to the AMT.
Knowledge	The applicant demonstrates understanding of:
<i>AM.I.A.K1</i>	Electron theory (conventional flow vs. electron flow).
<i>AM.I.A.K2</i>	Magnetism.
<i>AM.I.A.K3</i>	Capacitance in a circuit.
<i>AM.I.A.K4</i>	Inductance in a circuit.
<i>AM.I.A.K5</i>	Alternate Current (AC) electrical circuits.
<i>AM.I.A.K6</i>	Direct Current (DC) electrical circuits.
<i>AM.I.A.K7</i>	Electrical laws and theory.
<i>AM.I.A.K7a</i>	a. Ohm's Law.
<i>AM.I.A.K7b</i>	b. Kirchhoff's Laws.
<i>AM.I.A.K7c</i>	c. Watt's Law.
<i>AM.I.A.K7d</i>	d. Faraday's Law.
<i>AM.I.A.K7e</i>	e. Lenz's Law.
<i>AM.I.A.K7f</i>	f. Right-hand motor rule.
<i>AM.I.A.K8</i>	Electrical measurement tools, principles, and procedures.
<i>AM.I.A.K9</i>	Voltage.
<i>AM.I.A.K9a</i>	a. Regulation.
<i>AM.I.A.K10</i>	Current.
<i>AM.I.A.K11</i>	Resistance.
<i>AM.I.A.K11a</i>	a. Impedance.
<i>AM.I.A.K11b</i>	b. Resistance in series.
<i>AM.I.A.K11c</i>	c. Resistance in parallel.
<i>AM.I.A.K11d</i>	d. Total resistance.
<i>AM.I.A.K12</i>	Power.
<i>AM.I.A.K13</i>	Series circuits.
<i>AM.I.A.K14</i>	Parallel circuits.
<i>AM.I.A.K15</i>	Aircraft batteries.
<i>AM.I.A.K16</i>	Transformers.
<i>AM.I.A.K17</i>	Circuit continuity.
<i>AM.I.A.K18</i>	Controlling devices, including switches and relays.
<i>AM.I.A.K19</i>	Protective devices, including fuses, circuit breakers, and current limiters.
<i>AM.I.A.K20</i>	Resistor types and color coding.
<i>AM.I.A.K21</i>	Semiconductors including diodes, transistors and integrated circuits.
<i>AM.I.A.K22</i>	Digital logic, including RAM, ROM, NVRAM, logic gates, inverter, and flip-flop.
<i>AM.I.A.K23</i>	Binary numbers.
<i>AM.I.A.K24</i>	Electrostatic discharge.
<i>AM.I.A.K25</i>	Electrical circuit drawings.
<i>AM.I.A.K26</i>	Complex/combined circuits.
<i>AM.I.A.K27</i>	AC and DC motors.

I. General

Subject	A. Fundamentals of Electricity and Electronics
Risk Management	The applicant demonstrates the ability to identify, assess, and mitigate risks, encompassing:
<i>AM.I.A.R1</i>	Failure to observe safety precautions when taking voltage, current, resistance, and capacitance measurements.
<i>AM.I.A.R2</i>	Hazards associated with handling, storage, and inspection of different types of batteries (i.e. lead acid, NiCad, lithium ion, gel cell).
<i>AM.I.A.R3</i>	Hazards associated with high-voltage circuits (e.g., strobe lighting).
<i>AM.I.A.R4</i>	Failure to observe safety precautions when working around batteries.
Skills	The applicant demonstrates the ability to:
<i>AM.I.A.S1</i>	Perform circuit continuity test.
<i>AM.I.A.S2</i>	Measure voltage.
<i>AM.I.A.S3</i>	Measure current.
<i>AM.I.A.S4</i>	Measure resistance.
<i>AM.I.A.S5</i>	Test a switch or relay.
<i>AM.I.A.S6</i>	Test a fuse or circuit breaker.
<i>AM.I.A.S7</i>	Read and interpret aircraft electrical circuit diagrams, and symbols, including solid state devices and logic functions.
<i>AM.I.A.S8</i>	Troubleshoot a circuit.
<i>AM.I.A.S9</i>	Identify symbols used in electrical and electronic schematic diagrams (e.g., grounds, shields, resistors, capacitors, fuses, circuit breakers, batteries, diodes, transistors, and integrated circuits).
<i>AM.I.A.S10</i>	Demonstrate how to test for short-circuit and open-circuit conditions.
<i>AM.I.A.S11</i>	Measure voltage drop across a resistor.
<i>AM.I.A.S12</i>	Determine or measure for open electrical circuits.
<i>AM.I.A.S13</i>	Inspect an aircraft battery.
<i>AM.I.A.S14</i>	Service an aircraft battery.

I. General

Subject	B. Aircraft Drawings
References	FAA-H-8083-30, AC 43.13-1
Objective	To determine that the applicant exhibits satisfactory knowledge, risk management, and skills associated with aircraft drawings.
Knowledge	The applicant demonstrates understanding of:
<i>AM.I.B.K1</i>	Drawings, blueprints, sketches, charts, graphs, and/or system schematics, including commonly used lines, symbols, and terminology.
<i>AM.I.B.K2</i>	Repair or alteration of an aircraft system or component(s) using drawings/blueprints and/or system schematics to determine whether it conforms to its type design.
<i>AM.I.B.K3</i>	Inspection of an aircraft system or component(s) using drawings/blueprints and/or schematics.
<i>AM.I.B.K4</i>	Terms used in conjunction with aircraft drawings/blueprints and/or system schematics.
Risk Management	The applicant demonstrates the ability to identify, assess, and mitigate risks, encompassing:
<i>AM.I.B.R1</i>	Misinterpretation of plus or minus tolerances as depicted on aircraft drawings.
<i>AM.I.B.R2</i>	Misuse of manufacturers specifications for design of alterations and repairs.
<i>AM.I.B.R3</i>	Failure to ensure the drawing or schematic is the one applicable to the particular aircraft by model and serial number.
<i>AM.I.B.R4</i>	Failure to identify the correct and most current version and applicability of drawing being used.
Skills	The applicant demonstrates the ability to:
<i>AM.I.B.S1</i>	Draw a sketch of a repair or alteration.
<i>AM.I.B.S2</i>	Identify the meaning of lines and symbols used in an aircraft drawing.
<i>AM.I.B.S3</i>	Interpret dimensions used in an aircraft drawing.
<i>AM.I.B.S4</i>	Identify changes on an aircraft drawing.
<i>AM.I.B.S5</i>	Determine material requirements from an aircraft drawing.
<i>AM.I.B.S6</i>	Interpret graphs and charts.

I. General

Subject	C. Weight and Balance
References	FAA-H-8083-30, AC 43.13-1, FAA-H-8083-1
Objective	To determine that the applicant exhibits satisfactory knowledge, risk management, and skills associated with weight and balance.
Knowledge	The applicant demonstrates understanding of:
AM.I.C.K1	Weight and balance terminology.
AM.I.C.K2	Purpose for weighing an aircraft.
AM.I.C.K3	Weighing procedures, including the general preparations for weighing, with emphasis on aircraft weighing area considerations.
AM.I.C.K4	Procedures for calculation of the following: arm, positive or negative moment, center of gravity (CG) or moment index.
AM.I.C.K5	Purpose and application of weight and CG limits.
AM.I.C.K6	Purpose of determining CG.
AM.I.C.K7	Adverse loading considerations and how to calculate if adverse loading will cause an out of limit condition.
AM.I.C.K8	Determine proper empty weight configuration.
AM.I.C.K9	Proper ballast placement.
AM.I.C.K10	Jacking an aircraft.
Risk Management	The applicant demonstrates the ability to identify, assess, and mitigate risks encompassing:
AM.I.C.R1	Situations that may lead to unsafe conditions when jacking an aircraft.
AM.I.C.R2	Weighing an aircraft without following recommended procedures.
AM.I.C.R3	Misuse of scales.
AM.I.C.R4	Adverse aerodynamic effect of CG that is forward or aft of CG limits.
AM.I.C.R5	Adverse aerodynamic and performance effects of weight in excess of limits.
Skills	The applicant demonstrates the ability to:
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.

I. General

Subject	D. Fluid Lines and Fittings
References	FAA-H-8083-30, AC 43.13-1
Objective	To determine that the applicant exhibits satisfactory knowledge, risk management, and skills associated with fluid lines and fittings.
Knowledge	The applicant demonstrates understanding of:
<i>AM.I.D.K1</i>	Tubing and hose materials, applications, sizes, and fittings.
<i>AM.I.D.K2</i>	Rigid line or flexible hose material identification.
<i>AM.I.D.K3</i>	Rigid line fabrication, installation, and inspection techniques/practices.
<i>AM.I.D.K4</i>	Flexible hose fabrication, installation, and inspection techniques/practices.
<i>AM.I.D.K5</i>	Importance of using a torque wrench when securing fluid hose and line fittings.
<i>AM.I.D.K6</i>	Use of torque seal or similar witness techniques after installing critical fluid hose and line fittings.
Risk Management	The applicant demonstrates the ability to identify, assess, and mitigate risks encompassing:
<i>AM.I.D.R1</i>	Failure to follow proper system configuration prior to and during maintenance.
<i>AM.I.D.R2</i>	Misuse of required safety equipment.
<i>AM.I.D.R3</i>	Failure to use precautions when working with hazardous fluids.
<i>AM.I.D.R4</i>	Failure to observe precautions when working with high pressure fluid systems.
<i>AM.I.D.R5</i>	Hazards associated with a twisted hose.
<i>AM.I.D.R6</i>	Hazards associated with a loosened fitting or a hose that has moved out-of-position.
<i>AM.I.D.R7</i>	Improper use of tools while applying torque to a fluid line.
Skills	The applicant demonstrates the ability to:
<i>AM.I.D.S1</i>	Fabricate a rigid line with a flare and a bend.
<i>AM.I.D.S2</i>	Install an aircraft rigid line.
<i>AM.I.D.S3</i>	Install an aircraft flexible hose.
<i>AM.I.D.S4</i>	Perform a rigid line or flexible hose inspection.
<i>AM.I.D.S5</i>	Identify installation and security requirements for rigid lines and flexible hoses.
<i>AM.I.D.S6</i>	Identify fluid lines, pneumatic lines, and fittings.
<i>AM.I.D.S7</i>	Fabricate a flexible hose.
<i>AM.I.D.S8</i>	Fabricate a flareless-fitting-tube connection.

I. General

Subject	E. Aircraft Materials, Hardware, and Processes
References	FAA-H-8083-30, AC 43.13-1
Objective	To determine that the applicant exhibits satisfactory knowledge, risk management, and skills associated with materials, hardware, and processes.
Knowledge	The applicant demonstrates understanding of:
AM.I.E.K1	Materials commonly used in aircraft and their general application.
AM.I.E.K2	Heat treatment and metal working processes.
AM.I.E.K3	Forces placed on aircraft materials (e.g., tension, compression, torsion, bending, strain, and shear).
AM.I.E.K4	Hardware commonly used in aircraft (e.g., bolts, nuts, screws, pins, washers, turnlock fasteners, cables, cable fittings, and rigid line couplings).
AM.I.E.K5	Safety wire and safety clip requirements and techniques.
AM.I.E.K6	Precision measurement tools, principles, and procedures.
AM.I.E.K7	Soldering preparation, types of solder, and/or flux usage.
AM.I.E.K8	Torqueing tools, principles, and procedures.
AM.I.E.K9	Suitability and compatibility of materials and hardware used for maintenance.
AM.I.E.K10	Relationship between torque and fastener preload.
AM.I.E.K11	TBD
AM.I.E.K12	Characteristics of acceptable welds.
AM.I.E.K13	Characteristics of unacceptable welds.
AM.I.E.K14	Procedures for weld repairs.
AM.I.E.K15	Manufacturer's markings on materials and hardware.
Risk Management	The applicant demonstrates the ability to identify, assess, and mitigate risks encompassing:
AM.I.E.R1	Improper use of personal protective equipment (PPE).
AM.I.E.R2	Consequences of improper torque.
AM.I.E.R3	Consequences associated with used hardware or suspected unapproved parts (SUPS).
AM.I.E.R4	Misunderstanding and misapplication of torqueing techniques on critical, highly-stressed fasteners.
Skills	The applicant demonstrates the ability to:
AM.I.E.S1	Install safety wire on nuts, bolts, and/or 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.

I. General

Subject	<i>E. Aircraft Materials, Hardware, and Processes</i>
AM.I.E.S15	Inspect and check welds.

Commented [WS(3)]: 6/25/20: AMT AKTQ AEB concurred on removal of this code.

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I. General

Subject	F. Ground Operations and Servicing
References	FAA-H-8083-30, AC 20-35C, AC 43.13-1, AC 150/5210-20
Objective	To determine that the applicant exhibits satisfactory knowledge, risk management, and skills associated with ground operation and servicing.
Knowledge	The applicant demonstrates understanding of:
AM.I.F.K1	Aircraft towing procedures.
AM.I.F.K2	Aircraft securing procedures.
AM.I.F.K3	Aviation fueling/defueling procedures.
AM.I.F.K4	Airport operation area procedures and ATC communications, including runway incursion prevention.
AM.I.F.K5	Engine starting, ground operation, and aircraft taxiing procedures.
AM.I.F.K6	Types/classes of fire extinguishers and procedures.
AM.I.F.K7	Aircraft oil, hydraulic and pneumatic, and deicing servicing procedures.
AM.I.F.K8	Oxygen system servicing procedures.
AM.I.F.K9	Characteristics of aviation gasoline and/or turbine fuels, including basic types and means of identification.
AM.I.F.K10	Fuel additives commonly used in the field.
AM.I.F.K11	Use of approved grades/types of fuel in aircraft engines.
AM.I.F.K12	Tool and hardware use and accountability.
AM.I.F.K13	Material handling.
AM.I.F.K14	Parts protections.
AM.I.F.K15	Hazardous materials, Safety Data Sheets (SDS), and PPE.
AM.I.F.K16	Foreign object damage effects
Risk Management	The applicant demonstrates the ability to identify, assess, and mitigate risks encompassing:
AM.I.F.R1	Dangers associated with engine starting and ground operations.
AM.I.F.R2	Consequences of misfueling and/or using incorrect and/or contaminated fuel.
AM.I.F.R3	Dangers associated with failure to use an engine start/run-up checklist.
AM.I.F.R4	Failure to observe oxygen system safety practices/precautions during servicing.
AM.I.F.R5	Hazards involved in preparing to tow an aircraft.
AM.I.F.R6	Ground operations of aircraft engines with cowlings removed contrary to manufacturer instructions.
AM.I.F.R7	Hazards associated with ground operation of aircraft in the vicinity of other aircraft or ground support equipment.
AM.I.F.R8	Hazards associated with engine starting and operation while troubleshooting or adjustment of engine controls.
AM.I.F.R9	Hazards associated with fueling/defueling ungrounded aircraft or using improper equipment.
AM.I.F.R10	Consequences of improperly connecting external power equipment to an aircraft.
Skills	The applicant demonstrates the ability to:
AM.I.F.S1	Secure an aircraft.
AM.I.F.S2	Prepare an aircraft for towing.
AM.I.F.S3	Follow a checklist to start up and/or shut down an aircraft reciprocating or turbine engine.
AM.I.F.S4	TBD
AM.I.F.S5	Use appropriate hand signals for the movement of aircraft.
AM.I.F.S6	Prepare an aircraft for fueling.
AM.I.F.S7	Inspect an aircraft fuel system for water and Foreign Object Debris (FOD) contamination.
AM.I.F.S8	Identify procedures for extinguishing fires in an engine induction system.

I. General

Subject	<i>F. Ground Operations and Servicing</i>
<i>AM.I.F.S9</i>	Connect external power to an aircraft.
<i>AM.I.F.S10</i>	Identify different grades of aviation fuel.
<i>AM.I.F.S11</i>	Identify procedures for securing a turbine-powered aircraft after engine shutdown.
<i>AM.I.F.S12</i>	Select an approved fuel for an aircraft.
<i>AM.I.F.S13</i>	Perform a foreign object damage control procedure.

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I. General

Subject	G. Cleaning and Corrosion Control
References	FAA-H-8083-30, AC 43.13-1
Objective	To determine that the applicant exhibits satisfactory knowledge, risk management, and skills associated with cleaning, corrosion control, and aircraft finishes.
Knowledge	The applicant demonstrates understanding of:
<i>AM.I.G.K1</i>	Aircraft cleaning procedures.
<i>AM.I.G.K2</i>	Corrosion theory and causation.
<i>AM.I.G.K3</i>	Types and effects of corrosion.
<i>AM.I.G.K4</i>	Corrosion prone areas in aircraft.
<i>AM.I.G.K5</i>	Corrosion preventive maintenance procedures.
<i>AM.I.G.K6</i>	Corrosion identification and inspection.
<i>AM.I.G.K7</i>	Corrosion removal and treatment procedures.
<i>AM.I.G.K8</i>	Corrosion Preventive Compounds (CPC) (e.g., waxy sealants, thin-film dielectrics).
<i>AM.I.G.K9</i>	Selection of optimal CPC and frequency of treatment.
<i>AM.I.G.K10</i>	Use of high-pressure application equipment (e.g., fogging).
<i>AM.I.G.K11</i>	Improper use of cleaners on aluminum or composite materials.
<i>AM.I.G.K12</i>	Dissimilar metals causing accelerated corrosion, and role of protective barriers to mitigate this risk.
<i>AM.I.G.K13</i>	Conversion coatings.
<i>AM.I.G.K14</i>	Materials used for protection of airframe structures.
<i>AM.I.G.K15</i>	Primer materials.
<i>AM.I.G.K16</i>	Topcoat materials.
<i>AM.I.G.K17</i>	Surface preparation for a desired finishing material.
<i>AM.I.G.K18</i>	Effects of ambient conditions on finishing materials.
<i>AM.I.G.K19</i>	Effects of improper surface preparation on finishing materials.
<i>AM.I.G.K20</i>	Regulatory requirements for replacing identification, registration markings, and placards.
<i>AM.I.G.K21</i>	Inspection of aircraft finishes.
<i>AM.I.G.K22</i>	Safety practices/precautions when using finishing materials (e.g., PPE, fire prevention).
<i>AM.I.G.K23</i>	Finishing materials application techniques and practices.
<i>AM.I.G.K24</i>	Control surface balance considerations after refinishing.
Risk Management	The applicant demonstrates the ability to identify, assess, and mitigate risks, encompassing:
<i>AM.I.G.R1</i>	Failure to identify health concerns when using paints, solvents, finishing materials, and processes.
<i>AM.I.G.R2</i>	Improper ventilation.
<i>AM.I.G.R3</i>	Misidentification of materials and processes to be used for cleaning or corrosion treatment on a given part or structure to prevent further damage.
<i>AM.I.G.R4</i>	Failure to follow SDS PPE instructions for products used during removal and treatment of corrosion.
<i>AM.I.G.R5</i>	Failure to follow fire prevention measures when working with flammable chemicals.
<i>AM.I.G.R6</i>	Improper disposal of chemicals and waste materials.
<i>AM.I.G.R7</i>	Inappropriate use of PPE when working with paints and solvents.
<i>AM.I.G.R8</i>	Improper application of or incompatible finishing materials.
Skills	The applicant demonstrates the ability to:
<i>AM.I.G.S1</i>	Perform a portion of an aircraft corrosion inspection.
<i>AM.I.G.S2</i>	Identify, select, and use aircraft corrosion prevention/cleaning materials.
<i>AM.I.G.S3</i>	Apply corrosion prevention/coating materials.

I. General

Subject	G. Cleaning and Corrosion Control
<i>AM.I.G.S4</i>	Inspect finishes and identify defects.
<i>AM.I.G.S5</i>	Inspect an aircraft compartment for corrosion.
<i>AM.I.G.S6</i>	Identify procedures to clean and protect plastics.
<i>AM.I.G.S7</i>	Determine location and/or size requirements for aircraft registration numbers.
<i>AM.I.G.S8</i>	Prepare composite surface for painting.
<i>AM.I.G.S9</i>	Identify finishing materials and appropriate thinners.
<i>AM.I.G.S10</i>	Layout and mask a surface in preparation for painting.
<i>AM.I.G.S11</i>	Prepare metal surface for painting.
<i>AM.I.G.S12</i>	Determine what paint system can be used on a given aircraft.
<i>AM.I.G.S13</i>	Apply etch solution and conversion coating.
<i>AM.I.G.S14</i>	Identify types of protective finishes.

DRAFT

I. General

Subject	H. Mathematics
References	FAA-H-8083-30, AC 43.13-1
Objective	To determine that the applicant exhibits satisfactory knowledge, risk management, and skills associated with mathematics as it relates to aircraft maintenance. <i>Note: The practical portion of the Mathematics subject area may be tested simultaneously when performing calculation(s) in subject areas Basic Electricity and/or Weight and Balance.</i>
Knowledge	The applicant demonstrates understanding of:
AM.I.H.K1	Areas of various geometrical shapes.
AM.I.H.K2	Volumes of various geometrical shapes.
AM.I.H.K3	Definitions/descriptions and use of geometrical terms, including but not limited to any of the following: polygon, pi, diameter, radius, and hypotenuse.
AM.I.H.K4	Ratio problems, including examples of where or how they may be used in relation to aircraft maintenance or system(s) operation.
AM.I.H.K5	Proportion and percentage problems, including examples of where or how they may be used in relation to aircraft maintenance or system(s) operation.
AM.I.H.K6	Algebraic operations, including examples of where or how they may be used in relation to aircraft maintenance.
AM.I.H.K7	Conditions or areas where metric conversion may be necessary.
AM.I.H.K8	Scientific (exponential) notation, decimal notation, fractional notation, binary notation, and conversion between these various forms of numeric notation.
AM.I.H.K9	Rounding numbers.
AM.I.H.K10	Powers and special powers.
AM.I.H.K11	Measurement systems.
AM.I.H.K12	Use of positive and negative integers in mathematical operations.
AM.I.H.K13	Basic mathematic functions (addition, subtraction, multiplication, division)
Risk Management	The applicant demonstrates the ability to identify, assess, and mitigate risks encompassing:
AM.I.H.R1	Failure to use the precedence of algebraic operators when solving an algebraic equation.
AM.I.H.R2	Failure to maintain the correct positive or negative integer in mathematical operations.
AM.I.H.R3	Implications of rounding numbers when precision is needed.
Skills	The applicant demonstrates the ability to:
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.

I. General

Subject	<i>I. Regulations, Maintenance Forms, Records, and Publications</i>
References	FAA-H-8083-30, 14 CFR, AC 43-9C, AC 43.13-1
Objective	To determine that the applicant exhibits satisfactory knowledge, risk management, and skills associated with regulations, publications, and recordkeeping.
Knowledge	The applicant demonstrates understanding of:
<i>AM.I.I.K1</i>	Privileges and limitations of a mechanic certificate.
<i>AM.I.I.K2</i>	Recent experience requirements and how to re-establish once lost.
<i>AM.I.I.K3</i>	Maintenance record entry for approval for return to service after maintenance and/or alterations.
<i>AM.I.I.K4</i>	Maintenance record entry for approval for return to service after inspection.
<i>AM.I.I.K5</i>	The purpose and use of FAA forms (e.g., FAA Forms 337, 8010-4, 8100-2, 8130-3).
<i>AM.I.I.K6</i>	Maintenance terminology as defined in 14 CFR part 1 (e.g., time in service, maintenance, preventive maintenance, major alteration, major repair, minor alteration, minor repair).
<i>AM.I.I.K7</i>	Criteria and responsibility for determining whether a repair or alteration is major or minor.
<i>AM.I.I.K8</i>	The regulatory framework including general subject matter of the relevant parts of 14 CFR relevant to aircraft maintenance and mechanics.
<i>AM.I.I.K9</i>	Agency publications and guidance materials including aircraft specifications, TCDSs, advisory circulars, and Airworthiness Directives (ADs).
<i>AM.I.I.K10</i>	Alternative methods of ADs compliance.
<i>AM.I.I.K11</i>	Manufacturer publications including maintenance manuals, service bulletins, maintenance alerts, and master minimum equipment list.
<i>AM.I.I.K12</i>	FAA databases and resources available including TCDSs and supplemental type certificates.
<i>AM.I.I.K13</i>	Compliance requirements for manufacturer-specified methods, techniques and practices.
<i>AM.I.I.K14</i>	Compliance requirements for manufacturer-specified maintenance and inspection intervals.
<i>AM.I.I.K15</i>	FAA-approved maintenance data including maintenance manuals and other methods, techniques and practices acceptable by the administrator.
<i>AM.I.I.K16</i>	Difference between approved data and acceptable data, and when each is required.
<i>AM.I.I.K17</i>	FAA-approved airworthiness limitations.
<i>AM.I.I.K18</i>	Alert, Caution, and Warning Indications; understand the basic definition of warnings, cautions, and notes that are used in maintenance and operating manuals.
<i>AM.I.I.K19</i>	Inoperative equipment.
<i>AM.I.I.K20</i>	Discrepancy records or placards.
<i>AM.I.I.K21</i>	The use of useable on, or effectivity, codes in parts manuals.
<i>AM.I.I.K22</i>	Determining the serial number effectivity of an item.
<i>AM.I.I.K23</i>	Mechanic address change notification procedures.
Risk Management	The applicant demonstrates the ability to identify, assess, and mitigate risks, encompassing:
<i>AM.I.I.R1</i>	Hazards resulting from incomplete or inaccurate documentation.
<i>AM.I.I.R2</i>	Improper use of SDS.
<i>AM.I.I.R3</i>	Complacency during documentation phase of maintenance procedures.
<i>AM.I.I.R4</i>	Failure to adhere to warnings, cautions, or notes as they are used in maintenance and operational manuals.
<i>AM.I.I.R5</i>	Incorrectly determining if a component is applicable to a given aircraft.
Skills	The applicant demonstrates the ability to:
<i>AM.I.I.S1</i>	Complete an FAA Form 337 for a major repair or alteration.
<i>AM.I.I.S2</i>	Examine an FAA Form 337 for accuracy.
<i>AM.I.I.S3</i>	Determine an aircraft's inspection status by reviewing the aircraft's maintenance records.

I. General

Subject	<i>I. Regulations, Maintenance Forms, Records, and Publications</i>
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/or FAA TCDS for an aircraft or component.
AM.I.I.S7	TBD
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/or 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.
AM.I.I.S19	Complete an aircraft maintenance record entry for return to service.

I. General

Subject	<i>J. Physics for Aviation</i>
References	FAA-H-8083-30, AC 43.13-1
Objective	To determine that the applicant exhibits satisfactory knowledge, risk management, and skills associated with aviation physics.
Knowledge	The applicant demonstrates understanding of:
<i>AM.I.J.K1</i>	Matter and energy.
<i>AM.I.J.K2</i>	Work, power, force, and motion.
<i>AM.I.J.K3</i>	Simple machines and mechanics.
<i>AM.I.J.K4</i>	Heat and pressure.
<i>AM.I.J.K5</i>	Bernoulli's Principle.
<i>AM.I.J.K6</i>	Newton's Law of Motion.
<i>AM.I.J.K7</i>	Gas law and fluid mechanics.
<i>AM.I.J.K8</i>	Theory of flight (aerodynamics).
<i>AM.I.J.K9</i>	Standard atmosphere and factors affecting atmospheric conditions.
<i>AM.I.J.K10</i>	Primary and secondary aircraft flight controls.
<i>AM.I.J.K11</i>	Additional aerodynamic devices including vortex generators, wing fences, and stall strips.
<i>AM.I.J.K12</i>	Relationship between temperature, density, weight, and volume.
<i>AM.I.J.K13</i>	Force, area, or pressure in a specific application.
Risk Management	The applicant demonstrates the ability to identify, assess, and mitigate risks, encompassing:
<i>AM.I.J.R1</i>	Changes in aircraft and engine performance due to density altitude.
<i>AM.I.J.R2</i>	Effect a repair can have on a flight surface.
<i>AM.I.J.R3</i>	Improper use of performance/testing data.
<i>AM.I.J.R4</i>	Hazards associated with using incorrect units (e.g., Celsius vs. Fahrenheit).
Skills	The applicant demonstrates the ability to:
<i>AM.I.J.S1</i>	Convert temperature units (e.g., from Celsius to Fahrenheit).
<i>AM.I.J.S2</i>	Determine density altitude.
<i>AM.I.J.S3</i>	Determine pressure altitude.
<i>AM.I.J.S4</i>	Calculate force, area, or pressure in a specific application.
<i>AM.I.J.S5</i>	Demonstrate the mechanical advantage of various types of levers.
<i>AM.I.J.S6</i>	Design an inclined plane on paper, indicating the mechanical advantage.
<i>AM.I.J.S7</i>	Identify changes in pressure and velocity as a fluid passes through a venturi.
<i>AM.I.J.S8</i>	Calculate horsepower.

I. General

Subject	<i>K. Inspection Concepts and Techniques</i>
References	FAA-H-8083-30, AC 43.13-1
Objective	To determine that the applicant exhibits satisfactory knowledge, risk management, and skills associated with aircraft inspections.
Knowledge	The applicant demonstrates understanding of:
<i>AM.I.K.K1</i>	Measuring tools including calipers, micrometers, and gauges.
<i>AM.I.K.K2</i>	Calibration and tool accuracy requirements.
<i>AM.I.K.K3</i>	Nondestructive Testing (NDT) procedures and methods.
<i>AM.I.K.K4</i>	Aircraft inspection programs (e.g., progressive, 100-hour, annual, and other FAA-approved inspections).
<i>AM.I.K.K5</i>	Aircraft inspection methods and tools for materials, hardware, and processes.
Risk Management	The applicant demonstrates the ability to identify, assess, and mitigate risks, encompassing:
<i>AM.I.K.R1</i>	Failure to demagnetize a component following a magnetic particle inspection.
<i>AM.I.K.R2</i>	Inaccurate use of precision measuring instruments.
<i>AM.I.K.R3</i>	Noncalibrated precision measuring equipment.
<i>AM.I.K.R4</i>	Misuse of inspection techniques.
<i>AM.I.K.R5</i>	Failure to use precautions to prevent damage to aircraft components and/or test equipment when performing tests using an ohmmeter.
Skills	The applicant demonstrates the ability to:
<i>AM.I.K.S1</i>	Use Vernier calipers.
<i>AM.I.K.S2</i>	Use micrometers.
<i>AM.I.K.S3</i>	Use measurement gauges.
<i>AM.I.K.S4</i>	Perform a visual inspection.
<i>AM.I.K.S5</i>	Perform a dye penetrant inspection.
<i>AM.I.K.S6</i>	Inspect aircraft for compliance with an AD.
<i>AM.I.K.S7</i>	Identify NDT methods for composite, surface metal, and subsurface metal defects.
<i>AM.I.K.S8</i>	Perform a tap test on a composite component.

I. General

Subject	L. Human Factors
References	FAA-H-8083-30, AC 43.13-1
Objective	To determine that the applicant exhibits satisfactory knowledge, risk management, and skills associated with human factors.
Knowledge	The applicant demonstrates understanding of:
<i>AM.I.L.K1</i>	Safety culture and organizational factors.
<i>AM.I.L.K2</i>	Human error principles.
<i>AM.I.L.K3</i>	Event investigation.
<i>AM.I.L.K4</i>	Human performance and limitations.
<i>AM.I.L.K5</i>	Physical and social environment.
<i>AM.I.L.K6</i>	Communication/reporting of hazards.
<i>AM.I.L.K7</i>	Teamwork and leadership.
<i>AM.I.L.K8</i>	Professionalism and integrity.
<i>AM.I.L.K9</i>	Shift and task turnover.
<i>AM.I.L.K10</i>	Conditions/preconditions for unsafe acts.
<i>AM.I.L.K11</i>	Types of human errors.
Risk Management	The applicant demonstrates the ability to identify, assess, and mitigate risks, encompassing:
<i>AM.I.L.R1</i>	Failure to report hazards.
<i>AM.I.L.R2</i>	Fatigue management and fitness for duty.
<i>AM.I.L.R3</i>	Non-invasive, condition-monitoring technologies.
Skills	The applicant demonstrates the ability to:
<i>AM.I.L.S1</i>	File a Malfunction or Defect Report.
<i>AM.I.L.S2</i>	Brief a shift turnover for continuity of work.
<i>AM.I.L.S3</i>	Locate information regarding human factors errors.

II. Airframe

Subject	A. Metallic Structures
References	FAA-H-8083-31, AC 43.13-1
Objective	To determine that the applicant exhibits satisfactory knowledge, risk management, and skills associated with aircraft metallic structures.
Knowledge	The applicant demonstrates understanding of:
AM.II.A.K1	Inspection/testing of metal structures.
AM.II.A.K2	Types of sheet metal defects.
AM.II.A.K3	Selection of sheet metal repair materials.
AM.II.A.K4	Layout, forming, and drilling of sheet metal components.
AM.II.A.K5	Selection of rivets, hardware, and fasteners for a sheet metal repair.
AM.II.A.K6	Heat treatment processes for aluminum.
AM.II.A.K7	Rivet layout.
AM.II.A.K8	Rivet removal and installation methods.
AM.II.A.K9	Maintenance safety practices/precautions for sheet metal repairs or fabrications.
AM.II.A.K10	Flame welding gasses.
AM.II.A.K11	Storage/handling of welding gasses.
AM.II.A.K12	Flame welding practices and techniques.
AM.II.A.K13	Inert-gas welding practices and techniques.
AM.II.A.K14	Purpose and types of shielding gasses.
AM.II.A.K15	Types of steel tubing welding repairs.
AM.II.A.K16	Procedures for weld repairs.
AM.II.A.K17	Types of structures and their characteristics.
Risk Management	The applicant demonstrates the ability to identify, assess, and mitigate risks, encompassing:
AM.II.A.R1	Improper selection of repair materials.
AM.II.A.R2	Failure to utilize maintenance safety practices/precautions for sheet metal structures.
AM.II.A.R3	Inappropriate use of PPE when working with sheet metal structures.
AM.II.A.R4	Failure to observe safety procedures for handling, storage, and use of compressed gas
AM.II.A.R5	Failure to observe safety procedures in the use of electric welding equipment.
Skills	The applicant demonstrates the ability to:
AM.II.A.S1	Install and remove solid rivets.
AM.II.A.S2	Install and remove a blind rivet.
AM.II.A.S3	Determine applicability of sheet metal for a repair in a specific application.
AM.II.A.S4	Select and install special purpose fasteners.
AM.II.A.S5	Design a repair using a Manufacturer's Structural Repair Manual.
AM.II.A.S6	Prepare and install a patch to repair an aircraft or component.
AM.II.A.S7	Make a drawing of a repair including the number of rivets and size of sheet metal required.
AM.II.A.S8	Remove a repair that was installed with rivets.
AM.II.A.S9	Trim and form a piece of sheet metal to fit a prepared area.
AM.II.A.S10	Fabricate an aluminum part in accordance with a drawing.
AM.II.A.S11	Determine a rivet pattern for a specific repair.
AM.II.A.S12	Countersink rivet holes in sheet metal.
AM.II.A.S13	Perform a repair on a damaged aluminum sheet.

II. Airframe

Subject	A. Metallic Structures
AM.II.A.S14	Determine extent of damage and decide if metallic structure is repairable.

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II. Airframe

Subject	B. Non-Metallic Structures
References	FAA-H-8083-31, AC 43-13.1
Objective	To determine that the applicant exhibits satisfactory knowledge, risk management, and skills associated with aircraft non-metallic structures.
Knowledge	The applicant demonstrates understanding of:
AM.II.B.K1	Wood structures, inspection techniques, tools, and practices for wood structures.
AM.II.B.K2	Effects of moisture/humidity on wood and fabric coverings.
AM.II.B.K3	Types and/or general characteristics of wood used in aircraft structures.
AM.II.B.K4	Permissible substitutes and/or other materials used in the construction and repair of wood structures.
AM.II.B.K5	Acceptable and unacceptable wood defects.
AM.II.B.K6	Wood repair techniques and practices.
AM.II.B.K7	Factors used in determining the proper type covering material.
AM.II.B.K8	Types of approved aircraft covering material.
AM.II.B.K9	Seams commonly used with aircraft covering.
AM.II.B.K10	Covering textile terms.
AM.II.B.K11	Structure surface preparation.
AM.II.B.K12	Covering methods commonly used.
AM.II.B.K13	Covering means of attachment.
AM.II.B.K14	Areas on aircraft covering most susceptible to deterioration.
AM.II.B.K15	Aircraft covering preservation/restoration.
AM.II.B.K16	Inspection of aircraft covering.
AM.II.B.K17	Covering repair techniques and practices.
AM.II.B.K18	Inspection/testing of composite structures.
AM.II.B.K19	Types of composite structure defects.
AM.II.B.K20	Composite structure fiber, core, and/or matrix materials.
AM.II.B.K21	Composite materials storage practices and shelf life.
AM.II.B.K22	Composite repair methods, techniques, fasteners, and practices.
AM.II.B.K23	Thermoplastic material inspection/types of defects.
AM.II.B.K24	Thermoplastic material storage and handling.
AM.II.B.K25	Thermoplastic material installation procedures.
AM.II.B.K26	Care and maintenance of windows.
AM.II.B.K27	Window temporary and/or permanent repairs.
AM.II.B.K28	Maintenance safety practices/precautions for composite materials/structures, and/or windows.
AM.II.B.K29	Inspecting restraints and upholstery.
Risk Management	The applicant demonstrates the ability to identify, assess, and mitigate risks, encompassing:
AM.II.B.R1	Using the wrong type of glue (adhesive) or fasteners for aircraft structure.
AM.II.B.R2	Improper composite structure repairs.
AM.II.B.R3	Exposure to materials used in composite repair.
AM.II.B.R4	Improper storage of composite materials.
AM.II.B.R5	Incorrect measuring and mixing of materials associated with composite construction.
AM.II.B.R6	Use of materials that are not part of an approved repair system.
AM.II.B.R7	Hazards associated with using materials beyond their shelf-life.

II. Airframe

Skills	The applicant demonstrates the ability to:
AM.II.B.S1	Identify appropriate fasteners on composite structures.
AM.II.B.S2	Inspect and repair fiberglass.
AM.II.B.S3	Inspect composite, plastic, or glass-laminated structures.
AM.II.B.S4	Clean and inspect acrylic type windshields.
AM.II.B.S5	Locate and explain procedures for a temporary repair to a side window.
AM.II.B.S6	TBD
AM.II.B.S7	Prepare composite surface for painting.
AM.II.B.S8	Perform a tap test on composite material.
AM.II.B.S9	Locate and explain repair standard dimensions.
AM.II.B.S10	Locate and explain repair procedures for elongated bolt holes.
AM.II.B.S11	Determine extent of damage and decide if nonmetallic structure is repairable.
AM.II.B.S12	Perform lay up for a repair to a composite panel, including preparation for vacuum bagging, using a Manufacturer's Repair Manual.
AM.II.B.S13	Tie a modified seine knot.

II. Airframe

Subject	C. Flight Controls
References	FAA-H-8083-31, AC 43.13-1
Objective	To determine that the applicant exhibits satisfactory knowledge, risk management, and skills associated with aircraft assembly and rigging.
Knowledge	The applicant demonstrates understanding of:
<i>AM.II.C.K1</i>	Control cables.
<i>AM.II.C.K2</i>	Control cable maintenance.
<i>AM.II.C.K3</i>	Cable connectors.
<i>AM.II.C.K4</i>	Cable guides.
<i>AM.II.C.K5</i>	Control stops.
<i>AM.II.C.K6</i>	Push pull tubes.
<i>AM.II.C.K7</i>	Torque tubes.
<i>AM.II.C.K8</i>	Bell cranks.
<i>AM.II.C.K9</i>	Flutter and flight control balance.
<i>AM.II.C.K10</i>	Rigging of airplane flight controls.
<i>AM.II.C.K11</i>	Airplane flight controls and/or stabilizer systems.
<i>AM.II.C.K12</i>	Other aerodynamic wing features.
<i>AM.II.C.K13</i>	Secondary and auxiliary control surfaces.
Risk Management	The applicant demonstrates the ability to identify, assess, and mitigate risks, encompassing:
<i>AM.II.C.R1</i>	Misuse of and incorrect interpretation of a cable tension chart.
<i>AM.II.C.R2</i>	Improperly rigging aircraft flight controls.
<i>AM.II.C.R3</i>	Improper selection and misuse of lifting equipment used to move aircraft components into place for assembly.
<i>AM.II.C.R4</i>	Failure to maintain a calibration schedule for cable tension meters and other rigging equipment.
<i>AM.II.C.R5</i>	Incorrect use and misinterpretation of cable tensiometers.
Skills	The applicant demonstrates the ability to:
<i>AM.II.C.S1</i>	Identify fixed-wing aircraft rigging adjustment locations.
<i>AM.II.C.S2</i>	Identify control surfaces that provide movement about an aircraft's axes.
<i>AM.II.C.S3</i>	Inspect a primary and secondary flight control surface.
<i>AM.II.C.S4</i>	Remove and/or reinstall a primary flight control surface.
<i>AM.II.C.S5</i>	Inspect primary control cables.
<i>AM.II.C.S6</i>	Adjust and secure a primary flight control cable.
<i>AM.II.C.S7</i>	Adjust push-pull flight control systems.
<i>AM.II.C.S8</i>	Check the balance of a flight control surface.
<i>AM.II.C.S9</i>	Determine allowable axial play limits for a flight control bearing.
<i>AM.II.C.S10</i>	Inspect a trim tab for freeplay, travel, and operation.
<i>AM.II.C.S11</i>	Balance a control surface.
<i>AM.II.C.S12</i>	Fabricate a primary flight control cable.
<i>AM.II.C.S13</i>	Locate aircraft flight control travel limits.

II. Airframe

Subject	<i>D. Airframe Inspection</i>
References	FAA-H-8083-31, AC 43-13.1
Objective	To determine that the applicant exhibits satisfactory knowledge, risk management, and skills associated with airframe inspections.
Knowledge	The applicant demonstrates understanding of:
<i>AM.II.D.K1</i>	Inspection requirements under 14 CFR Part 91.
<i>AM.II.D.K2</i>	Maintenance recordkeeping requirements under 14 CFR Part 43.
<i>AM.II.D.K3</i>	Requirements for complying with ADs.
<i>AM.II.D.K4</i>	Identification of life limited parts and their replacement interval.
<i>AM.II.D.K5</i>	Special inspections.
<i>AM.II.D.K6</i>	Use of FAA-approved data.
<i>AM.II.D.K7</i>	Compliance with service letters, service bulletins, instructions for continued airworthiness, or ADs.
<i>AM.II.D.K8</i>	CFRs applicable to inspection and airworthiness.
<i>AM.II.D.K9</i>	Corrosion types and identification.
Risk Management	The applicant demonstrates the ability to identify, assess, and mitigate risks, encompassing:
<i>AM.II.D.R1</i>	Misinterpretation of inspection instructions, which can lead to over or under maintenance being performed.
<i>AM.II.D.R2</i>	Limitations of visual inspection and where its use would not be applicable.
<i>AM.II.D.R3</i>	Failure to observe safety considerations when performing radiographic inspections.
<i>AM.II.D.R4</i>	Improper selection and misuse of checklists and other maintenance publications.
<i>AM.II.D.R5</i>	Incorrect maintenance record documentation.
Skills	The applicant demonstrates the ability to:
<i>AM.II.D.S1</i>	Perform an airframe inspection to include a records check.
<i>AM.II.D.S2</i>	Perform a portion of a 100-hour inspection in accordance with part 43.
<i>AM.II.D.S3</i>	Enter results of a 100-hour inspection in a maintenance record.
<i>AM.II.D.S4</i>	Determine compliance with a specific AD.
<i>AM.II.D.S5</i>	Provide a checklist for conducting a 100-hour inspection.
<i>AM.II.D.S6</i>	Determine if any additional inspections are required during a particular 100-hour inspection; i.e., 300-hour filter replacement.
<i>AM.II.D.S7</i>	Inspect seat and seatbelt to include TSO markings.

II. Airframe

Subject	E. Landing Gear Systems
References	FAA-H-8083-31, AC 43.13-1
Objective	To determine that the applicant exhibits satisfactory knowledge, risk management, and skills associated with aircraft landing gear.
Knowledge	The applicant demonstrates understanding of:
AM.II.E.K1	Fixed and retractable landing gear systems.
AM.II.E.K2	Fixed and retractable landing gear components.
AM.II.E.K3	Landing gear strut servicing/lubrication.
AM.II.E.K4	Inspection of bungee and spring steel landing gear systems.
AM.II.E.K5	Steering systems.
AM.II.E.K6	Landing gear position and warning system inspection, check, and servicing.
AM.II.E.K7	Brake assembly servicing and inspection.
AM.II.E.K8	Anti-skid system components and operation.
AM.II.E.K9	Wheel, brake, and tire construction.
AM.II.E.K10	Tire storage, care, and/or servicing.
AM.II.E.K11	Landing gear and/or tire and wheel safety and inspection.
AM.II.E.K12	Brake actuating systems.
AM.II.E.K13	Alternative landing gear systems (e.g., skis, floats).
Risk Management	The applicant demonstrates the ability to identify, assess, and mitigate risks, encompassing:
AM.II.E.R1	Failure to observe landing gear and/or tire and wheel safety practices/precautions.
AM.II.E.R2	Improper use of aircraft jacks.
AM.II.E.R3	Hazards associated with high pressure fluids and gasses.
AM.II.E.R4	Hazards associated with the storage and handling of hydraulic fluids.
AM.II.E.R5	High pressure strut or system disassembly.
AM.II.E.R6	Hazards associated with operation of retractable landing gear systems around personnel.
Skills	The applicant demonstrates the ability to:
AM.II.E.S1	Inspect and service landing gear.
AM.II.E.S2	Inspect, check, and service an anti-skid system.
AM.II.E.S3	Locate and explain procedures for checking operation of an anti-skid warning system.
AM.II.E.S4	Locate and explain troubleshooting procedures for an anti-skid system.
AM.II.E.S5	Jack aircraft.
AM.II.E.S6	Troubleshoot a landing gear retraction check.
AM.II.E.S7	Inspect wheels, brakes, bearings, and tires.
AM.II.E.S8	Remove and replace brake lining(s).
AM.II.E.S9	Service landing gear air/oil shock strut.
AM.II.E.S10	Bleed air from a hydraulic brake system.
AM.II.E.S11	Troubleshoot hydraulic brake systems.
AM.II.E.S12	Remove, inspect, and/or install a wheel brake assembly.
AM.II.E.S13	Inspect a tire for defects.
AM.II.E.S14	Locate tire storage practices.
AM.II.E.S15	Replace air/oil shock strut air valve.
AM.II.E.S16	Troubleshoot an air/oil shock strut.
AM.II.E.S17	Service a nosewheel shimmy damper.
AM.II.E.S18	Inspect nosewheel steering system for proper adjustment.

II. Airframe

Subject	<i>E. Landing Gear Systems</i>
<i>AM.II.E.S19</i>	Locate and explain the process for checking landing gear alignment.
<i>AM.II.E.S20</i>	Replace master brake cylinder packing seals.
<i>AM.II.E.S21</i>	Troubleshoot aircraft steering system.
<i>AM.II.E.S22</i>	Identify landing gear position and warning system components.
<i>AM.II.E.S23</i>	Troubleshoot landing gear position and/or warning systems.
<i>AM.II.E.S24</i>	Inspect and/or repair landing gear position indicating system.
<i>AM.II.E.S25</i>	Adjust the operation of a landing gear warning system.
<i>AM.II.E.S26</i>	Remove, install, and/or adjust a landing gear down-lock switch.
<i>AM.II.E.S27</i>	Inspect a brake for serviceability.
<i>AM.II.E.S28</i>	Troubleshoot nosewheel shimmy.
<i>AM.II.E.S29</i>	Inspect tube landing gear for damage.

II. Airframe

Subject	F. Hydraulic and Pneumatic Systems
References	FAA-H-8083-31, AC 43.13-1
Objective	To determine that the applicant exhibits satisfactory knowledge, risk management, and skills associated with aircraft hydraulic and pneumatic power systems.
Knowledge	The applicant demonstrates understanding of:
AM.II.F.K1	Hydraulic system components and fluids.
AM.II.F.K2	Hydraulic system operation.
AM.II.F.K3	Hydraulic system servicing requirements.
AM.II.F.K4	Hydraulic system inspection, check, servicing, and troubleshooting.
AM.II.F.K5	Pneumatic system types and components.
AM.II.F.K6	Pneumatic system servicing requirements.
AM.II.F.K7	Servicing, function, and/or operation of accumulators.
AM.II.F.K8	Types of hydraulic/pneumatic seals and/or fluid/seal compatibility.
AM.II.F.K9	TBD
AM.II.F.K10	Pressure regulators, restrictors, and valves.
AM.II.F.K11	Filter maintenance procedures.
AM.II.F.K12	Hoses, lines, and fittings.
Risk Management	The applicant demonstrates the ability to identify, assess, and mitigate risks encompassing:
AM.II.F.R1	Incorrectly relieving system pressure prior to system servicing or disassembly.
AM.II.F.R2	Hazards associated with high pressure gasses and fluids.
AM.II.F.R3	Hazards associated with the storage and handling of hydraulic fluids.
AM.II.F.R4	Cross-contamination of hydraulic fluids.
AM.II.F.R5	Incompatibility between hydraulic seals and hydraulic fluids.
Skills	The applicant demonstrates the ability to:
AM.II.F.S1	Identify different types of hydraulic fluids.
AM.II.F.S2	Identify different packing seals.
AM.II.F.S3	Install seals and backup rings in a hydraulic component.
AM.II.F.S4	Remove and install a selector valve.
AM.II.F.S5	Check a pressure regulator and adjust as necessary.
AM.II.F.S6	Remove, clean, inspect, and install a hydraulic system filter.
AM.II.F.S7	Service a hydraulic system accumulator.
AM.II.F.S8	Service a hydraulic system reservoir.
AM.II.F.S9	Remove, install, and/or perform an operational check of a hydraulic pump.
AM.II.F.S10	TBD
AM.II.F.S11	Purge air from a hydraulic system.
AM.II.F.S12	Remove and/or install a system pressure relief valve.
AM.II.F.S13	Inspect a hydraulic or pneumatic system for leaks.
AM.II.F.S14	Troubleshoot a hydraulic or pneumatic system for leaks.
AM.II.F.S15	TBD
AM.II.F.S16	TBD
AM.II.F.S17	TBD
AM.II.F.S18	Locate and explain hydraulic fluid servicing instructions and identify/select fluid for a given aircraft.

II. Airframe

Subject	<i>F. Hydraulic and Pneumatic Systems</i>
<i>AM.II.F.S19</i>	Locate installation procedures for a seal, backup ring, and/or gasket.
<i>AM.II.F.S20</i>	Locate procedures for checking pneumatic/bleed air overheat warning systems.

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II. Airframe

Subject	G. Environmental Systems
References	FAA-H-8083-31, AC 43.13-1
Objective	To determine that the applicant exhibits satisfactory knowledge, risk management, and skills associated with aircraft cabin atmosphere control.
Knowledge	The applicant demonstrates understanding of:
AM.II.G.K1	Pressurization systems.
AM.II.G.K2	Bleed air heating.
AM.II.G.K3	Aircraft instrument cooling.
AM.II.G.K4	Exhaust heat exchanger and/or system component(s) function, operation, and/or inspection procedures.
AM.II.G.K5	Combustion heater and/or system component(s) function, operation, and/or inspection procedures.
AM.II.G.K6	Vapor-cycle system and/or system component(s) operation, servicing, and/or inspection procedures.
AM.II.G.K7	Air-cycle system and/or system component(s) operation and/or inspection procedures.
AM.II.G.K8	Cabin pressurization and/or system component(s) operation and/or inspection procedures.
AM.II.G.K9	Types of oxygen systems and/or oxygen system component(s) operation (e.g., chemical generator, pressure cylinder).
AM.II.G.K10	Oxygen system maintenance and/or inspection procedures.
AM.II.G.K11	Water and waste systems.
Risk Management	The applicant demonstrates the ability to identify, assess, and mitigate risks, encompassing:
AM.II.G.R1	Hazards associated with oxygen system maintenance.
AM.II.G.R2	Failure to observe environmental precautions for recovery of vapor-cycle refrigerant.
AM.II.G.R3	Failure to observe safety precautions when handling, or performing maintenance on, chemical oxygen generating systems.
AM.II.G.R4	Failure to observe safety precautions associated with the storage, handling, and use of compressed gas cylinder and high pressure systems.
AM.II.G.R5	Failure to observe manufacturer's recommended servicing procedures, including refrigerant types.
AM.II.G.R6	Hazards associated with maintenance of combustion heaters.
Skills	The applicant demonstrates the ability to:
AM.II.G.S1	Inspect an oxygen system.
AM.II.G.S2	Purge an oxygen system prior to servicing.
AM.II.G.S3	Service an oxygen system.
AM.II.G.S4	Clean and inspect a pilot emergency oxygen mask and supply hoses.
AM.II.G.S5	Inspect an oxygen system pressure regulator.
AM.II.G.S6	Inspect an oxygen system cylinder for serviceability.
AM.II.G.S7	Inspect a chemical oxygen generator for serviceability and safe handling.
AM.II.G.S8	Locate the procedures to troubleshoot a combustion heater.
AM.II.G.S9	Locate the procedures for servicing a refrigerant (vapor-cycle) system.
AM.II.G.S10	Inspect a combustion heater fuel system for leaks.
AM.II.G.S11	Locate the troubleshooting procedures for an air-cycle system.
AM.II.G.S12	TBD
AM.II.G.S13	Inspect a cabin heater system equipped with an exhaust heat exchanger for cracks.
AM.II.G.S14	Clean and inspect an outflow valve for a pressurization system.

II. Airframe

Subject	<i>G. Environmental Systems</i>
<i>AM.II.G.S15</i>	Locate troubleshooting procedures for a pressurization system.
<i>AM.II.G.S16</i>	Troubleshoot an air-cycle air conditioning system.

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II. Airframe

Subject	H. Aircraft Instrument Systems
References	14 CFR parts 43 and 91, FAA-H-8083-31, AC 43.13-1
Objective	To determine that the applicant exhibits satisfactory knowledge, risk management, and skills associated with aircraft instruments.
Knowledge	The applicant demonstrates understanding of:
AM.II.H.K1	Annunciator indicating systems and the meaning of warning, caution, and advisory lights.
AM.II.H.K2	Magnetic compass inspection and operation.
AM.II.H.K3	Magnetic compass swinging procedures.
AM.II.H.K4	Pressure indicating instruments.
AM.II.H.K5	Temperature indicating instruments.
AM.II.H.K6	Position indication sensors and instruments.
AM.II.H.K7	Gyroscopic instruments.
AM.II.H.K8	Direction indicating instruments.
AM.II.H.K9	Instrument vacuum and pneumatic systems.
AM.II.H.K10	Pitot static system.
AM.II.H.K11	Fuel quantity indicating systems.
AM.II.H.K12	Instrument range markings.
AM.II.H.K13	Electronic displays.
AM.II.H.K14	Electrostatic sensitive devices.
AM.II.H.K15	Built in test equipment.
AM.II.H.K16	Electronic flight instrument system.
AM.II.H.K17	Engine indication and crew alerting system.
AM.II.H.K18	Heads-up guidance system.
AM.II.H.K19	14 CFR parts 43 and/or 91 requirements for static system leak checks.
AM.II.H.K20	Instrument limitations, conditions, and characteristics.
AM.II.H.K21	Transponder/encoder system.
AM.II.H.K22	Angle of attack and stall warning systems.
AM.II.H.K23	Takeoff and landing gear configuration warning systems.
AM.II.H.K24	Aircraft bonding and protection.
Risk Management	The applicant demonstrates the ability to identify, assess, and mitigate risks, encompassing:
AM.II.H.R1	Misuse of pressurized air and/or water during maintenance or cleaning of aircraft instrument systems.
AM.II.H.R2	Inappropriate or no action in response to a reported intermittent warning or caution annunciator light illumination.
AM.II.H.R3	Failure to observe safety precautions when performing maintenance on equipment identified as electrostatic sensitive.
AM.II.H.R4	Mishandling of mechanical gyros or instruments containing mechanical gyros.
AM.II.H.R5	Failure to observe precautions when performing pitot/static systems test to prevent instrument damage.
Skills	The applicant demonstrates the ability to:
AM.II.H.S1	Perform a static system leak test.
AM.II.H.S2	Remove and install an instrument.
AM.II.H.S3	Install range marks on an instrument glass.
AM.II.H.S4	Determine barometric pressure using an altimeter.
AM.II.H.S5	Check for proper range markings on an instrument.

II. Airframe

Subject	H. Aircraft Instrument Systems
<i>AM.II.H.S6</i>	Inspect a magnetic compass.
<i>AM.II.H.S7</i>	Locate the procedures for troubleshooting a vacuum operated instrument system.
<i>AM.II.H.S8</i>	Select proper altimeter for installation on a given aircraft.
<i>AM.II.H.S9</i>	Identify exhaust gas temperature system components.
<i>AM.II.H.S10</i>	Inspect a vacuum system filter for serviceability.
<i>AM.II.H.S11</i>	Adjust gyro/instrument air pressure/vacuum.
<i>AM.II.H.S12</i>	Inspect an aircraft's alternate air (static) source.
<i>AM.II.H.S13</i>	Locate and explain the adjustment procedures for a stall warning system.
<i>AM.II.H.S14</i>	Inspect outside air temperature gauge for condition and operation.

II. Airframe

Subject	I. Communication and Navigation Systems
References	14 CFR part 91, FAA-H-8083-31, AC 43.13-1, AC 43.13-2
Objective	To determine that the applicant exhibits satisfactory knowledge, risk management, and skills associated with aircraft communication and navigation systems.
Knowledge	The applicant demonstrates understanding of:
AM.II.I.K1	Radio operating principles.
AM.II.I.K2	Radio components.
AM.II.I.K3	Antenna and avionics identification, inspection, and mounting requirements.
AM.II.I.K4	Interphone and intercom systems.
AM.II.I.K5	Very High Frequency (VHF), High Frequency (HF), and SATCOM systems.
AM.II.I.K6	Aircraft Communication Addressing and Reporting System (ACARS) theory, components, and operation.
AM.II.I.K7	Emergency Locator Transmitter (ELT).
AM.II.I.K8	Automatic Direction Finder (ADF).
AM.II.I.K9	VHF omnidirectional radio range (VOR) theory, components, and operation.
AM.II.I.K10	Distance Measuring Equipment (DME) theory, components, and operation.
AM.II.I.K11	Instrument Landing System (ILS) theory, components, and operation.
AM.II.I.K12	Global Positioning System (GPS) theory, components, and operation.
AM.II.I.K13	Traffic Collision Avoidance System (TCAS), theory, components, and operation.
AM.II.I.K14	Weather radar.
AM.II.I.K15	Ground Proximity Warning Systems (GPWS) theory, components, and operation.
AM.II.I.K16	Auto-pilot theory, components, and operation.
AM.II.I.K17	Auto-throttle theory, components, and operation.
AM.II.I.K18	Stability augmentation.
AM.II.I.K19	Antennas and antenna inspection requirements.
AM.II.I.K20	Automatic Dependent Surveillance Broadcast (ADS-B) theory, components, and operation.
AM.II.I.K21	Radio Altimeter (RA) theory, components, and operation.
Risk Management	The applicant demonstrates the ability to identify, assess, and mitigate risks, encompassing:
AM.II.I.R1	Failure to use proper ELT testing procedures.
AM.II.I.R2	Failure to use precautions when performing maintenance on high power/high frequency systems (e.g., weather radar and SATCOM).
AM.II.I.R3	Improper wire harness routing and interference consequences.
AM.II.I.R4	Failure to consider safety and interference when mounting antennas.
AM.II.I.R5	Hazards associated with electro-static discharge.
AM.II.I.R6	Hazards associated with working around live electrical systems.
Skills	The applicant demonstrates the ability to:
AM.II.I.S1	TBD
AM.II.I.S2	Locate and explain autopilot inspection procedures.
AM.II.I.S3	List autopilot major components.
AM.II.I.S4	Locate and identify navigation and/or communication antennas.
AM.II.I.S5	Check VHF communications for operation.
AM.II.I.S6	Inspect a coaxial cable installation for security.
AM.II.I.S7	Check an emergency locator transmitter for operation.
AM.II.I.S8	Inspect ELT batteries for expiration date and locate proper testing procedures.

II. Airframe

Subject	<i>I. Communication and Navigation Systems</i>
<i>AM.II.I.S9</i>	Inspect electronic equipment mounting base for security and condition.
<i>AM.II.I.S10</i>	Inspect electronic equipment shock mount bonding jumpers for resistance.
<i>AM.II.I.S11</i>	Inspect static discharge wicks for security and/or resistance.
<i>AM.II.I.S12</i>	Inspect a radio installation for security.
<i>AM.II.I.S13</i>	Locate and explain the installation procedures for antennas including mounting and coaxial connections.
<i>AM.II.I.S14</i>	Make a list of required placards for communication and navigation avionic equipment.

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II. Airframe

Subject	J. Aircraft Fuel Systems
References	FAA-H-8083-31, AC 43.13-1
Objective	To determine that the applicant exhibits satisfactory knowledge, risk management, and skills associated with aircraft fuel.
Knowledge	The applicant demonstrates understanding of:
<i>AM.II.J.K1</i>	Fuel system types.
<i>AM.II.J.K2</i>	Fuel system components including filters and selector valves.
<i>AM.II.J.K3</i>	Aircraft fuel tanks/cells
<i>AM.II.J.K4</i>	Fuel flow.
<i>AM.II.J.K5</i>	Fuel transfer, fueling, and defueling.
<i>AM.II.J.K6</i>	Fuel jettisoning/dump systems.
<i>AM.II.J.K7</i>	Characteristics of fuel types.
<i>AM.II.J.K8</i>	Fuel system maintenance and inspection.
<i>AM.II.J.K9</i>	Fuel quantity indication.
Risk Management	The applicant demonstrates the ability to identify, assess, and mitigate risks, encompassing:
<i>AM.II.J.R1</i>	Hazards associated with fuel system maintenance.
<i>AM.II.J.R2</i>	Fuel system contamination.
<i>AM.II.J.R3</i>	Hazards associated with fuel spills.
<i>AM.II.J.R4</i>	Hazards associated with performing fuel system maintenance requiring fuel tank entry.
<i>AM.II.J.R5</i>	Failure to observe proper safety procedures when defueling aircraft.
Skills	The applicant demonstrates the ability to:
<i>AM.II.J.S1</i>	Inspect, check, troubleshoot, or repair a fuel system.
<i>AM.II.J.S2</i>	Inspect a metal fuel tank.
<i>AM.II.J.S3</i>	Inspect a bladder fuel tank.
<i>AM.II.J.S4</i>	Inspect an integral fuel tank.
<i>AM.II.J.S5</i>	Check manually operated fuel valves for proper operation and/or leaks.
<i>AM.II.J.S6</i>	Troubleshoot a fuel valve problem.
<i>AM.II.J.S7</i>	Drain fuel system sump(s).
<i>AM.II.J.S8</i>	Service a fuel system strainer.
<i>AM.II.J.S9</i>	Inspect a fuel quantity indicating system.
<i>AM.II.J.S10</i>	Locate fuel system operating instructions.
<i>AM.II.J.S11</i>	Locate fuel system inspection procedures.
<i>AM.II.J.S12</i>	Locate fuel system crossfeed procedures.
<i>AM.II.J.S13</i>	Locate fuel system required placards.
<i>AM.II.J.S14</i>	Locate fuel system defueling procedures.
<i>AM.II.J.S15</i>	Troubleshoot fuel pressure warning system.
<i>AM.II.J.S16</i>	Locate troubleshooting procedures for fuel temperature systems.
<i>AM.II.J.S17</i>	Remove and/or install a fuel quantity transmitter.
<i>AM.II.J.S18</i>	Troubleshoot fuel quantity indicating system.
<i>AM.II.J.S19</i>	Troubleshoot aircraft fuel systems.
<i>AM.II.J.S20</i>	Inspect a fuel selector valve.

II. Airframe

Subject	K. Aircraft Electrical Systems
References	FAA-H-8083-31, AC 43.13-1
Objective	To determine that the applicant exhibits satisfactory knowledge, risk management, and skills associated with aircraft electrical systems.
Knowledge	The applicant demonstrates understanding of:
AM.II.K.K1	Generators, DC generation systems, and DC power distribution systems.
AM.II.K.K2	Alternators, AC generation systems, and AC power distribution systems.
AM.II.K.K3	Starter generators.
AM.II.K.K4	Constant Speed Drive (CSD) and Integrated Drive Generator (IDG) systems and components.
AM.II.K.K5	Voltage regulators and over-volt and overcurrent protection.
AM.II.K.K6	Inverter systems.
AM.II.K.K7	Aircraft wiring sizes, types, selection, and installation.
AM.II.K.K8	De-rating factors in switch selection.
AM.II.K.K9	Aircraft wiring shielding.
AM.II.K.K10	Aircraft lightning protection.
AM.II.K.K11	Aircraft bonding and protection.
AM.II.K.K12	Aircraft lighting systems.
AM.II.K.K13	Electrical system troubleshooting.
AM.II.K.K14	Soldering preparation, types of solder, and/or flux usage.
AM.II.K.K15	Aircraft electrical connectors, splices, terminals, and switches.
AM.II.K.K16	Electrical system measurement, adjustment, or testing.
AM.II.K.K17	Aircraft battery troubleshooting and maintenance.
Risk Management	The applicant demonstrates the ability to identify, assess, and mitigate risks, encompassing:
AM.II.K.R1	Failure to use caution when testing/troubleshooting electrical systems or components.
AM.II.K.R2	Hazards associated with connecting or disconnecting external power.
AM.II.K.R3	Hazards associated with performing maintenance on energized circuits/systems.
AM.II.K.R4	Failure to use caution when performing maintenance in areas containing aircraft wiring.
AM.II.K.R5	Improperly routing and securing wires and wire bundles.
AM.II.K.R6	Failure to use the correct size wire in an electrical circuit.
AM.II.K.R7	Hazards created by incorrect selection or installation of wire terminals.
AM.II.K.R8	Hazards associated with soldering.
AM.II.K.R9	Failure to observe safety precautions and practices when soldering.
Skills	The applicant demonstrates the ability to:
AM.II.K.S1	Inspect aircraft wiring to verify installation and routing.
AM.II.K.S2	Perform wire terminating and splicing.
AM.II.K.S3	Assemble an aircraft electrical connector.
AM.II.K.S4	Use a wiring circuit diagram to identify components.
AM.II.K.S5	Solder aircraft wiring.
AM.II.K.S6	Troubleshoot an airframe electrical circuit.
AM.II.K.S7	Install airframe electrical wiring, switches, or protective devices.
AM.II.K.S8	Secure wire bundles.
AM.II.K.S9	Determine an electrical load in a given aircraft system.
AM.II.K.S10	Install bonding jumpers.

II. Airframe

Subject	<i>K. Aircraft Electrical Systems</i>
<i>AM.II.K.S11</i>	Check output voltage of a DC generator.
<i>AM.II.K.S12</i>	Check the resistance of an electrical system component.
<i>AM.II.K.S13</i>	Inspect generator brush serviceability and brush spring tension.
<i>AM.II.K.S14</i>	Inspect and check anti-collision, position, and/or landing lights for proper operation.
<i>AM.II.K.S15</i>	Inspect components in an electrical system.
<i>AM.II.K.S16</i>	Troubleshoot a DC electrical system supplied by an AC electrical system.
<i>AM.II.K.S17</i>	Identify components in an electrical schematic where AC is rectified to a DC voltage.
<i>AM.II.K.S18</i>	Perform a continuity test to verify the condition of a conductor.
<i>AM.II.K.S19</i>	Perform a test on a conductor for a short to ground.
<i>AM.II.K.S20</i>	Perform a test on a conductor for a short to other conductors.
<i>AM.II.K.S21</i>	Troubleshoot an electric fault.

II. Airframe

Subject	L. Ice and Rain Control Systems
References	FAA-H-8083-31, AC 43.13-1
Objective	To determine that the applicant exhibits satisfactory knowledge, risk management, and skills associated with aircraft ice and rain control systems.
Knowledge	The applicant demonstrates understanding of:
AM.II.L.K1	Aircraft icing causes/effects.
AM.II.L.K2	Ice detection systems.
AM.II.L.K3	Aircraft and powerplant anti-ice systems and components.
AM.II.L.K4	De-ice systems and components.
AM.II.L.K5	Wiper blade, chemical, and pneumatic bleed air rain control systems.
AM.II.L.K6	Anti-icing and de-icing system maintenance.
AM.II.L.K7	Environmental conditions.
Risk Management	The applicant demonstrates the ability to identify, assess, and mitigate risks, encompassing:
AM.II.L.R1	Hazards associated with system testing or maintenance.
AM.II.L.R2	Improper storage and handling of deicing fluids.
AM.II.L.R3	Improper selection and/or misuse of appropriate cleaning materials for heated windshields.
Skills	The applicant demonstrates the ability to:
AM.II.L.S1	Inspect and operationally check pitot-static anti-ice system.
AM.II.L.S2	Inspect and/or operationally check deicer boot.
AM.II.L.S3	Clean a pneumatic deicer boot.
AM.II.L.S4	Troubleshoot an electrically-heated pitot system.
AM.II.L.S5	Inspect thermal anti-ice systems.
AM.II.L.S6	Inspect and operationally check an electrically-heated windshield.
AM.II.L.S7	Inspect an electrically-operated windshield wiper system.*
AM.II.L.S8	Replace blades on a windshield wiper system.*
AM.II.L.S9	Inspect a pneumatic rain removal system.*
	* NOTE: Do NOT use this AMT ACS Code until the MTEL is revised.

II. Airframe

Subject	<i>M. Airframe Fire Protection Systems</i>
References	FAA-H-8083-31, AC 43.13-1
Objective	To determine that the applicant exhibits satisfactory knowledge, risk management, and skills associated with aircraft overheating and fire detection, protection, and suppression systems.
Knowledge	The applicant demonstrates understanding of:
<i>AM.II.M.K1</i>	Types of fires and aircraft fire zones.
<i>AM.II.M.K2</i>	Overheat and fire detection and warning systems.
<i>AM.II.M.K3</i>	Overheat and fire detection system maintenance and inspection.
<i>AM.II.M.K4</i>	Smoke and carbon monoxide detection systems.
<i>AM.II.M.K5</i>	Fire extinguishing agents.
<i>AM.II.M.K6</i>	Types of fire extinguishing systems.
<i>AM.II.M.K7</i>	Fire extinguishing system maintenance and inspection requirements.
Risk Management	The applicant demonstrates the ability to identify, assess, and mitigate risks, encompassing:
<i>AM.II.M.R1</i>	Failure to use precautions when performing maintenance on circuits associated with fire bottle squibs.
<i>AM.II.M.R2</i>	Inappropriate use of PPEs when working on or testing fire extinguishing systems.
<i>AM.II.M.R3</i>	Hazards associated with fire extinguishing agents.
Skills	The applicant demonstrates the ability to:
<i>AM.II.M.S1</i>	Troubleshoot an aircraft fire detection or extinguishing system.
<i>AM.II.M.S2</i>	Determine proper container pressure for an installed fire extinguisher system.
<i>AM.II.M.S3</i>	Identify maintenance procedures for fire detection and/or extinguishing system(s) and/or system component(s).
<i>AM.II.M.S4</i>	Inspect a smoke and/or toxic gas detection system.
<i>AM.II.M.S5</i>	Inspect a carbon monoxide detector.
<i>AM.II.M.S6</i>	Locate the procedures for checking a smoke detection system.
<i>AM.II.M.S7</i>	Locate the procedures for inspecting an overheat detection system.
<i>AM.II.M.S8</i>	Inspect fire protection system cylinders and check for hydrostatic test date.
<i>AM.II.M.S9</i>	Inspect fire detection/protection system.
<i>AM.II.M.S10</i>	Perform operational check of fire detection/protection system.
<i>AM.II.M.S11</i>	Inspect fire extinguishing agent bottle discharge cartridge.
<i>AM.II.M.S12</i>	Inspect a continuous-loop type fire detection system.

II. Airframe

Subject	<i>N. Rotorcraft Fundamentals</i>
References	FAA-H-8083-31, AC 43.13-1
Objective	To determine that the applicant exhibits satisfactory knowledge, risk management, and skills associated with rotorcraft systems.
Knowledge	The applicant demonstrates understanding of:
<i>AM.II.N.K1</i>	Rotorcraft aerodynamics.
<i>AM.II.N.K2</i>	Flight controls.
<i>AM.II.N.K3</i>	Transmissions.
<i>AM.II.N.K4</i>	Rigging requirements for rotary wing aircraft.
<i>AM.II.N.K5</i>	Design, type and operation of rotor systems.
<i>AM.II.N.K6</i>	Helicopter skid shoe and tube inspection.
<i>AM.II.N.K7</i>	Rotor blade functions and construction.
<i>AM.II.N.K8</i>	Rotor vibrations, track, and balance.
<i>AM.II.N.K9</i>	Drive system vibrations and inspection.
Risk Management	The applicant demonstrates the ability to identify, assess, and mitigate risks, encompassing:
<i>AM.II.N.R1</i>	Dangers of working around helicopter blades during ground operations.
<i>AM.II.N.R2</i>	Hazards associated with ground-handling procedures.
<i>AM.II.N.R3</i>	Improper procedures during ground operations and functional tests.
<i>AM.II.N.R4</i>	Improper maintenance and inspection of rotorcraft systems and components.
Skills	The applicant demonstrates the ability to:
<i>AM.II.N.S1</i>	Locate components of a helicopter rotor system.
<i>AM.II.N.S2</i>	Locate helicopter rotor blade track and balance procedures.
<i>AM.II.N.S3</i>	Locate and explain procedures needed to rig helicopter controls.
<i>AM.II.N.S4</i>	Locate and explain procedures to track and balance a rotor system.

III. Powerplant

Subject	A. Reciprocating Engines
References	14 CFR part 43, FAA-H-8083-32, AC 43.13-1
Objective	To determine that the applicant exhibits satisfactory knowledge, risk management, and skills associated with aircraft reciprocating engines.
Knowledge	The applicant demonstrates understanding of:
AM.III.A.K1	Types of reciprocating engines.
AM.III.A.K2	Reciprocating engine operating principles/theory of operation.
AM.III.A.K3	Internal combustion engine operating principles/theory of operation.
AM.III.A.K4	Horizontally-opposed engine construction and internal components.
AM.III.A.K5	Radial engine construction and internal components.
AM.III.A.K6	Storage and preservation.
AM.III.A.K7	Reciprocating engine performance (e.g., PLANK, SFC).
AM.III.A.K8	Reciprocating engine maintenance and inspection.
AM.III.A.K9	Reciprocating engine ground operations.
AM.III.A.K10	Diesel engine operating principles/theory of operation.
Risk Management	The applicant demonstrates the ability to identify, assess, and mitigate risks, encompassing:
AM.III.A.R1	Hazards associated with performing maintenance which requires moving the propeller.
AM.III.A.R2	Failure to observe safety considerations in preparation and ground operation of a reciprocating engine.
AM.III.A.R3	Failure to take appropriate actions in the event of a reciprocating engine fire.
AM.III.A.R4	Failure to observe manufacturer's procedures during maintenance.
Skills	The applicant demonstrates the ability to:
AM.III.A.S1	Perform a cylinder assembly inspection.
AM.III.A.S2	Operate and troubleshoot reciprocating engine.
AM.III.A.S3	Install piston and/or knuckle/wrist pin(s).
AM.III.A.S4	Identify the parts of a cylinder.
AM.III.A.S5	Identify the parts of a crankshaft.
AM.III.A.S6	Identify and inspect various types of bearings.
AM.III.A.S7	Inspect and/or rig cable and push-pull engine controls.
AM.III.A.S8	Inspect engine mounts.
AM.III.A.S9	Demonstrate engine starting procedures.
AM.III.A.S10	Locate top dead-center position of number one cylinder.
AM.III.A.S11	Perform cylinder compression test.
AM.III.A.S12	Install a cylinder on a horizontally-opposed engine.

III. Powerplant

Subject	B. Turbine Engines
References	14 CFR part 43, FAA-H-8083-32, AC 43.13-1
Objective	To determine that the applicant exhibits satisfactory knowledge, risk management, and skills associated with aircraft turbine engines.
Knowledge	The applicant demonstrates understanding of:
<i>AM.III.B.K1</i>	Turbine engine operating principles/theory of operation.
<i>AM.III.B.K2</i>	Types of turbine engines.
<i>AM.III.B.K3</i>	Turbine engine construction and internal components.
<i>AM.III.B.K4</i>	Turbine engine performance and monitoring.
<i>AM.III.B.K5</i>	Turbine engine troubleshooting, maintenance, and inspection procedures.
<i>AM.III.B.K6</i>	Procedures required after the installation of a turbine engine.
<i>AM.III.B.K7</i>	Causes for turbine engine performance loss.
<i>AM.III.B.K8</i>	Bleed air systems.
<i>AM.III.B.K9</i>	Storage and preservation.
<i>AM.III.B.K10</i>	Auxiliary power unit(s).
<i>AM.III.B.K11</i>	Turbine engines, adjustment, and testing.
Risk Management	The applicant demonstrates the ability to identify, assess, and mitigate risks, encompassing:
<i>AM.III.B.R1</i>	Hazards associated with operation of a turbine engine.
<i>AM.III.B.R2</i>	Failure to use precautions when performing maintenance on a turbine engine.
<i>AM.III.B.R3</i>	Failure to take appropriate actions in the event of a turbine engine fire.
<i>AM.III.B.R4</i>	Failure to use precautions to prevent foreign object damage.
Skills	The applicant demonstrates the ability to:
<i>AM.III.B.S1</i>	Identify different turbine compressors.
<i>AM.III.B.S2</i>	Identify different types of turbine engine blades.
<i>AM.III.B.S3</i>	Identify components of turbine engines.
<i>AM.III.B.S4</i>	Map airflow direction and pressure changes in turbine engines.
<i>AM.III.B.S5</i>	Remove and install a fuel nozzle in a turbine engine.
<i>AM.III.B.S6</i>	Inspect a combustion liner.
<i>AM.III.B.S7</i>	Locate the procedures for the adjustment of a fuel control unit.
<i>AM.III.B.S8</i>	Perform turbine engine inlet guide vane and compressor blade inspection.
<i>AM.III.B.S9</i>	Locate the installation or removal procedures for a turbine engine.
<i>AM.III.B.S10</i>	Locate the procedures for trimming a turbine engine.
<i>AM.III.B.S11</i>	Identify damaged turbine engine blades.
<i>AM.III.B.S12</i>	Identify causes for turbine engine performance loss.
<i>AM.III.B.S13</i>	Inspect the first two stages of a turbine fan or compressor for foreign object damage.

III. Powerplant

Subject	C. Engine Inspection
References	14 CFR part 43, 14 CFR part 91, FAA-H-8083-32, AC 43.13-1
Objective	To determine that the applicant exhibits satisfactory knowledge, risk management, and skills associated with aircraft engine inspections.
Knowledge	The applicant demonstrates understanding of:
<i>AM.III.C.K1</i>	Inspection requirements under 14 CFR part 43 and 14 CFR part 91.
<i>AM.III.C.K2</i>	Identification of life limited parts and their replacement interval.
<i>AM.III.C.K3</i>	Special inspections.
<i>AM.III.C.K4</i>	Use of FAA-approved data.
<i>AM.III.C.K5</i>	Compliance with service letters, service bulletins, instructions for continued airworthiness, ADs, or TCDSs.
<i>AM.III.C.K6</i>	Maintenance recordkeeping requirements under 14 CFR part 43.
<i>AM.III.C.K7</i>	Inspect, check, and service engine internal components.
Risk Management	The applicant demonstrates the ability to identify, assess, and mitigate risks, encompassing:
<i>AM.III.C.R1</i>	Failure to observe safety precautions when performing a compression test on a reciprocating engine.
<i>AM.III.C.R2</i>	Hazards associated with performing maintenance on an operating reciprocating engine.
<i>AM.III.C.R3</i>	Hazards associated with performing maintenance on an operating turbine engine.
Skills	The applicant demonstrates the ability to:
<i>AM.III.C.S1</i>	Perform a compression check on a cylinder.
<i>AM.III.C.S2</i>	Evaluate powerplant for compliance with FAA-approved data.
<i>AM.III.C.S3</i>	Perform a powerplant records inspection.
<i>AM.III.C.S4</i>	Inspect for compliance with applicable ADs.
<i>AM.III.C.S5</i>	Determine engine installation eligibility.
<i>AM.III.C.S6</i>	Determine compliance with engine specifications or TCDS or engine listings.
<i>AM.III.C.S7</i>	Perform a portion of a required inspection on an engine.
<i>AM.III.C.S8</i>	Check engine controls for proper operation and adjustment.
<i>AM.III.C.S9</i>	Inspect an engine for leaks after performing maintenance.
<i>AM.III.C.S10</i>	Inspect an aircraft engine accessory for serviceability.
<i>AM.III.C.S11</i>	Inspect engine records for time or cycles on life-limited parts.
<i>AM.III.C.S12</i>	TBD
<i>AM.III.C.S13</i>	Perform a portion of a 100-hour inspection on an engine in accordance with part 43.

III. Powerplant

Subject	D. Engine Instrument Systems
References	FAA-H-8083-32, AC 43.13-1
Objective	To determine that the applicant exhibits satisfactory knowledge, risk management, and skills associated with aircraft engine instruments.
Knowledge	The applicant demonstrates understanding of:
AM.III.D.K1	Fuel flow.
AM.III.D.K2	Temperature (e.g. exhaust gas, oil, oil cylinder head, turbine inlet).
AM.III.D.K3	Speed indicating systems.
AM.III.D.K4	Pressure (e.g., air, fuel, manifold, oil).
AM.III.D.K5	Position indicating.
AM.III.D.K6	Torque meters.
AM.III.D.K7	Engine pressure ratio (EPR).
AM.III.D.K8	Engine indicating and crew alerting.
AM.III.D.K9	Digital engine control module (e.g., Full Authority Digital Engine Controls (FADEC)).
AM.III.D.K10	Electronic centralized aircraft monitoring.
AM.III.D.K11	Engine instrument range markings and instrument conditions.
AM.III.D.K12	Annunciator indicating systems (e.g., warning, caution, and advisory lights).
Risk Management	The applicant demonstrates the ability to identify, assess, and mitigate risks, encompassing:
AM.III.D.R1	Failure to avoid damage to the instrument or indicating system.
AM.III.D.R2	Improperly-calibrated or erroneous engine instruments.
Skills	The applicant demonstrates the ability to:
AM.III.D.S1	Troubleshoot an engine oil temperature/pressure instrument system.
AM.III.D.S2	Troubleshoot a low fuel pressure indicating system.
AM.III.D.S3	Remove, inspect, and/or install a fuel-flow transmitter.
AM.III.D.S4	Remove, inspect, and/or install fuel flow gauge.
AM.III.D.S5	Identify components of an electric tachometer system.
AM.III.D.S6	Check fuel flow transmitter power supply.
AM.III.D.S7	Inspect tachometer markings for accuracy.
AM.III.D.S8	Perform resistance measurements of thermocouple indication system.
AM.III.D.S9	Remove, inspect, and/or install turbine engine Exhaust Gas Temperature (EGT) component.
AM.III.D.S10	Locate procedures for troubleshooting a turbine EPR system.
AM.III.D.S11	Troubleshoot a tachometer system.
AM.III.D.S12	Replace a cylinder head temperature thermocouple.
AM.III.D.S13	Inspect EGT probes.
AM.III.D.S14	Locate and inspect engine low fuel pressure warning system components.
AM.III.D.S15	Check aircraft engine manifold pressure gauge for proper operation.
AM.III.D.S16	Inspect a manifold pressure system.
AM.III.D.S17	Repair a low oil pressure warning system.
AM.III.D.S18	Troubleshoot an EGT indicating system.
AM.III.D.S19	Inspect an oil temperature probe.

III. Powerplant

Subject	<i>E. Engine Fire Protection Systems</i>
References	FAA-H-8083-32, AC 43.13-1
Objective	To determine that the applicant exhibits satisfactory knowledge, risk management, and skills associated with aircraft engine fire detection and protection systems.
Knowledge	The applicant demonstrates understanding of:
<i>AM.III.E.K1</i>	Types of fires and engine fire zones.
<i>AM.III.E.K2</i>	Fire detection warning system operation.
<i>AM.III.E.K3</i>	Fire detection system maintenance and inspection requirements.
<i>AM.III.E.K4</i>	Fire extinguishing agents, types of systems, and operation.
<i>AM.III.E.K5</i>	Fire extinguishing system maintenance and inspection.
Risk Management	The applicant demonstrates the ability to identify, assess, and mitigate risks, encompassing:
<i>AM.III.E.R1</i>	Failure to observe safety considerations when working with container discharge cartridges.
<i>AM.III.E.R2</i>	Hazards associated with extinguishing agents.
<i>AM.III.E.R3</i>	Failure to observe precautions when performing maintenance on circuits associated with electrically-activated container discharge cartridges (squibs).
Skills	The applicant demonstrates the ability to:
<i>AM.III.E.S1</i>	Troubleshoot and repair an engine fire detection system.
<i>AM.III.E.S2</i>	Identify fire detection sensing units.
<i>AM.III.E.S3</i>	Inspect fire detection continuous loop system.
<i>AM.III.E.S4</i>	Inspect fire detection thermal switch or thermocouple system.
<i>AM.III.E.S5</i>	Locate troubleshooting procedures for a fire detection system.
<i>AM.III.E.S6</i>	Inspect engine fire extinguisher system blowout plugs.
<i>AM.III.E.S7</i>	Inspect a turbine engine fire extinguisher container.
<i>AM.III.E.S8</i>	Inspect fire extinguisher discharge circuit.
<i>AM.III.E.S9</i>	Troubleshoot and repair a fire extinguishing system.
<i>AM.III.E.S10</i>	Inspect a fire extinguisher container discharge cartridge (squib).
<i>AM.III.E.S11</i>	Inspect fire extinguisher container and determine hydrostatic test requirements.
<i>AM.III.E.S12</i>	Inspect flame detectors for operation.
<i>AM.III.E.S13</i>	Check operation of fire warning press-to-test and troubleshoot faults.
<i>AM.III.E.S14</i>	Identify continuous-loop fire detection system components.

III. Powerplant

Subject	F. Engine Electrical Systems
References	FAA-H-8083-30, FAA-H-8083-32, AC 43.13-1
Objective	To determine that the applicant exhibits satisfactory knowledge, risk management, and skills associated with aircraft engine electrical systems.
Knowledge	The applicant demonstrates understanding of:
AM.III.F.K1	Generators.
AM.III.F.K2	Alternators.
AM.III.F.K3	Starter generators.
AM.III.F.K4	Voltage regulators and overvoltage and overcurrent protection.
AM.III.F.K5	DC generation systems.
AM.III.F.K6	AC generation systems.
AM.III.F.K7	The procedure for locating the correct electrical cable/wire size needed to fabricate a cable/wire.
AM.III.F.K8	The purpose and procedure for paralleling a dual-generator electrical system.
AM.III.F.K9	CSD and IDG systems and components.
AM.III.F.K10	Engine electrical wiring, switches, and protective devices.
Risk Management	The applicant demonstrates the ability to identify, assess, and mitigate risks, encompassing:
AM.III.F.R1	Failure to observe proper polarity when performing electrical system maintenance.
AM.III.F.R2	Inappropriate actions in response to a warning or caution annunciator light.
AM.III.F.R3	Failure to observe safety precautions when performing maintenance on energized aircraft circuits/systems.
AM.III.F.R4	Failure to observe safety concerns with routing and security of wiring near flammable fluid lines.
Skills	The applicant demonstrates the ability to:
AM.III.F.S1	Inspect engine electrical wiring, switches, and protective devices.
AM.III.F.S2	Determine suitability of a replacement component by part number.
AM.III.F.S3	Replace an engine-driven generator or alternator.
AM.III.F.S4	Inspect an engine-driven generator or alternator in accordance with manufacturer's instructions.
AM.III.F.S5	Troubleshoot an aircraft electrical generating system.
AM.III.F.S6	Remove and/or install an engine direct-drive electric starter.
AM.III.F.S7	Troubleshoot a direct-drive electric starter system.
AM.III.F.S8	Inspect an electrical system cable.
AM.III.F.S9	Determine wire size for engine electrical system.
AM.III.F.S10	Repair a broken engine electrical system wire.
AM.III.F.S11	Replace a wire bundle lacing.
AM.III.F.S12	Troubleshoot an electrical system using a schematic or wiring diagram.
AM.III.F.S13	Fabricate a bonding jumper.
AM.III.F.S14	Inspect a turbine engine starter generator.
AM.III.F.S15	Inspect engine electrical connectors.

III. Powerplant

Subject	G. Lubrication Systems
References	FAA-H-8083-32, AC 43.13-1
Objective	To determine that the applicant exhibits satisfactory knowledge, risk management, and skills associated with aircraft lubrication systems.
Knowledge	The applicant demonstrates understanding of:
AM.III.G.K1	Types, grades, and uses of engine oil.
AM.III.G.K2	Lubrication system operation and components.
AM.III.G.K3	Wet-sump system.
AM.III.G.K4	Dry-sump system.
AM.III.G.K5	Chip detectors.
AM.III.G.K6	Lubrication system maintenance, inspection, servicing, and analysis.
AM.III.G.K7	Excessive aircraft engine oil consumption.
Risk Management	The applicant demonstrates the ability to identify, assess, and mitigate risks, encompassing:
AM.III.G.R1	Improper use or mixing of engine oils.
AM.III.G.R2	Failure to follow manufacturer's recommendations regarding the use of engine lubricants.
AM.III.G.R3	Improper handling, storage, and disposal of used lubricating oil.
Skills	The applicant demonstrates the ability to:
AM.III.G.S1	Inspect an oil cooler.
AM.III.G.S2	Determine the correct type of oil for a specific engine.
AM.III.G.S3	Identify turbine engine oil filter bypass indicator.
AM.III.G.S4	Determine approved oils for different climatic temperatures.
AM.III.G.S5	Locate procedures for obtaining oil samples.
AM.III.G.S6	Inspect an oil filter or screen.
AM.III.G.S7	Perform oil pressure adjustment.
AM.III.G.S8	Identify oil system components.
AM.III.G.S9	Replace an oil system component.
AM.III.G.S10	Identify oil system flow.
AM.III.G.S11	Troubleshoot an engine oil pressure malfunction.
AM.III.G.S12	Troubleshoot an engine oil temperature system.
AM.III.G.S13	Identify types of metal found in an oil filter.
AM.III.G.S14	Remove and inspect an engine chip detector.

III. Powerplant

Subject	H. Ignition and Starting Systems
References	FAA-H-8083-32, AC 43.13-1
Objective	To determine that the applicant exhibits satisfactory knowledge, risk management, and skills associated with aircraft ignition and starting systems.
Knowledge	The applicant demonstrates understanding of:
<i>AM.III.H.K1</i>	Ignition system theory.
<i>AM.III.H.K2</i>	Spark plug theory.
<i>AM.III.H.K3</i>	Shower of sparks and impulse coupling.
<i>AM.III.H.K4</i>	Three electrical circuits of a magneto system.
<i>AM.III.H.K5</i>	Solid state ignition systems.
<i>AM.III.H.K6</i>	Digital engine control module (e.g., FADEC).
<i>AM.III.H.K7</i>	Engine starters.
<i>AM.III.H.K8</i>	Magneto system components and operation.
<i>AM.III.H.K9</i>	Turbine engine ignition systems.
Risk Management	The applicant demonstrates the ability to identify, assess, and mitigate risks, encompassing:
<i>AM.III.H.R1</i>	Hazards associated with advanced and retarded ignition timing (piston engine).
<i>AM.III.H.R2</i>	Failure to observe precautions when performing maintenance on engines with capacitor discharge ignition systems.
<i>AM.III.H.R3</i>	Failure to observe safety precautions when working around reciprocating engines with an ungrounded magneto.
Skills	The applicant demonstrates the ability to:
<i>AM.III.H.S1</i>	Set magneto internal timing.
<i>AM.III.H.S2</i>	Time magneto to engine.
<i>AM.III.H.S3</i>	Remove, clean, and install spark plug.
<i>AM.III.H.S4</i>	Troubleshoot and repair an ignition system.
<i>AM.III.H.S5</i>	Inspect an electrical starting system.
<i>AM.III.H.S6</i>	Inspect magneto breaker points.
<i>AM.III.H.S7</i>	Inspect an ignition harness.
<i>AM.III.H.S8</i>	Inspect a magneto impulse coupling.
<i>AM.III.H.S9</i>	Troubleshoot an electrical starting system.
<i>AM.III.H.S10</i>	Troubleshoot ignition switch circuit.
<i>AM.III.H.S11</i>	Inspect and check gap of spark plugs.
<i>AM.III.H.S12</i>	Identify the correct spark plugs used for replacement installation.
<i>AM.III.H.S13</i>	Troubleshoot a turbine or reciprocating engine ignition system.
<i>AM.III.H.S14</i>	Identify the correct igniter plug and replace turbine engine igniter plugs.
<i>AM.III.H.S15</i>	Troubleshoot turbine engine igniters.
<i>AM.III.H.S16</i>	Inspect turbine engine ignition system.
<i>AM.III.H.S17</i>	Inspect igniters.

III. Powerplant

Subject	I. Fuel Metering Systems
References	FAA-H-8083-32, AC 43.13-1
Objective	To determine that the applicant exhibits satisfactory knowledge, risk management, and skills associated with aircraft fuel metering systems.
Knowledge	The applicant demonstrates understanding of:
AM.III.1.K1	Fuel/air ratio and fuel metering, and carburetor theory and operation.
AM.III.1.K2	Float carburetor theory, components, operation, and adjustments.
AM.III.1.K3	Pressure carburetor theory, operation, and adjustments.
AM.III.1.K4	Continuous flow fuel injection theory, components, operation, troubleshooting and adjustment.
AM.III.1.K5	Digital engine control module (e.g., FADEC).
AM.III.1.K6	Hydromechanical fuel control system design and components.
AM.III.1.K7	Fuel nozzles and manifolds design, operation, and maintenance.
AM.III.1.K8	Components, theory, and operation of a turbine engine fuel metering system.
Risk Management	The applicant demonstrates the ability to identify, assess, and mitigate risks, encompassing:
AM.III.1.R1	Failure to consider safety precautions when adjusting a turbine engine fuel control.
AM.III.1.R2	Failure to consider safety precautions when adjusting reciprocating engine fuel control systems.
AM.III.1.R4	Improper handling of fuel metering system components that may contain fuel.
Skills	The applicant demonstrates the ability to:
AM.III.1.S1	Inspect, troubleshoot, and/or repair a continuous flow fuel injection system.
AM.III.1.S2	Remove, inspect, and install a turbine engine fuel nozzle.
AM.III.1.S3	Identify carburetor components.
AM.III.1.S4	Identify fuel and air flow through a float-type carburetor.
AM.III.1.S5	Remove and/or install a carburetor main metering jet.
AM.III.1.S6	Inspect a carburetor fuel inlet screen.
AM.III.1.S7	Adjust a continuous flow fuel injection system.
AM.III.1.S8	Inspect the needle, seat, and float level on a float-type carburetor.
AM.III.1.S9	Remove and/or install a float-type carburetor.
AM.III.1.S10	Adjust carburetor idle speed and/or mixture.
AM.III.1.S11	Locate procedures for a turbine engine Revolutions Per Minute (RPM) overspeed inspection.
AM.III.1.S12	Inspect fuel metering cockpit controls for proper adjustment.
AM.III.1.S13	Locate procedures for adjusting a hydromechanical fuel control unit.
AM.III.1.S14	Locate and explain procedures for removing and/or installing a turbine engine fuel control unit.

Commented [WS(4)]: See 3/3/20 email string: Shelly to follow-up with Rebecca to see if correcting this code affects any O&P question(s).

III. Powerplant

Subject	J. Engine Fuel Systems
References	FAA-H-8083-32, AC 43.13-1
Objective	To determine that the applicant exhibits satisfactory knowledge, risk management, and skills associated with aircraft engine fuel systems.
Knowledge	The applicant demonstrates understanding of:
AM.III.J.K1	Inspection requirements for an engine fuel system.
AM.III.J.K2	Fuel system operation.
AM.III.J.K3	Fuel heaters.
AM.III.J.K4	Fuel lines.
AM.III.J.K5	Fuel pumps.
AM.III.J.K6	Fuel valves.
AM.III.J.K7	Fuel filters.
AM.III.J.K8	Engine fuel drains.
Risk Management	The applicant demonstrates the ability to identify, assess, and mitigate risks encompassing:
AM.III.J.R1	Failure to observe safety considerations during fuel system maintenance.
AM.III.J.R2	Improper handling of engine fuel control units that may contain fuel.
Skills	The applicant demonstrates the ability to:
AM.III.J.S1	Identify components of an engine fuel system.
AM.III.J.S2	Remove and/or install an engine-driven fuel pump.
AM.III.J.S3	Inspect a remotely-operated fuel valve for proper operation.
AM.III.J.S4	Locate and identify fuel selector placards.
AM.III.J.S5	Inspect a main fuel filter assembly for leaks.
AM.III.J.S6	Inspect fuel boost pump.
AM.III.J.S7	Locate and identify a turbine engine fuel heater.
AM.III.J.S8	Inspect fuel pressure warning light function.
AM.III.J.S9	Adjust fuel pump fuel pressure.
AM.III.J.S10	Inspect engine fuel system fluid lines and/or components.
AM.III.J.S11	Troubleshoot abnormal fuel pressure.
AM.III.J.S12	Locate the procedures for troubleshooting a turbine engine fuel heater system.
AM.III.J.S13	Remove, clean, and/or replace an engine fuel filter.
AM.III.J.S14	Troubleshoot engine fuel pressure fluctuation.
AM.III.J.S15	Inspect fuel selector valve.
AM.III.J.S16	Determine correct fuel nozzle spray pattern.

III. Powerplant

Subject	<i>K. Engine Induction Systems</i>
References	FAA-H-8083-32, AC 43.13-1
Objective	To determine that the applicant exhibits satisfactory knowledge, risk management, and skills associated with aircraft induction and engine airflow systems.
Knowledge	The applicant demonstrates understanding of:
<i>AM.III.K.K1</i>	Reciprocating and turbine engine induction system theory, components, and operation.
<i>AM.III.K.K2</i>	Causes and effects of induction system icing.
<i>AM.III.K.K3</i>	Superchargers and controls.
<i>AM.III.K.K4</i>	Turbochargers, intercoolers, and controls.
<i>AM.III.K.K5</i>	Engine anti-ice systems.
<i>AM.III.K.K6</i>	Induction system filtering.
<i>AM.III.K.K7</i>	Carburetor heaters.
Risk Management	The applicant demonstrates the ability to identify, assess, and mitigate risks, encompassing:
<i>AM.III.K.R1</i>	Hazards of performing maintenance on turbochargers.
<i>AM.III.K.R2</i>	Hazards associated with the ground operation of aircraft engines.
<i>AM.III.K.R3</i>	Failure to observe precautions associated with maintenance-related FOD.
Skills	The applicant demonstrates the ability to:
<i>AM.III.K.S1</i>	Inspect a carburetor heat system.
<i>AM.III.K.S2</i>	Inspect an alternate air valve for proper operation.
<i>AM.III.K.S3</i>	Inspect an induction system drain for proper operation.
<i>AM.III.K.S4</i>	Inspect a turbine engine air intake anti-ice system.
<i>AM.III.K.S5</i>	Service an induction air filter.
<i>AM.III.K.S6</i>	Inspect a turbocharger for leaks and security.
<i>AM.III.K.S7</i>	Inspect and service a turbocharger waste gate.
<i>AM.III.K.S8</i>	Inspect an induction system for obstruction.
<i>AM.III.K.S9</i>	Inspect an air intake manifold for leaks.
<i>AM.III.K.S10</i>	Locate a reciprocating engine induction leak.
<i>AM.III.K.S11</i>	Inspect a particle separator.
<i>AM.III.K.S12</i>	Identify components of a turbocharger induction system.
<i>AM.III.K.S13</i>	Identify turbine engine ice and rain protection system components.
<i>AM.III.K.S14</i>	Inspect an air inlet duct for security.

III. Powerplant

Subject	L. Engine Cooling Systems
References	FAA-H-8083-32, AC 43.13-1
Objective	To determine that the applicant exhibits satisfactory knowledge, risk management, and skills associated with aircraft engine cooling systems.
Knowledge	The applicant demonstrates understanding of:
<i>AM.III.L.K1</i>	Air cooling system theory, components, and operation.
<i>AM.III.L.K2</i>	Pressure cowling air flow and control.
<i>AM.III.L.K3</i>	Turbine engine internal cooling.
<i>AM.III.L.K4</i>	Engine baffle and seal installation.
<i>AM.III.L.K5</i>	Liquid cooling system theory, components, and operation.
<i>AM.III.L.K6</i>	Augmenter cooling system.
<i>AM.III.L.K7</i>	Turbine engine insulation blankets and shrouds.
Risk Management	The applicant demonstrates the ability to identify, assess, and mitigate risks, encompassing:
<i>AM.III.L.R1</i>	Hazards of performing maintenance on engine cooling systems.
<i>AM.III.L.R2</i>	Hazards associated with chemicals used in liquid cooling systems.
<i>AM.III.L.R3</i>	Failure to follow manufacturer's instructions during ground operation of aircraft engines.
Skills	The applicant demonstrates the ability to:
<i>AM.III.L.S1</i>	Perform an induction and cooling system inspection.
<i>AM.III.L.S2</i>	Repair cylinder baffle.
<i>AM.III.L.S3</i>	Inspect cylinder baffling.
<i>AM.III.L.S4</i>	Inspect cowl flap system for normal operation.
<i>AM.III.L.S5</i>	Inspect cylinder cooling fins.
<i>AM.III.L.S6</i>	Identify location of turbine engine insulation blankets.
<i>AM.III.L.S7</i>	Identify turbine engine cooling air flow.
<i>AM.III.L.S8</i>	Locate the proper specifications for coolant used in a liquid cooled engine.
<i>AM.III.L.S9</i>	Identify exhaust augmentor cooled engine components.
<i>AM.III.L.S10</i>	Inspect engine cooling rigid and flexible ducting and/or baffle seals.
<i>AM.III.L.S11</i>	Inspect engine exhaust augmentor cooling system.

III. Powerplant

Subject	<i>M. Engine Exhaust and Reverser Systems</i>
References	FAA-H-8083-32, AC 43.13-1
Objective	To determine that the applicant exhibits satisfactory knowledge, risk management, and skills associated with aircraft engine exhaust and reverser systems.
Knowledge	The applicant demonstrates understanding of:
<i>AM.III.M.K1</i>	Reciprocating engine exhaust system theory, components, operation, and inspection.
<i>AM.III.M.K2</i>	Turbine engine exhaust system theory, components, operation, and inspection.
<i>AM.III.M.K3</i>	Noise suppression theory, components, and operation (e.g., mufflers, hush kits, augments tubes).
<i>AM.III.M.K4</i>	Thrust reverser theory, components, and operation.
Risk Management	The applicant demonstrates the ability to identify, assess, and mitigate risks encompassing:
<i>AM.III.M.R1</i>	Improper maintenance and inspection of exhaust system components.
<i>AM.III.M.R2</i>	Hazards associated with the operation of turbine engine reversing systems.
<i>AM.III.M.R3</i>	Hazards associated with the operation of reciprocating engines with exhaust systems leaks.
<i>AM.III.M.R4</i>	Dangers associated with exhaust system failures.
<i>AM.III.M.R5</i>	Hazards associated with the ground operation of aircraft engines.
Skills	The applicant demonstrates the ability to:
<i>AM.III.M.S1</i>	Identify the type of exhaust system on a particular aircraft.
<i>AM.III.M.S2</i>	Inspect a turbine engine exhaust system component.
<i>AM.III.M.S3</i>	Inspect a reciprocating engine exhaust system.
<i>AM.III.M.S4</i>	Inspect exhaust system internal baffles or diffusers.
<i>AM.III.M.S5</i>	Inspect exhaust heat exchanger.
<i>AM.III.M.S6</i>	Locate procedures for testing and/or troubleshooting a turbine thrust reverser system.
<i>AM.III.M.S7</i>	Perform a pressure leak check of a reciprocating engine exhaust system.

III. Powerplant

Subject	N. Propellers
References	FAA-H-8083-32, AC 43.13-1
Objective	To determine that the applicant exhibits satisfactory knowledge, risk management, and skills associated with aircraft propellers.
Knowledge	The applicant demonstrates understanding of:
<i>AM.III.N.K1</i>	Propeller theory and operation.
<i>AM.III.N.K2</i>	Types of propellers and blade design.
<i>AM.III.N.K3</i>	Pitch control and adjustment.
<i>AM.III.N.K4</i>	Constant speed propeller and governor theory and operation.
<i>AM.III.N.K5</i>	Turbine engine propeller reverse/beta range operation.
<i>AM.III.N.K6</i>	Propeller servicing, maintenance, and inspection requirements.
<i>AM.III.N.K7</i>	Procedures for removal and installation of a propeller.
<i>AM.III.N.K8</i>	Propeller TCDS.
<i>AM.III.N.K9</i>	Propeller synchronization systems.
<i>AM.III.N.K10</i>	Propeller ice control systems.
Risk Management	The applicant demonstrates the ability to identify, assess, and mitigate risks, encompassing:
<i>AM.III.N.R1</i>	Hazards associated with ground operation.
<i>AM.III.N.R2</i>	Improper propeller maintenance and inspections.
Skills	The applicant demonstrates the ability to:
<i>AM.III.N.S1</i>	Remove and/or install a propeller.
<i>AM.III.N.S2</i>	Check blade static tracking.
<i>AM.III.N.S3</i>	Inspect a propeller for condition and airworthiness.
<i>AM.III.N.S4</i>	Measure propeller blade angle.
<i>AM.III.N.S5</i>	Repair an aluminum propeller blade.
<i>AM.III.N.S6</i>	Perform propeller lubrication.
<i>AM.III.N.S7</i>	Locate and explain the procedures for balancing a fixed-pitch propeller.
<i>AM.III.N.S8</i>	Adjust a propeller governor.
<i>AM.III.N.S9</i>	Identify propeller range of operation.
<i>AM.III.N.S10</i>	Repair metal propeller leading/trailing edge damage.
<i>AM.III.N.S11</i>	Determine what minor propeller alterations are acceptable using the propeller specifications, TCDS, and/or listings.
<i>AM.III.N.S12</i>	Inspect and/or repair a propeller anti-icing or de-icing system.

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Appendix 1: Knowledge Test Description, Requirements, and Registration

Commented [WS(5): 8/27/18: Editor(s) to ensure applicable language is standardized, in the Appendices, across all A/W and OPS ACS and TS documents (including references to AC 60-28).

Knowledge Test Description

The knowledge test is an important part of the airman certification process. Applicants must pass the knowledge tests before taking the practical test. Federal Aviation Administration (FAA) airman knowledge tests are effective instruments for aviation safety and regulation measurement. However, these tests can only sample the vast amount of knowledge every AMT needs.

Comments may be e-mailed to AFS630Comments@faa.gov.

The knowledge test consists of objective, multiple-choice questions. There is a single correct response for each test question. Each test question is independent of other questions. A correct response to one question does not depend upon, or influence, the correct response to another.

There are three Aviation Maintenance Technician knowledge tests:

Test Code	Test Name	Number of Questions	Age	Allotted Time	Passing Score
AMG	Aviation Maintenance Technician – General	60	N/A	2.0	70
AMA	Aviation Maintenance Technician – Airframe	100	N/A	2.0	70
AMP	Aviation Maintenance Technician – Powerplant	100	N/A	2.0	70

Knowledge Test Blueprint

AMG Knowledge Areas Required by 14 CFR section 65.75 are on the Knowledge Test	Percent of Questions Per Test
Basic Electricity	5 – 15%
Aircraft Drawings	5 – 10%
Weight and Balance	5 – 10%
Fluid Lines and Fittings	5 – 10%
Materials, Hardware, and Processes	5 – 10%
Ground Operation and Servicing	5 – 15%
Cleaning and Corrosion Control	5 – 10%
Mathematics	5 – 10%
Regulations, Publications, and Recordkeeping	5 – 10%
Aviation Physics	5 – 10%
Inspections	5 – 10%
Human Factors	5 – 10%
Total Number of Questions	60

AMA Knowledge Areas Required by 14 CFR section 65.75 are on the Knowledge Test	Percent of Questions Per Test
Metallic Structures	5 – 15%
Non-Metallic Structures	5 – 10%
Aerodynamics, Aircraft Assembly, and Rigging	5 – 10%
Airframe Inspection	5 – 15%
Landing Gear	5 – 10%
Hydraulic and Pneumatic Systems	5 – 10%
Cabin Atmosphere Control	5 – 10%
Aircraft Instrument Systems	5 – 10%
Communication and Navigation	5 – 10%
Aircraft Fuel	5 – 10%
Aircraft Electrical	5 – 10%
Ice and Rain Protection	5 – 10%
Overheat and Fire Protection Systems	5 – 10%
Rotorcraft Fundamentals	5 – 10%
Total Number of Questions	100

AMP Knowledge Areas Required by 14 CFR section 65.75 are on the Knowledge Test	Percent of Questions Per Test
Reciprocating Engines	5 – 15%
Turbine Engines	5 – 10%
Engine Inspection	5 – 10%
Engine Indicating Systems	5 – 10%
Engine Fire Protection Systems	5 – 10%
Engine Electrical	5 – 15%
Lubrication	5 – 10%
Ignition and Starting	5 – 10%
Fuel Metering Systems	5 – 10%
Engine Fuel Systems	5 – 10%
Induction and Engine Airflow	5 – 10%
Engine Cooling Systems	5 – 10%
Engine Exhaust and Reverser Systems	5 – 10%
Propellers	5 – 10%
Total Number of Questions	100

English Language Standard

In accordance with the requirements of 14 CFR part 65.71 and the FAA Aviation English Language Proficiency standard, throughout the application and testing process the applicant must demonstrate the ability to read, write, speak, and understand the English language. English language proficiency is required for effective crew communication and coordination. Normal restatement of questions as would be done for a native English speaker is permitted, and does not constitute grounds for disqualification.

Commented [WS(6): 4/30/18: Per AMT Change Driver Telecon discussion, customize this sentence for AMT ACS.

Knowledge Test Requirements

An airman applicant may present one or more of the following item(s) as authorization to take an AMT test:

- Original FAA Form 8610-2, Airman Certificate and/or Rating Application.
 - NOTE 1: The proctor should verify that applicable blocks are marked (in upper left corner of form). Those not applicable will have a line drawn through them. (Example located in FAA Order 8080.6, Appendix.) If either or both the Airframe and Powerplant boxes are checked on the FAA Form 8610-2, along with the 'Original Issuance' box (and NOT the 'Added Rating' box), this serves as authorization for the Aviation Mechanic General (AMG) test. DO NOT ACCEPT AN "ORIGINAL ISSUANCE" APPLICATION FOR AN AMG TEST ONLY. (If the 'Added Rating' box is marked, this indicates that the AMG test is NOT required.)
 - NOTE 2: The proctor should ensure block V is completed, including the date, inspector's original signature, and FAA Flight Standards District Office (FSDO) identifier. (A sample form is located in FAA Order 8080.6, Appendix.)
 - NOTE 3: The applicant must retain both original 8610-2 forms issued by the FSDO. The proctor must make a copy of the form and attach it to the applicable daily log (refer to FAA Order 8080.6, 'Test Procedures-General' Chapter); or, if the testing center is approved for electronic filing, the proctor must file the form electronically in accordance with (IAW) their Airman Knowledge Testing (AKT) Organization Designation Authorization (ODA) Holder's Procedures Manual.
- Certificate of graduation or completion from an FAA-certificated Aviation Maintenance Technician School (AMTS).
 - NOTE 1: The proctor must ensure the certificate includes the AMTS name and certificate number, graduation date, curriculum from which the applicant graduated, applicant name, and signature of an authorized school official.
 - NOTE 2: The proctor must ensure the applicant is only allowed the test(s) authorized on the certificate.
 - NOTE 3: The proctor must make a legible photocopy of the certificate presented at the time of applicant processing, and attach this copy to the applicable daily log; or, if the testing center is approved for electronic filing, the proctor must file the certificate electronically in accordance with their AKT ODA Holder's Procedures Manual. The proctor must return the original certificate to the applicant.
- Military Certificate of Eligibility.
 - NOTE 1: The proctor must ensure the applicant is only allowed the test(s) authorized on the certificate; and that the test date does not precede the certificate date. (A sample certificate is located in Order 8080.6, Appendix.)
 - NOTE 2: The proctor must make a legible photocopy of the certificate presented at the time of applicant processing, and attach this copy to the applicable daily log; or, if the testing center is approved for electronic filing, the proctor must file the certificate electronically in accordance with their AKT ODA Holder's Procedures Manual. The proctor must return the original certificate to the applicant.

Acceptable form of authorization for AMG (ONLY for applicants attending exempted AMTSs):

- Evidence of authorization to take the general test based on the school having an exemption issued under 14 CFR part 11 to § 65.75(a).

Acceptable forms of retest authorization for ALL tests listed above:

- Original passing AKTR.
- Original expired AKTR.
- Original failed AKTR.
 - NOTE 1: Requires a 30-day waiting period for retesting if the applicant presents a failed AKTR, but no authorized instructor endorsement.
 - NOTE 2: Retests do not require a 30-day waiting period if the applicant presents a signed statement from an airman holding the certificate and rating(s) sought by the applicant. This statement must certify that the airman has given the applicant additional instruction in each of the subjects failed, and that the airman considers the applicant ready for retesting.
 - NOTE 3: An applicant retesting AFTER FAILURE is required to submit the applicable AKTR indicating failure to the testing center prior to retesting.
 - The original failed AKTR must be retained by the proctor and attached to the applicable daily log. If the testing center is approved for electronic filing, the proctor must: initial the AKTR within the embossed seal; file the AKTR in accordance with their AKT ODA Holder's Procedures Manual; verify the original failed AKTR has been successfully captured and stored prior to destruction; and destroy the AKTR.

Knowledge Test Centers

The FAA authorizes hundreds of knowledge testing center locations that offer a full range of airman knowledge tests. For information on authorized testing centers, and to register for a knowledge test, contact one of the providers listed at www.faa.gov.

Knowledge Test Registration

The first step in taking a knowledge test is the registration process. You may either call one of the test providers or testing centers or simply use the walk-in basis. If you choose to register via phone, you will need to select a testing center and schedule a test date. You may register for tests several weeks in advance, and you may cancel your appointment according to the test provider's cancellation policy, if applicable, in order to avoid a cancellation fee.

The next step in taking a knowledge test is providing proper identification. An acceptable identification document includes a recent photograph, date of birth, signature, and actual residential address, if different from the mailing address. This information may be presented in more than one form of identification. Acceptable forms of identification include, but are not limited to, drivers' licenses, government identification cards, passports, alien residency (green) cards, and military identification cards. Information on acceptable forms of identification is available at www.faa.gov/training_testing/testing.

You also need to present authorization to test. Acceptable forms of authorization are:

- FAA Form 8610-2.
- A graduation certificate or certificate of completion to an affiliated testing center as previously explained.
- An original (not photocopy) failed Airman Knowledge Test Report, passing Airman Knowledge Test Report, or expired Airman Knowledge Test Report.

Information on acceptable forms of authorization is available at www.faa.gov/training_testing/testing.

Before you take the actual test, you will have the option to take a sample test. The actual test is time limited; however, you should have sufficient time to complete and review your test.

Appendix 2: Knowledge Test Procedures

Before starting the actual test, the testing center will provide an opportunity to practice navigating through the test. This practice or tutorial session may include sample questions to familiarize the applicant with the look and feel of the software (e.g., selecting an answer, marking a question for later review, monitoring time remaining for the test, and other features of the testing software.)

Acceptable Materials

You may use aids, reference materials, and test materials within the guidelines listed below, if actual test questions or answers are not revealed. All models of aviation oriented calculators may be used, including small electronic calculators that perform only arithmetic functions (add, subtract, multiply, and divide). Simple programmable memories, which allow addition to, subtraction from, or retrieval of one number from the memory, are permissible. Also, simple functions such as square root and percent keys are permissible.

The following guidelines apply:

1. You may use any reference materials provided with the test. In addition, you may use scales, straightedges, protractors, plotters, and electronic or mechanical calculators that are directly related to the test.
2. Manufacturer's permanently inscribed instructions on the front and back of such aids (e.g., formulas, conversions, and weight and balance formulas) are permissible.
3. Testing centers may provide a calculator to you and/or deny use of your personal calculator based on the following limitations:
 - a. Prior to and upon completion of the test while in the presence of the proctor, you must actuate the ON/OFF switch and perform any other function that ensures erasure of any data stored in memory circuits.
 - b. The use of electronic calculators incorporating permanent or continuous type memory circuits without erasure capability is prohibited. The proctor may refuse the use of your calculator when unable to determine the calculator's erasure capability.
 - c. Printouts of data must be surrendered at the completion of the test if the calculator incorporates this design feature.
 - d. The use of magnetic cards, magnetic tapes, modules, computer chips, or any other device upon which prewritten programs or information related to the test can be stored and retrieved is prohibited.
 - e. You are not permitted to use any booklet or manual containing instructions related to use of test aids.
4. Dictionaries are not allowed in the testing area.
5. The proctor makes the final determination relating to test materials and personal possessions you may take into the testing area.

Applicant Misconduct During Testing

To avoid test compromise, airman knowledge testing centers must follow strict security procedures established by the FAA, and described in FAA Order 8080.6 (as amended), Conduct of Airman Knowledge Tests. The FAA has directed testing centers to terminate a test any time a proctor suspects a cheating incident has occurred.

The FAA will investigate; and, if the agency determines that cheating or unauthorized conduct has occurred, any airman certificate or rating you hold may be revoked. You may also be prohibited from applying for or taking any test for a certificate or rating for a period of up to one year.

Testing Procedures for Applicants Requesting Special Accommodations

An applicant with learning or reading disability may request approval from AFS-630 through the local FSDO or International Field Office (IFO) to take an airman knowledge test, using one of the three options listed below, in preferential order:

- Option 1:** The applicant may request up to 1 ½ times the standard time allotted to complete the airman knowledge test.

Commented [WS(7): 2/28/19, Jackie Spanitz: This section differs from what's used in the Operations ACS (ACS-6, -7, -8, -10). Suggest replacing this with the Acceptable Materials used in the other ACS for consistency and alignment with the current AC 60-11.

Option 2: The applicant may use a self-contained, electronic device which pronounces and displays typed-in words (e.g., the Franklin Speaking Wordmaster®) to facilitate the testing process. The applicant must provide his or her own device, with approval of the device to be determined by the proctor.

Note: *The device should consist of an electronic thesaurus that audibly pronounces typed-in words and presents them on a display screen. The device should also have a built-in headphone jack, for private listening, in order to avoid disturbing others during testing.*

Option 3: The applicant may request the proctor's assistance in reading specific words or terms from the test questions and/or supplement book. To prevent compromising the testing process, the proctor must be an individual with no aviation background or expertise; and must provide reading assistance only (i.e., no explanation of words or terms). When an applicant requests this option, the FSDO or IFO representative must contact AFS-630 for assistance in selecting the test site and assisting proctor.

Note: *Applicants desiring to test using procedures other than those described in the preceding options must first seek permission from AFS-630.*

Before approving any option, the FSDO or IFO representative must advise the applicant of the regulatory certification requirement to be able to read, write, speak, and understand the English language.

Note: *The device should consist of an electronic thesaurus that audibly pronounces typed-in words and presents them on a display screen. The device should also have a built-in headphone jack, for private listening, in order to avoid disturbing others during testing.*

Appendix 3: Airman Knowledge Test Report

Immediately upon completion of the knowledge test, the applicant receives a printed Airman Knowledge Test Report (AKTR) documenting the score ~~with the testing center's raised, embossed seal~~. The applicant must retain the original AKTR. When taking the practical test, the applicant must present the original Airman Knowledge Test Report to the evaluator, who is required to assess the noted areas of deficiency during the oral portion of the practical test.

An AKTR expires 24 calendar months after the month the applicant completes the knowledge test. If the AKTR expires before completion of the practical test, the applicant must retake the knowledge test.

To obtain a duplicate AKTR due to loss or destruction of the original, the applicant can send a signed request accompanied by a check or money order for \$12.00 (U.S. funds), payable to the FAA to:

Federal Aviation Administration
Airmen Certification Branch, AFS-760
P.O. Box 25082
Oklahoma City, OK 73125

To obtain a copy of the application form or a list of the information required, please see the [Airmen Certification Branch](#) Web Page.

FAA Knowledge Test Question Coding

Each Subject in the ACS document includes an ACS code. This ACS code **will soon be displayed** on the AKTR to indicate what Subject element was proven deficient on the knowledge test. Instructors can then provide remedial training in the deficient areas; and evaluators can re-test this element during the practical exam.

The ACS coding consists of 4 elements. For example: this code is deciphered as follows:

AM.I.A.K1:

- AM = Applicable ACS (Aviation Mechanic)
- I = Section (General)
- A = Subject (Basic Electricity)
- K1 = Knowledge Element 1 [Electron theory (conventional flow vs. electron flow).]

Knowledge test questions are mapped to the ACS codes, which **will soon replace** the system of "Learning Statement Codes." After this transition occurs, the AKTR will list an ACS code that correlates to a specific Subject element for a given Section and Subject. Remedial study and re-testing will be specific, targeted, and based on specified learning criteria.

Missed Knowledge Test Questions

As part of the oral portion of the Oral and Practical Test, applicants will be retested on the subjects identified by the codes shown on the AKTR.

Appendix 4: The Oral and Practical Test – Eligibility and Prerequisites

Each applicant for a Mechanic certificate must successfully pass an Oral and Practical test. These tests are normally conducted by an FAA Designated Mechanic Examiner (DME). An applicant who is prepared for the Oral and Practical test will contact a DME and make an appointment for the test. A list of DMEs is available at www.faa.gov, or contact your local Flight Standards District Office for more information on DMEs in your area.

Prior to the actual test, the DME will conduct a pre-test interview with the applicant. This pre-test interview will provide the DME and applicant with information needed for the test, such as the date, time, and location of the test, establishing a testing schedule, and obtaining codes from the AKTR. FAA designees are allowed to charge a reasonable fee for their services and this fee should be discussed and agreed upon prior to the scheduled test.

The applicant must bring the following items to the pre-test interview and the O&P Test:

- Two identically prepared FAA Form 8610-2, Airman Certificate and/or Rating Applications with original signatures.
- If testing on the basis of:
 - Graduation from an FAA approved 14 CFR Part 147 Aircraft Maintenance Technician School (AMTS), provide the original graduation certificate(s) for the applicable rating applied for.
 - A Military Certificate of Eligibility, provide the original certificate showing eligibility for the ratings applied for.
 - Practical experience as provided in 14 CFR 65.77, a FAA signature in Block V of FAA Form 8610-2 authorizing the applicant to test.
 - 14 CFR 65.80 for AMTS students who have made satisfactory progress, a signature in Block II of FAA Form 8610-2 from a school official and FAA Inspector authorizing the applicant to test.
- Knowledge test results indicating a passing grade (70% or >) for the appropriate tests based on ratings applied for. Test results must not be expired at the scheduled completion of the O&P test.
- A current government issued photo identification with a signature from the issuing official, such as a passport, U.S. Military ID, Driver's License, etc.

Failure to bring the required documents to the pre-test interview or O&P test may result in the test being delayed or terminated.

In accordance with the requirements of 14 CFR 65.17 and [FAA Advisory Circular \(AC\) 60-28, Aviation English Language Standard \(as revised\)](#), throughout the application and testing process, the applicant must demonstrate the ability to read, write, speak, and understand the English language. All testing instructions and oral questions will be conducted in English. Normal restatement of questions, as would be done for a native English speaker, is permitted, and does not constitute grounds for disqualification.

The oral portion of the Oral and Practical Test will consist of questions to re-test the knowledge proven deficient on the FAA knowledge tests. Applicants should expect to be questioned on the topics associated with the codes displayed on their AKTR.

Commented [WS(8): 8/27/18: Editor(s) to ensure applicable language is standardized, in the Appendices, across all A/W and OPS ACS and TS documents (including references to AC 60-28).

3/13/19 / 3/26/19: A/W SG: Edit the appendices to include O&P changes discussed during the ARAC ACS WG – A/W SG Breakout Meeting (see meeting summary) + 3/26/19 ACTS Meeting + and/or final decisions/outcomes regarding the O&P process and MTG.

Appendix 5: Practical Test Roles, Responsibilities, and Outcomes

Applicant Responsibilities

The applicant is responsible for demonstrating acceptable knowledge of the established standards for knowledge, skill, and risk management elements in all subjects appropriate to the certificate and rating sought. The applicant should use this ACS and its references in preparation to take the oral and practical test.

An applicant is not permitted to know, before testing begins, which selections from each subject area are to be included in his/her test. Therefore, an applicant should be well prepared in all knowledge, risk management, and skill elements included in the ACS.

The oral portion of the test will consist of questions specific to the topics associated with the codes on the AKTR. Applicants will need to demonstrate acceptable knowledge of the subjects missed on the FAA knowledge test. The practical portion of the test will continue with oral questioning, specific to the projects being tested.

~~The practical portion of the subject areas may be tested simultaneously with the oral portion, provided all skill elements are covered. For example, Mathematics may be combined when performing calculation(s) in subject areas such as Basic Electricity or Weight and Balance.~~

Additional information on requirements for conducting a practical test is contained in [FAA Order 8900.2 \(as revised\)](#).

All applicants must demonstrate an approval for return to service standard, where applicable, and demonstrate the ability to locate and apply the required reference materials. In instances where an approval for return to service standard cannot be achieved, the applicant must be able to explain why the return to service standard was not met (e.g., when tolerances are outside of a product's limitations).

AMT applicants meeting the experience requirements of 14 CFR 65.77 are eligible to take the airman knowledge test for the general, airframe, and powerplant knowledge exams without any additional formal training. It is highly recommended that applicants seek guidance from an experienced certificated mechanic, and/or review the references listed in this ACS in those subject areas in which they may not have direct experience. It is the applicants' responsibility to prepare and review the subjects listed in this ACS in order to increase one's ability to obtain a passing score on the exam.

Evaluator Responsibilities

The evaluator must generate a complete test planning sheet to conduct the oral and practical test. The evaluator must include all the questions and projects obtained from the Internet-based [Mechanic Test Generator \(MTG\) Oral and Practical Test Generator](#) at: <https://av-info.faa.gov/DsgReq/Login.aspx>. ~~(See [FAA Order 8900.2, Chapter 6](#), for details.)~~ The ~~Oral and Practical Test Generator~~ [MTG](#) will include oral questions from the knowledge elements of the ACS to retest those topics missed on the FAA ~~K~~ knowledge ~~E~~ exams; these ~~will~~ [should](#) be asked during the oral portion of the test. The ~~Oral and Practical Test Generator~~ [MTG](#) will include questions on the knowledge and risk management elements of the ACS, specific to the selected projects; these ~~will~~ [should](#) be asked, in context, during the practical demonstration portion of the test. The applicant is allowed to use reference material for those oral questions that are given ~~as part of during~~ the practical demonstration portion of the test.

The evaluator must ask the applicant to provide the AKTRs prior to generating the test planning sheet. All deficient knowledge areas, as indicated by the ACS codes on the AKTRs, will be retested during the oral portion of the test. ~~If the applicant scores 100 percent on the knowledge exam, the minimum number of questions will be asked during the oral portion of the test.~~

The evaluator must personally observe all practical projects performed by the applicant. The practical portion of the test will include an ongoing evaluation of knowledge and risk management, while evaluating the skill. The evaluator who conducts the practical test is responsible for determining that the applicant meets acceptable standards of knowledge and skill in the assigned subject areas within the appropriate ACS.

Commented [WS(9)]: 3/13/19 / 3/26/19: A/W SG: Edit the appendices to include O&P changes discussed during the ARAC ACS WG – A/W SG Breakout Meeting (see meeting summary) + 3/26/19 ACTS Meeting + and/or final decisions/outcomes regarding the O&P process and MTG.

Commented [WS(10)]: Refer to 1/30/19 email from Stephanie Williams: "I don't think this is accurate anymore. Since we changed to the test generator the DME's no longer have the ability to pick and choose what they test, so they cannot test mathematics and weight and balance as the test generator will assign all oral questions and practical projects."

Commented [WS(11)]: Refer to 1/30/19 email from Stephanie Williams: "8900-1 FSIMS will have the information on giving the test that used to be in the 8900.2 ... until it is in FSIMS the correct reference is 8900.2 Chapter 6."

Commented [WS(12)]: (See comment above.)

The following terms may be reviewed with the applicant prior to, or during, element assignment:

1. **Inspect**—means to examine by sight and/or touch (with or without inspection enhancing tools/equipment).
2. **Check**—means to verify proper operation.
3. **Troubleshoot**—means to analyze and identify malfunctions.
4. **Service**—means to perform functions that assure continued operation.
5. **Repair**—means to correct a defective condition; and repair of an airframe or powerplant system includes component replacement and adjustment.
6. **Overhaul**—means disassembled, cleaned, inspected, repaired as necessary, and reassembled.

An applicant is not permitted to know, before testing begins, which selections in each subject area are to be included in his/her test. Therefore, an applicant should be well prepared in **all** knowledge, risk, and skill elements included in the ACS.

The practical portion of the subject areas may be tested simultaneously with other subject areas, provided all skill elements are covered. For example, "Mathematics" can be combined when performing calculation(s) in subject areas such as Basic Electricity and Weight and Balance.

Further information and requirements for conducting a practical test is contained in **FAA Order 8900.2 (as revised)**.

The evaluator who conducts the oral and practical test is responsible for determining that the applicant meets the established standards of aeronautical knowledge, risk management, and skill for each subject in the appropriate ACS.

In the integrated ACS framework, the sections contain subjects, which are further broken down into knowledge elements (i.e., K1), risk management elements (i.e., R1), and skill elements (i.e., S1). Knowledge and risk management elements are primarily evaluated during the knowledge testing phase of the airman certification process. The evaluator administering the oral and practical test has the discretion to combine subjects/elements as appropriate to testing scenarios.

Commented [WS(13)]: Refer to 1/30/19 email from Stephanie Williams: "I don't think this is accurate anymore. Since we changed to the test generator the DME's no longer have the ability to pick and choose what they test, so they cannot test mathematics and weight and balance as the test generator will assign all oral questions and practical projects."

Commented [WS(14)]: (See comment above.)

Appendix 6: Safety

General

Safety must be the prime consideration at all times. The evaluator and applicant must be constantly alert while performing maintenance or troubleshooting projects. Should any project require an action that would jeopardize safety, the evaluator will ask the applicant to simulate that portion of the project.

The DME will ensure the applicant follows all safety recommendations/precautions while performing the assigned projects including, but not limited to, the following:

1. Approach to the project; proper information and tools; preparation of the equipment; and observation of safety precautions, such as wearing safety glasses, hearing protection, and any other required Personal Protective Equipment (PPE).
2. Cleaning, preparing, and protecting parts; skill in handling tools; thoroughness and cleanliness.
3. Use of current maintenance and/or overhaul publications and procedures.
4. Application of appropriate rules, risk management, and safety assessments.
5. Attitude toward safety, manufacturer's recommendations, and acceptable industry practices.

The applicant should be aware that any disregard for safety is not tolerated and will result in a failure.

Appendix 7: References

This ACS is based on the following 14 CFR parts, FAA publications, and FAA guidance documents.

Reference	Title
14 CFR part 43	Maintenance, Preventive Maintenance, Rebuilding and Alteration
14 CFR part 45	Identification and Registration Marking
14 CFR part 65	Certification: Airmen Other Than Flight Crewmembers
14 CFR part 91	General Operating and Flight Rules
14 CFR part 147	Aviation Maintenance Technician Schools
FAA-H-8083-1	Weight and Balance Handbook
FAA-H-8083-30	Aviation Maintenance Technician Handbook – General
FAA-H-8083-31	Aviation Maintenance Technician Handbook – Airframe (Volumes 1 and 2)
FAA-H-8083-32	Aviation Maintenance Technician – Powerplant (Volumes 1 and 2)
AC 20-35C	Tiedown Sense
AC 43-9C	Maintenance Records
AC 43.13-1	Acceptable Methods, Techniques and Practices Aircraft Inspection & Repair
AC 43.13-2	Acceptable Methods, Techniques and Practical Aircraft Alterations
AC 43-204	Visual Inspection for Aircraft
AC 45-2	Identification and Registration Marking
AC 60-11	Test Aids and Materials that May be Used by Airman Knowledge Testing Applicants
AC 60-28	English Language Skill Standards Required by 14 CFR Parts 61, 63, and 65

Note: Users should reference the current edition of the reference documents listed above. The current edition of all FAA publications can be found at www.faa.gov.

Appendix 8: Abbreviations and Acronyms

The following abbreviations and acronyms are used in the ACS.

Abb./Acronym	Definition
14 CFR	Title 14 of the Code of Federal Regulations
AC	Advisory Circular
AC	Alternate Current
ACARS	Aircraft Communication Addressing and Reporting System
ACS	Airman Certification Standards
AD	Airworthiness Directive
ADF	Automatic Direction Finder
ADS-B	Automatic Dependent Surveillance Broadcast
AELP	Aviation English Language Proficiency
AFS	Flight Standards Service
AIS	Audio Integration System
AKT	Airman Knowledge Test
AKTR	Airman Knowledge Test Report
AMA	Airframe
AMG	General
AMP	Powerplant
AMT	Aviation Maintenance Technician
AMTS	Aviation Maintenance Technician School
ASI	Aviation Safety Inspector
ASRS	Aviation Safety Reporting System
ATC	Air Traffic Control
CFR	Code of Federal Regulations
CG	Center of Gravity
CPC	Corrosion Preventive Compounds
CSD	Constant Speed Drive
DC	Direct Current
DME	Designated Mechanic Examiner
DME	Distance Measuring Equipment
EGT	Exhaust Gas Temperature
ELT	Emergency Locator Transmitter
EPR	Engine Pressure Ratio
FAA	Federal Aviation Administration
FADEC	Full Authority Digital Engine Controls
FOD	Foreign Object Debris
FSDO	Flight Standards District Office
GPS	Global Positioning System
GPWS	Ground Proximity Warning Systems

Abb./Acronym	Definition
HF	High Frequency
IDG	Integrated Drive Generator
IFR	Instrument Flight Rules
ILS	Instrument Landing System
INS	Inertial Navigation System
LSC	Learning Statement Code
MAC	Mean Aerodynamic Chord
<u>MTG</u>	<u>Mechanic Test Generator</u>
NDT	Nondestructive Testing
NiCad	Nickle-Cadmium (battery)
NVRAM	Nonvolatile Random Access Memory
ODA	Organization Designation Authorization
RA	Radio Altimeter
RAM	Random Access Memory
ROM	Read Only Memory
RPM	Revolutions Per Minute
SATCOM	Satellite Communications
SDS	Safety Data Sheets
SFC	Specific Fuel Consumption
SMS	Safety Management System
STC	Supplemental Type Certificate
SUPS	Suspected Unapproved Parts
TCAS	Traffic Collision Avoidance System
TCDS	Type Certificate Data Sheet
TSO	Technical Standard Order
VHF	Very High Frequency
VOR	Very High Frequency Omnidirectional Radio Range