

COURSE SYLLABUS

CLEARED FOR AVIATION
MAINTENANCE – A&P

PRACTICAL TASK LOG



Cleared For Aviation Maintenance - A&P

Practical Task Log

King Schools, Inc.

3840 Calle Fortunada

San Diego, CA

92123 800-854-1001 (USA)

858-541-2200 (Worldwide)

www.kingschools.com

Cleared for Aviation Maintenance- A&P Practical Task Log
Your Path to Becoming an Aviation Maintenance Technician

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Desired Outcomes for Tasks

*All items are to be graded independently by the instructing technician and customer, then discussed and a final grade assessed.

The desired outcome for all tasks is indicated by the shaded column “Practice”, “Perform”, or “Manage”. The completion standard for each task gives additional information on what should be observed in order to meet the desired outcome.

The following is a detailed description of the standard for each desired outcome.

- **Practice:** At the completion of the practical task, the technician in training will know basic facts and principles about the task; be able to locate information and follow directions and written instructions; and locate methods, procedures, instructions, and reference material. *Interpretation of information is not required, and no skill demonstration is required to fulfill this desired outcome. Instruction and/or assistance from the instructing technician is expected.*
- **Perform:** At the completion of the practical task, the technician in training will know, understand, and apply facts, principles, theories, and concepts to the task. The technician in training will also be able to locate and interpret maintenance data and perform basic operations using the appropriate data, tools, and equipment. *The technician in training should be able to identify areas that he or she can improve on with practice and must have a thorough understanding of what is a return-to-service standard for the task. A high level of skill is not required to fulfill this desired outcome.*
- **Manage:** At the completion of the practical task, the technician in training will know, understand, and apply facts, principles, theories, and concepts and understand how they relate to the total operation and maintenance of aircraft. The technician in training will be able to make independent and accurate airworthiness judgments and perform all skill operations to a return-to-service standard using appropriate data, tools, and equipment. Inspections are performed in accordance with acceptable or approved data. *Instruction and/or assistance from the instructing technician is not needed by the technician in training at this level. A fairly high skill level is required to fulfill this desired outcome.*

Note that the “Total Time Estimate” is an estimate, and each task may be repeated until the desired outcome is reached.

Additionally, note the following maintenance task definitions used throughout the task descriptions:

- **Inspect** means to examine (with or without inspection enhancing tools/equipment).
- **Check** means to verify proper operation.
- **Troubleshoot** means to analyze and identify malfunctions.
- **Service** means to perform functions that assure continued operation.
- **Repair** means to correct a defective condition and repair of an airframe or powerplant system including component replacement and adjustment.
- **Overhaul** means to disassemble, clean, inspect, repair as necessary, and reassemble.

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General Tasks

Phase 1: Mathematics	Practice	Perform	Manage	Total Time Estimate
Lesson 5: Ratios and Percentages				
Compute the torque value when converting from inch-pounds to foot-pounds or from foot-pounds to inch-pounds. <i>Completion Standard: Demonstrates the ability to convert torque values in a given scenario.</i>				0.3
Phase 2: Physics for Aviation	Practice	Perform	Manage	Total Time Estimate
Lesson 1: Physics and Calculations				
Identify changes in pressure and velocity as a fluid passes through a venturi. <i>Completion Standard: Demonstrates an understanding of changing pressure and velocity of a fluid going through a venturi and is able to identify the lowest and highest points of pressure and velocity correctly.</i>				0.2
Phase 3: Weight and Balance	Practice	Perform	Manage	Total Time Estimate
Lesson 2: Weighing an Aircraft				
Research and explain the procedures for weighing an aircraft. <i>Completion Standard: Demonstrates the ability to locate weight and balance information for a specific aircraft and describe weighing procedures in detail.</i>				0.7
Check aircraft weighing scales for calibration. <i>Completion Standard: Demonstrates the ability to calibrate aircraft scales.</i>				0.3
Jacking an aircraft. <i>Completion Standard: Demonstrates the ability to use appropriate data, equipment, and safety precautions to jack an aircraft.</i>				0.5

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Use of scales. <i>Completion Standard: Demonstrates the ability to use scales correctly to weigh an aircraft.</i>				0.3
Lesson 3: Calculating Center of Gravity				
Create a maintenance record for a weight and balance change. <i>Completion Standard: Demonstrates the ability to accurately record new maintenance data.</i>				0.3
Calculate a weight change and complete required records. <i>Completion Standard: Demonstrates the ability to apply weight and balance concepts to calculate a weight and balance change and record the new maintenance data.</i>				0.6
Phase 4: Fundamentals of Electricity and Electronics	Practice	Perform	Manage	Total Time Estimate
Lesson 3: Resistance and Current				
Measure voltage drop across a resistor. <i>Completion Standard: Demonstrates the ability to use appropriate data and tools to measure voltage drop.</i>				0.2
Measure voltage. <i>Completion Standard: Demonstrates the ability to use appropriate data and tools to measure voltage.</i>				0.2
Measure current. <i>Completion Standard: Demonstrates the ability to use appropriate data and tools to measure current.</i>				0.2
Measure resistance. <i>Completion Standard: Demonstrates the ability to use appropriate data and tools to measure resistance.</i>				0.2
Lesson 6: Batteries				
Inspect and service an aircraft battery. <i>Completion Standard: Demonstrates the ability to locate and use approved or acceptable data to perform an inspection of an aircraft battery. Demonstrates the skill to service the battery following the inspection using approved or acceptable data.</i>				1.0
Lesson 7: Troubleshooting and Diagrams				

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Determine or measure for open electrical circuits. <i>Completion Standard: Demonstrates the ability to use appropriate data and tools to measure for an open circuit.</i>				0.2
Troubleshoot a circuit. <i>Completion Standard: Demonstrates an understanding of a given circuit's operation and the ability to perform testing procedures using appropriate data, tools, and equipment.</i>				0.7
Demonstrate how to test for short-circuit and open-circuit conditions. <i>Completion Standard: Demonstrates the ability to use appropriate data and tools to test for a short-circuit and open-circuit and explain the test results.</i>				0.2
Test a switch or relay. <i>Completion Standard: Demonstrates the ability to use appropriate data and tools to test a switch or relay and explain the test results.</i>				0.2
Test a fuse or circuit breaker. <i>Completion Standard: Demonstrates the ability to use appropriate data and tools to test a fuse or circuit breaker and explain the test results.</i>				0.2
Perform circuit continuity test. <i>Completion Standard: Demonstrates the ability to test for continuity using appropriate data and tools and explain the test results.</i>				0.2
Lesson 8: Integrated Circuits				
Read and interpret aircraft electrical circuit diagrams, and symbols, including solid state devices and logic functions. <i>Completion Standard: Demonstrates an understanding of circuit diagrams and symbols allowing for independent decisions to be made concerning the maintenance of a given system.</i>				0.5
Phase 5: Aircraft Drawings	Practice	Perform	Manage	Total Time Estimate
Lesson 2: Working with Drawings				
Draw a sketch of a repair or alteration. <i>Completion Standard: Demonstrates the ability to determine an appropriate repair or alteration for a given scenario and create a sketch using accurate lines, symbols, and dimensions that are commonly used in aircraft drawings/ blueprints.</i>				1.0

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Phase 6: Aircraft Materials, Hardware, and Processes	Practice	Perform	Manage	Total Time Estimate
Lesson 4: Nuts and Bolts				
Determine and properly torque aircraft hardware. <i>Completion Standard: Demonstrates the ability to use appropriate data and tools to torque aircraft hardware.</i>				0.5
Select and install aircraft bolts. <i>Completion Standard: Demonstrates the ability to use appropriate data and tools to install aircraft bolts.</i>				0.5
Lesson 5: Safety Wiring				
Install safety wire on nuts, bolts, and turnbuckles. <i>Completion Standard: Demonstrates the skill of installing safety wire on a variety of hardware to a return-to-service standard.</i>				1.0
Lesson 6: Aircraft Materials and Processes				
Fabricate a cable assembly using a swaged-end fitting. <i>Completion Standard: Demonstrates the skill of fabricating a cable assembly with a swaged-end fitting following approved or accepted procedures.</i>				1.0
Lesson 7: Measuring Devices				
Make precision measurements with an instrument that has a Vernier scale. <i>Completion Standard: Demonstrates the skill of consistently taking accurate measurements with an instrument that has a Vernier scale.</i>				1.0
Check for proper calibration of a micrometer. <i>Completion Standard: Demonstrates the knowledge and skill to check for micrometer calibration.</i>				0.3
Check the concentricity of a shaft. <i>Completion Standard: Demonstrates the knowledge and skill to check the concentricity of a shaft.</i>				0.3
Phase 7: Fluid Lines and Fittings	Practice	Perform	Manage	Total Time Estimate
Lesson 2: Fluid Lines and Fittings				

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<p>Fabricate a rigid line with a flare and a bend.</p> <p><i>Completion Standard: Demonstrates the knowledge and skill to fabricate a rigid line with a flare and a bend using appropriate data, tools, and materials to achieve a return-to-service standard.</i></p>				1.5
<p>Install an aircraft rigid line.</p> <p><i>Completion Standard: Demonstrates the skill to install a rigid line to a return-to-service standard.</i></p>				0.5
<p>Install an aircraft flexible hose.</p> <p><i>Completion Standard: Demonstrates the skill to install a flexible hose to a return-to-service standard.</i></p>				0.5
<p>Perform a rigid line or flexible hose inspection.</p> <p><i>Completion Standard: Demonstrates the ability to locate and use approved or acceptable data to perform an inspection of a rigid line or flexible hose inspection.</i></p>				0.5
<p>Fabricate a flexible hose.</p> <p><i>Completion Standard: Demonstrates the knowledge and skill to fabricate a flexible hose using appropriate data, tools, and materials to achieve a return-to-service standard.</i></p>				1.0
<p>Fabricate a flareless-fitting-tube connection.</p> <p><i>Completion Standard: Demonstrates the knowledge and skill to fabricate a flareless-fitting-tube connection using appropriate data, tools, and materials to achieve a return-to-service standard.</i></p>				1.0
Phase 8: Cleaning and Corrosion Control	Practice	Perform	Manage	Total Time Estimate
Lesson 1: Introduction to Corrosion				
<p>Inspect an aircraft compartment for corrosion.</p> <p><i>Completion Standard: Demonstrates the knowledge of common areas that develop corrosion and the ability to identify different types of corrosion in an aircraft compartment.</i></p>				0.8
<p>Perform a portion of an aircraft corrosion inspection.</p> <p><i>Completion Standard: Demonstrates the knowledge of common areas that develop corrosion and the ability to identify different types of corrosion on an aircraft.</i></p>				0.8
Lesson 2: Resisting Corrosion				

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Apply etch solution and conversion coating. <i>Completion Standard: Demonstrates the knowledge and skill to apply etch solution and conversion coatings using approved or accepted procedures.</i>				1.0
Lesson 3: Processes and Materials Used in Corrosion Control				
Apply corrosion prevention/coating materials. <i>Completion Standard: Demonstrates the skill to select and apply appropriate corrosion prevention/ coating materials.</i>				1.0
Lesson 4: Aircraft Finishing				
Prepare composite surface for painting. <i>Completion Standard: Demonstrates the knowledge and skill to select and use appropriate materials and tools to prepare a composite surface for painting.</i>				1.0
Identify finishing materials and appropriate thinners. <i>Completion Standard: Demonstrates a basic knowledge of acceptable and approved finishing materials and thinners and is able to identify uses for various materials.</i>				0.5
Layout and mask a surface in preparation for painting. <i>Completion Standard: Demonstrates the skill to prepare a surface for painting.</i>				0.8
Prepare a metal surface for painting. <i>Completion Standard: Demonstrates the skill to prepare a metal surface for painting using approved or accepted materials and tools.</i>				1.0
Determine what paint system can be used on a given aircraft. <i>Completion Standard: Demonstrates the knowledge and ability to locate approved or accepted paint systems for a given application.</i>				0.5
Phase 9: Inspection Concepts and Techniques	Practice	Perform	Manage	Total Time Estimate
Lesson 1: Types of Inspections				
Use Vernier calipers. <i>Completion Standard: Demonstrates the skill of consistently taking accurate measurements with a Vernier caliper.</i>				0.5
Use micrometers. <i>Completion Standard: Demonstrates the skill of consistently taking accurate measurements with a micrometer.</i>				0.5

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Use measurement gauges. <i>Completion Standard: Demonstrates the skill of consistently taking accurate measurements using measurement gauges.</i>				0.5
Perform a visual inspection. <i>Completion Standard: Demonstrates the ability to locate and apply approved or accepted maintenance data to perform a visual inspection.</i>				0.5
Perform a dye penetrant inspection. <i>Completion Standard: Demonstrates the ability to perform a dye penetrant inspection using approved or accepted data, tools, and equipment. Applies knowledge of the inspection to give a basic explanation of the results.</i>				1.0
Inspect aircraft for compliance with an AD. <i>Completion Standard: Demonstrates the ability to review an AD and aircraft maintenance records to determine proper documentation of AD compliance. Verifies AD compliance with an aircraft inspection.</i>				1.0
Identify NDT methods for composite, surface metal, and subsurface metal defects. <i>Completion Standard: Demonstrates the ability to identify various NDT methods and their uses.</i>				0.8
Perform a tap test on a composite component. <i>Completion Standard: Demonstrates the skill to perform a tap test on a composite component. Applies knowledge of the tap test to give an explanation of the results.</i>				0.5
Phase 10: Regulations, Maintenance Forms, Records, and Publications	Practice	Perform	Manage	Total Time Estimate
Lesson 1: Federal Aviation Regulations				
Complete a 100-hour inspection aircraft maintenance record entry. <i>Completion Standard: Demonstrates the application of knowledge and skill to complete an inspection record entry.</i>				0.5
Lesson 2: Repairs and Alterations				
Determine whether a given repair or alteration is major or minor. <i>Completion Standard: Demonstrates the understanding and ability to accurately judge whether a repair or alteration is considered major or minor.</i>				0.8

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Determine applicability of approved data for a major repair. <i>Completion Standard: Demonstrates the understanding and ability to determine the applicability of approved data for a given major repair.</i>				0.5
Lesson 3: Maintenance Entries				
Complete an aircraft maintenance record entry for return to service. <i>Completion Standard: Demonstrates the ability to make independent and accurate airworthiness judgements and correctly complete the record entry.</i>				0.5
Compare an equipment list for an aircraft to equipment installed. <i>Completion Standard: Demonstrates the ability to make independent and accurate airworthiness judgements concerning aircraft equipment lists.</i>				1.0
Determine an aircraft's inspection status by reviewing the aircraft's maintenance records. <i>Completion Standard: Demonstrates the ability to determine the inspection status of an aircraft and make accurate airworthiness judgments based on the aircraft maintenance records.</i>				2.0
Complete an aircraft maintenance record entry for the compliance of a reoccurring AD for a specific airframe, aircraft engine, appliance, or propeller. <i>Completion Standard: Demonstrates the ability to make independent and accurate airworthiness judgements and correctly complete the record entry.</i>				0.5
Complete an FAA Form 337 for a major repair or alteration. <i>Completion Standard: Demonstrates the knowledge and ability to thoroughly complete an FAA Form 337 for a given repair or alteration.</i>				1.0
Examine an FAA Form 337 for accuracy. <i>Completion Standard: Demonstrates the ability to assess the accuracy of the contents of an FAA Form 337.</i>				1.0
Lesson 5: Aircraft Instruments				
Determine the conformity of aircraft instrument range markings and placarding. <i>Completion Standard: Demonstrates ability to locate acceptable or approved data as required to make independent and accurate judgements concerning instrument range markings and placarding.</i>				0.5
Lesson 6: Publications and Directives				

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Determine approved replacement parts for installation on a given aircraft. <i>Completion Standard: Demonstrates an understanding of approved replacement parts and how to locate approved parts for a given installation.</i>				0.5
Use a manufacturer's illustrated parts catalog to locate a specific part number and applicability. <i>Completion Standard: Demonstrates ability to locate a specific part number and applicability in a reasonable amount of time.</i>				0.5
Determine applicability of an AD. <i>Completion Standard: Demonstrates the ability to locate acceptable or approved data as required to make independent and accurate judgements concerning the applicability of an AD.</i>				0.5
Lesson 7: Type Certificates				
Determine maximum allowable weight of a specific aircraft. <i>Completion Standard: Demonstrates ability to locate appropriate weight and balance information and independently determine the maximum allowable weight.</i>				0.5
Locate supplemental type certificates applicable to a specific aircraft. <i>Completion Standard: Demonstrates the ability to locate an STC for a specific aircraft independently and in a reasonable amount of time.</i>				0.5
Locate applicable FAA aircraft specifications and FAA TCDS for an aircraft or component. <i>Completion Standard: Demonstrates the ability to independently locate aircraft specifications and TCDS.</i>				0.8
Lesson 8: Technical Standard Order				
Check a Technical Standard Order (TSO) or part manufacturing authorization for the proper markings. <i>Completion Standard: Demonstrates the ability to locate acceptable or approved data as required to check a TSO for proper markings.</i>				0.5
Phase 11: Ground Operations and Servicing	Practice	Perform	Manage	Total Time Estimate
Lesson 1: Piston Engine Starting				

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Identify procedures for extinguishing fires in an engine induction system. <i>Completion Standard: Accurately locates procedures for extinguishing induction system fires in a reasonable amount of time.</i>				0.5
Lesson 2: Turbine Engine Starting				
Locate and explain procedures for securing a turbine-powered aircraft after engine shutdown. <i>Completion Standard: Demonstrates the ability to locate and explain procedures relating to turbine engine securing.</i>				0.5
Follow a checklist to start-up or shut-down an aircraft reciprocating or turbine engine. <i>Completion Standard: Demonstrates the ability to safely follow a checklist for start-up or shut-down procedures.</i>				0.8
Lesson 3: Approaching, Taxiing, and Parking				
Secure an aircraft. <i>Completion Standard: Demonstrates the ability to secure an aircraft referencing appropriate maintenance data and procedures as needed.</i>				0.5
Prepare an aircraft for towing. <i>Completion Standard: Demonstrates the ability to prepare an aircraft for towing referencing appropriate maintenance data and procedures as needed.</i>				0.5
Use appropriate hand signals for the movement of aircraft. <i>Completion Standard: Demonstrates the understanding and use of various hand signals for directing the movement of aircraft.</i>				0.5
Lesson 4: Servicing and Safety Procedures				
Perform a foreign object damage control procedure. <i>Completion Standard: Demonstrates the application of knowledge and ability to perform a FOD control procedure.</i>				0.5
Connect external power to an aircraft. <i>Completion Standard: Demonstrates the ability to connect external power referencing appropriate maintenance data as needed.</i>				0.5
Lesson 5: Fuel and Fuel Systems				
Inspect an aircraft fuel system for water and foreign object debris (FOD) contamination. <i>Completion Standard: Locates appropriate data for inspecting fuel systems and demonstrates an understanding of the inspection results.</i>				0.8

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Select an approved fuel for an aircraft. <i>Completion Standard: Locates appropriate data for a given aircraft and correctly determines its approved fuel grade.</i>				0.5
Prepare an aircraft for fueling. <i>Completion Standard: Demonstrates the ability to prepare an aircraft for fueling referencing appropriate maintenance data and procedures as needed.</i>				0.5
Phase 12: Human Factors	Practice	Perform	Manage	Total Time Estimate
Lesson 1: Human Factors				
File a Malfunction or Defect Report. <i>Completion Standard: Demonstrates a knowledge of scenarios that may require a technician to file a malfunction or defect report and the general procedures for filing these reports.</i>				0.5
Brief a shift turnover for continuity of work. <i>Completion Standard: Demonstrates an understanding of important briefing points for a shift turnover and demonstrates clear communication methods.</i>				0.5

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Airframe Tasks

Phase 13: Metallic Structures	Practice	Perform	Manage	Total Time Estimate
Lesson 1: Aircraft Structural Repairs				
Perform a repair on a damaged aluminum sheet. <i>Completion Standard: Demonstrates application of knowledge and skill to perform a repair to a return-to-service standard using appropriate data, tools, and equipment.</i>				1.5
Determine extent of damage and decide if metallic structure is repairable. <i>Completion Standard: Demonstrates thorough understanding of repairable damage for a given scenario.</i>				1.0
Trim and form a piece of sheet metal to fit a prepared area. <i>Completion Standard: Demonstrates the skill of appropriately trimming and forming sheet metal for a specific application using appropriate data, tools, and equipment.</i>				1.5
Fabricate an aluminum part in accordance with a drawing. <i>Completion Standard: Demonstrates the application of knowledge of part drawings and the skill to independently fabricate an aluminum part.</i>				1.5
Determine a rivet pattern for a specific repair. <i>Completion Standard: Correctly applies knowledge of acceptable rivet patterns for a specific repair.</i>				1.0
Make a drawing of a repair, including the number of rivets and size of sheet metal required. <i>Completion Standard: Demonstrates the application of knowledge and independent judgment to draw an airworthy repair design.</i>				1.5
Design a repair using a manufacturer's structural repair manual. <i>Completion Standard: Demonstrates the application of knowledge and independent judgment to design an airworthy repair using appropriate data.</i>				1.0
Determine applicability of sheet metal for a repair in a specific application. <i>Completion Standard: Demonstrates the application of knowledge and independent judgment to determine the applicability of sheet metal for a repair.</i>				0.8

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Lesson 2: Rivet Selection and Installation				
Countersink rivet holes in sheet metal. <i>Completion Standard: Demonstrates a basic level of skill to countersink rivet holes in sheet metal using appropriate tools and equipment.</i>				1.5
Remove a repair that was installed with rivets. <i>Completion Standard: Independently demonstrates the skill of removing a repair installed with rivets.</i>				1.0
Prepare and install a patch to repair an aircraft or component. <i>Completion Standard: Demonstrates the application of knowledge to prepare a patch repair and the skill required to install the patch to a return-to-service standard using appropriate data, tools, and equipment.</i>				2.5
Select and install special purpose fasteners. <i>Completion Standard: Demonstrates the application of knowledge to select fasteners and the skill required to install special fasteners to a return-to-service standard using appropriate data, tools, and equipment.</i>				1.5
Install and remove solid rivets. <i>Completion Standard: Demonstrates the skill of installing and removing solid rivets to a return-to-service standard using appropriate data, tools, and equipment.</i>				1.5
Install and remove a blind rivet. <i>Completion Standard: Demonstrates the skill of installing and removing blind rivets to a return-to-service standard using appropriate data, tools, and equipment.</i>				1.5
Phase 14: Non-Metallic Structures	Practice	Perform	Manage	Total Time Estimate
Lesson 1: Composites- Bonded Structures				
Determine extent of damage and decide if nonmetallic structure is repairable. <i>Completion Standard: Demonstrates thorough understanding of repairable damage for a given scenario.</i>				1.0

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<p>Perform lay up for a repair to a composite panel, including preparation for vacuum bagging, using a manufacturer's repair manual.</p> <p><i>Completion Standard: Applies understanding of lay up procedures and demonstrates the skill of preparing a repair on a composite panel. Is able to locate appropriate data, tools, and equipment and understands a return-to-service standard for the repair.</i></p>				1.5
<p>Prepare composite surface for painting.</p> <p><i>Completion Standard: Demonstrates skill of preparing a composite surface for painting using appropriate data, tools, and equipment.</i></p>				1.0
<p>Perform a tap test on composite material.</p> <p><i>Completion Standard: Demonstrates skill of performing a tap test using appropriate data, tools, and equipment.</i></p>				0.8
<p>Locate and explain procedures for a temporary repair to a side window.</p> <p><i>Completion Standard: Demonstrates application of knowledge of temporary window repairs and explains the procedures to perform a temporary repair to meet return-to-service standards.</i></p>				1.0
<p>Identify appropriate fasteners on composite structures.</p> <p><i>Completion Standard: Applies knowledge of fastener suitability for composite structures.</i></p>				0.8
<p>Inspect and repair fiberglass.</p> <p><i>Completion Standard: Demonstrates ability to determine the extent of damage and completes a basic fiberglass repair using acceptable data and tools.</i></p>				2.0
<p>Inspect composite, plastic, or glass-laminated structures.</p> <p><i>Completion Standard: Locates and applies approved or acceptable data, tools, and equipment to perform inspection.</i></p>				0.8
<p>Clean and inspect acrylic type windshields.</p> <p><i>Completion Standard: Locates and applies approved or acceptable data, tools, and equipment to clean and inspect acrylic windshields.</i></p>				1.0
Lesson 2: Wooden Structures				
<p>Locate and explain repair standard dimensions.</p> <p><i>Completion Standard: Demonstrates a basic knowledge of repair standard dimensions and is able to locate further data as needed for a specific repair.</i></p>				0.5
<p>Locate and explain repair procedures for elongated bolt holes.</p> <p><i>Completion Standard: Demonstrates a basic knowledge of repair procedures and is able to locate further data as needed for elongated bolt holes.</i></p>				0.5

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Lesson 3: Fabric Covering and Finishing				
Locate and explain the procedures for tying a modified seine knot. <i>Completion Standard: Demonstrates basic knowledge and is able to locate further instructions for tying modified seine knots.</i>				0.5
Phase 15: Flight Controls Assembly and Rigging	Practice	Perform	Manage	Total Time Estimate
Lesson 1: Control Surfaces				
Fabricate a primary flight control cable. <i>Completion Standard: Demonstrates skill of fabricating a primary flight control cable to a return-to-service standard using appropriate data, tools, and equipment.</i>				1.5
Locate aircraft flight control travel limits. <i>Completion Standard: Demonstrates ability to locate and interpret appropriate maintenance data.</i>				0.5
Inspect a primary and secondary flight control surface. <i>Completion Standard: Demonstrates application of knowledge and ability to perform inspection in accordance with acceptable or approved data.</i>				1.0
Remove and reinstall a primary flight control surface. <i>Completion Standard: Demonstrates ability to independently use appropriate data, tools, and equipment to remove and reinstall a primary flight control surface.</i>				2.0
Inspect primary control cables. <i>Completion Standard: Demonstrates application of knowledge and ability to perform inspection in accordance with acceptable or approved data.</i>				1.0
Adjust and secure a primary flight control cable. <i>Completion Standard: Demonstrates skill of adjusting and securing a primary flight control cable to a return-to-service standard using appropriate data, tools, and equipment.</i>				1.5
Adjust push-pull flight control systems. <i>Completion Standard: Demonstrates skill of adjusting push-pull flight control systems to a return-to-service standard using appropriate data, tools, and equipment.</i>				1.5

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Check the balance of a flight control surface. <i>Completion Standard: Demonstrates application of knowledge and ability to check the balance of a flight control surface in accordance with acceptable or approved data.</i>				1.0
Determine allowable axial play limits for a flight control bearing. <i>Completion Standard: Demonstrates correct interpretation of maintenance data to determine limits for a flight control bearing.</i>				1.0
Inspect a trim tab for freeplay, travel, and operation. <i>Completion Standard: Demonstrates application of knowledge and ability to perform inspection in accordance with acceptable or approved data.</i>				1.0
Balance a control surface. <i>Completion Standard: Demonstrates skill of balancing a control surface to a return-to-service standard using appropriate data, tools, and equipment.</i>				1.5
Lesson 2: Aircraft Rigging				
Identify fixed-wing aircraft rigging adjustment locations. <i>Completion Standard: Demonstrates the ability to locate and interpret appropriate data to identify rigging adjustment locations.</i>				0.8
Phase 16: Rotorcraft Fundamentals	Practice	Perform	Manage	Total Time Estimate
Lesson 2: Helicopter Control System				
Locate components of a helicopter rotor system. <i>Completion Standard: Demonstrates basic knowledge of helicopter rotor system components and is able to locate appropriate maintenance data.</i>				0.8
Lesson 3: Helicopter Ground Operations				
Locate helicopter rotor blade track and balance procedures. <i>Completion Standard: Demonstrates basic knowledge of helicopter rotor tracking and balancing procedures and is able to locate and follow appropriate maintenance data with assistance.</i>				0.8
Locate and explain procedures needed to rig helicopter controls. <i>Completion Standard: Demonstrates basic knowledge of helicopter rigging procedures and is able to locate and explain appropriate maintenance data with assistance.</i>				0.8

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<p>Locate and explain procedures to track and balance a rotor system.</p> <p><i>Completion Standard: Demonstrates basic knowledge tracking and balancing procedures and is able to locate and explain appropriate maintenance data with assistance.</i></p>				0.8
Phase 17: Airframe Inspection	Practice	Perform	Manage	Total Time Estimate
Lesson 1: FAA Regulations				
<p>Inspect seat and seatbelt, including TSO markings.</p> <p><i>Completion Standard: Demonstrates application of knowledge and ability to perform inspection in accordance with acceptable or approved data.</i></p>				1.0
<p>Perform an airframe inspection, including a records check.</p> <p><i>Completion Standard: Demonstrates application of knowledge and ability to perform inspection in accordance with acceptable or approved data.</i></p>				1.5
<p>Perform a portion of a 100-hour inspection in accordance with 14 CFR part 43.</p> <p><i>Completion Standard: Demonstrates application of knowledge and ability to perform 100-hour inspection in accordance with 14 CFR part 43.</i></p>				2.0
<p>Enter results of a 100-hour inspection in a maintenance record.</p> <p><i>Completion Standard: Demonstrates application of knowledge and ability to correctly enter 100-hour inspection results into a maintenance record.</i></p>				1.0
<p>Provide a checklist for conducting a 100-hour inspection.</p> <p><i>Completion Standard: Demonstrates ability to locate appropriate maintenance data and provide a 100-hour inspection checklist with limited assistance.</i></p>				1.5
Lesson 3: Additional Inspection Instructions				
<p>Determine compliance with a specific AD.</p> <p><i>Completion Standard: Demonstrates ability to independently determine compliance with a specific AD.</i></p>				1.0
Lesson 4: Special Inspections				

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Determine if any additional inspections are required during a particular 100-hour inspection; (i.e., 300-hour filter replacement). <i>Completion Standard: Demonstrates ability to independently determine the necessity of additional inspections.</i>				1.0
Phase 18: Landing Gear Systems	Practice	Perform	Manage	Total Time Estimate
Lesson 1: Landing Gear Components				
Troubleshoot nose-wheel shimmy. <i>Completion Standard: Demonstrates thorough application of knowledge in troubleshooting procedures and ability to locate appropriate data, tools, and equipment for troubleshooting a nose-wheel shimmy.</i>				2.0
Troubleshoot aircraft steering system. <i>Completion Standard: Demonstrates thorough application of knowledge in troubleshooting procedures and ability to locate appropriate data, tools, and equipment for troubleshooting an aircraft steering system.</i>				2.0
Inspect nose-wheel steering system for proper adjustment. <i>Completion Standard: Demonstrates application of knowledge and ability to perform inspection in accordance with acceptable or approved data.</i>				1.0
Locate and explain the process for checking landing gear alignment. <i>Completion Standard: Demonstrates ability to independently locate and explain maintenance data pertinent to landing gear alignment.</i>				0.8
Replace air/oil shock strut air valve. <i>Completion Standard: Demonstrates application of knowledge and ability to replace air valve using appropriate data, tools, and equipment to a return-to-service standard.</i>				2.0
Troubleshoot an air/oil shock strut. <i>Completion Standard: Demonstrates thorough application of knowledge in troubleshooting procedures and ability to locate appropriate data, tools, and equipment for troubleshooting an air/oil shock strut.</i>				2.0
Service a nose-wheel shimmy damper. <i>Completion Standard: Demonstrates application of appropriate data, tools, and equipment and skill to service nose-wheel shimmy damper to a return-to-service standard.</i>				1.0

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Service landing gear air/oil shock strut. <i>Completion Standard: Demonstrates application of knowledge and ability to service landing gear air/oil shock strut using appropriate data, tools, and equipment to a return-to-service standard.</i>				2.0
Lesson 2: Landing Gear Retraction Systems				
Identify landing gear position and warning system components. <i>Completion Standard: Demonstrates application of knowledge to identify position and warning system components with limited assistance as needed.</i>				1.0
Troubleshoot landing gear position and warning systems. <i>Completion Standard: Demonstrates thorough application of knowledge in troubleshooting procedures and ability to locate appropriate data, tools, and equipment for troubleshooting landing gear position and warning systems.</i>				2.0
Inspect and repair landing gear position indicating system. <i>Completion Standard: Demonstrates application of knowledge and ability to perform inspection in accordance with acceptable or approved data. Demonstrates skill of repairing a position indicating system to a return-to-service standard.</i>				2.0
Adjust the operation of a landing gear warning system. <i>Completion Standard: Demonstrates skill of adjusting the operation of a landing gear warning system to a return-to-service standard using appropriate data, tools, and equipment.</i>				1.5
Remove, install, and adjust a landing gear down-lock switch. <i>Completion Standard: Demonstrates application of knowledge and ability to remove, install, and adjust a landing gear down-lock switch using appropriate data, tools, and equipment to a return-to-service standard.</i>				2.5
Jack aircraft. <i>Completion Standard: Demonstrates basic understanding of aircraft jacking procedures and the ability to locate appropriate data, tools, and equipment used in the jacking process.</i>				1.0
Troubleshoot a landing gear retraction check. <i>Completion Standard: Demonstrates thorough application of knowledge in troubleshooting procedures and ability to locate appropriate data, tools, and equipment for troubleshooting a landing gear retraction check.</i>				2.0
Lesson 3: Brakes				

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<p>Inspect a brake for serviceability.</p> <p><i>Completion Standard: Demonstrates application of knowledge and ability to perform inspection in accordance with acceptable or approved data.</i></p>				1.0
<p>Replace master brake cylinder packing seals.</p> <p><i>Completion Standard: Demonstrates application of knowledge and ability to replace packing seals using appropriate data, tools, and equipment to a return-to-service standard.</i></p>				1.5
<p>Bleed air from a hydraulic brake system.</p> <p><i>Completion Standard: Demonstrates application of knowledge and ability to bleed air from a hydraulic brake system using appropriate data, tools, and equipment to a return-to-service standard.</i></p>				2.0
<p>Troubleshoot hydraulic brake systems.</p> <p><i>Completion Standard: Demonstrates thorough application of knowledge in troubleshooting procedures and ability to locate appropriate data, tools, and equipment for troubleshooting a hydraulic brake system.</i></p>				2.0
<p>Remove, inspect, and install a wheel brake assembly.</p> <p><i>Completion Standard: Demonstrates skill to remove and install a wheel brake assembly using appropriate data, tools, and equipment to meet a return-to-service standard. Demonstrates application of knowledge and ability to perform inspection in accordance with acceptable or approved data.</i></p>				2.0
<p>Remove and replace brake lining(s).</p> <p><i>Completion Standard: Demonstrates application of knowledge and ability to remove and replace brake linings using appropriate data, tools, and equipment to a return-to-service standard.</i></p>				2.0
<p>Inspect, check, and service an anti-skid system.</p> <p><i>Completion Standard: Demonstrates application of knowledge and ability to perform inspection in accordance with acceptable or approved data. Demonstrates ability to check and service anti-skid system using appropriate data, tools, and equipment to a return-to-service standard.</i></p>				3.0
<p>Locate and explain procedures for checking operation of an anti-skid warning system.</p> <p><i>Completion Standard: Demonstrates ability to locate and give a basic explanation for operational check procedures with assistance as needed.</i></p>				1.0

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<p>Locate and explain troubleshooting procedures for an anti-skid system.</p> <p><i>Completion Standard: Demonstrates ability to locate and give a basic explanation for troubleshooting procedures with assistance as needed.</i></p>				1.0
Lesson 4: Aircraft Wheels and Tires				
<p>Inspect and service landing gear.</p> <p><i>Completion Standard: Demonstrates application of knowledge and ability to perform inspection in accordance with acceptable or approved data and service landing gear using appropriate data, tools, and equipment to a return-to-service standard.</i></p>				2.5
<p>Inspect wheels, brakes, bearings, and tires.</p> <p><i>Completion Standard: Demonstrates application of knowledge and ability to perform inspection in accordance with acceptable or approved data.</i></p>				1.5
<p>Inspect a tire for defects.</p> <p><i>Completion Standard: Demonstrates application of knowledge and use of appropriate data, tools, and equipment to inspect and identify tire defects in accordance with acceptable or approved data.</i></p>				1.0
<p>Locate tire storage practices.</p> <p><i>Completion Standard: Demonstrates basic knowledge and ability to locate appropriate maintenance data for tire storage practices.</i></p>				0.5
<p>Inspect tube landing gear for damage.</p> <p><i>Completion Standard: Demonstrates application of knowledge and ability to perform inspection in accordance with acceptable or approved data.</i></p>				1.0
Phase 19: Hydraulic and Pneumatic Systems	Practice	Perform	Manage	Total Time Estimate
Lesson 1: Fluid, Seals, and Basic System				
<p>Locate installation procedures for a seal, backup ring, or gasket.</p> <p><i>Completion Standard: Demonstrates ability to locate maintenance data pertinent to installation procedures for seals, rings, or gaskets with limited assistance.</i></p>				0.8
<p>Identify different types of hydraulic fluids.</p> <p><i>Completion Standard: Correctly identifies various hydraulic fluids using appropriate maintenance data.</i></p>				1.0

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Identify different packing seals. <i>Completion Standard: Correctly identifies packing seals using appropriate maintenance data.</i>				1.0
Install seals and backup rings in a hydraulic component. <i>Completion Standard: Demonstrates application of appropriate data, tools, and equipment and skill to install seals and backup rings to a return-to-service standard.</i>				1.5
Lesson 2: Hydraulic System Components				
Locate and explain hydraulic fluid servicing instructions and identify/select fluid for a given aircraft. <i>Completion Standard: Demonstrates ability to locate and explain maintenance data pertinent to hydraulic fluid servicing with limited assistance.</i>				1.0
Purge air from a hydraulic system. <i>Completion Standard: Demonstrates application of appropriate data, tools, and equipment and skill to purge air from a hydraulic system.</i>				1.5
Remove and install a system pressure relief valve. <i>Completion Standard: Demonstrates application of knowledge and ability to remove and install a system pressure relief valve using appropriate data, tools, and equipment to a return-to-service standard.</i>				2.0
Service a hydraulic system accumulator. <i>Completion Standard: Demonstrates application of appropriate data, tools, and equipment and skill to service accumulator to a return-to-service standard.</i>				1.5
Service a hydraulic system reservoir. <i>Completion Standard: Demonstrates application of appropriate data, tools, and equipment and skill to service a reservoir to a return-to-service standard.</i>				1.5
Remove, install, and perform an operational check of a hydraulic pump. <i>Completion Standard: Demonstrates application of knowledge and ability to remove, install, and perform operational checks on a hydraulic pump using appropriate data, tools, and equipment to a return-to-service standard.</i>				2.5
Remove and install a selector valve. <i>Completion Standard: Demonstrates application of knowledge and ability to remove and install a selector valve using appropriate data, tools, and equipment to a return-to-service standard.</i>				2.0

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<p>Check a pressure regulator and adjust as necessary.</p> <p><i>Completion Standard: Demonstrates application of knowledge and skill required to check and adjust a pressure regulator to a return-to-service standard using appropriate data, tools, and equipment.</i></p>				1.5	
Lesson 3: Filters, Lines, and Fittings					
<p>Remove, clean, inspect, and install a hydraulic system filter.</p> <p><i>Completion Standard: Demonstrates application of knowledge and ability to remove, clean, and install a hydraulic system filter using appropriate data, tools, and equipment to a return-to-service standard. Demonstrates ability to perform inspection using approved or accepted data.</i></p>				2.5	
Lesson 4: Pneumatic Systems					
<p>Locate procedures for checking pneumatic/bleed air overheat warning systems.</p> <p><i>Completion Standard: Demonstrates ability to locate maintenance data pertinent to pneumatic/bleed air overheat warning systems with assistance as needed.</i></p>				1.0	
<p>Inspect a hydraulic or pneumatic system for leaks.</p> <p><i>Completion Standard: Demonstrates application of knowledge and ability to perform inspection in accordance with acceptable or approved data.</i></p>				1.0	
<p>Troubleshoot a hydraulic or pneumatic system for leaks.</p> <p><i>Completion Standard: Demonstrates thorough application of knowledge in troubleshooting procedures and ability to locate appropriate data, tools, and equipment for troubleshooting system leaks.</i></p>				2.0	
Phase 20: Environmental Systems		Practice	Perform	Manage	Total Time Estimate
Lesson 1: Pressurization					
<p>Locate troubleshooting procedures for a pressurization system.</p> <p><i>Completion Standard: Demonstrates ability to locate maintenance data pertinent to troubleshooting a pressurization system with assistance as needed.</i></p>				0.8	
<p>Clean and inspect an outflow valve for a pressurization system.</p> <p><i>Completion Standard: Demonstrates basic knowledge and skill to clean and inspect an outflow valve with assistance as needed.</i></p>				1.0	
Lesson 2: Oxygen Systems					

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Inspect an oxygen system pressure regulator. <i>Completion Standard: Demonstrates application of knowledge and ability to perform inspection in accordance with acceptable or approved data.</i>				1.0
Inspect an oxygen system cylinder for serviceability. <i>Completion Standard: Demonstrates application of knowledge and ability to perform inspection in accordance with acceptable or approved data.</i>				1.0
Inspect a chemical oxygen generator for serviceability and safe handling. <i>Completion Standard: Demonstrates application of knowledge and ability to perform inspection in accordance with acceptable or approved data.</i>				1.0
Inspect an oxygen system. <i>Completion Standard: Demonstrates application of knowledge and ability to perform inspection in accordance with acceptable or approved data.</i>				1.0
Purge an oxygen system prior to servicing. <i>Completion Standard: Demonstrates application of appropriate data, tools, and equipment and skill to purge an oxygen system.</i>				1.5
Service an oxygen system. <i>Completion Standard: Demonstrates application of appropriate data, tools, and equipment and skill to service an oxygen system with limited assistance.</i>				1.5
Clean and inspect a pilot emergency oxygen mask and supply hoses. <i>Completion Standard: Demonstrates application of maintenance data and skill to clean and inspect oxygen mask and supply hoses with limited assistance.</i>				1.5
Lesson 3: Cooling and Heating				
Locate the procedures to troubleshoot a combustion heater. <i>Completion Standard: Demonstrates ability to locate maintenance data pertinent to troubleshooting combustion heaters with assistance as needed.</i>				0.8
Locate the procedures for servicing a refrigerant (vapor-cycle) system. <i>Completion Standard: Demonstrates ability to locate maintenance data pertinent to servicing refrigerant systems with assistance as needed.</i>				0.8

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Inspect a combustion heater fuel system for leaks. <i>Completion Standard: Demonstrates basic knowledge and ability to apply appropriate maintenance data to determine inspection areas.</i>				1.0
Locate the troubleshooting procedures for an air-cycle system. <i>Completion Standard: Demonstrates ability to locate maintenance data pertinent to troubleshooting an air-cycle system with assistance as needed.</i>				0.8
Troubleshoot an air-cycle air conditioning system. <i>Completion Standard: Demonstrates basic knowledge in troubleshooting procedures and ability to locate appropriate data, tools, and equipment for troubleshooting an air-cycle conditioning system.</i>				1.5
Inspect a cabin heater system equipped with an exhaust heat exchanger for cracks. <i>Completion Standard: Demonstrates basic knowledge and ability to apply appropriate maintenance data to determine inspection areas.</i>				1.0
Phase 21: Aircraft Instrument Systems	Practice	Perform	Manage	Total Time Estimate
Lesson 1: Instrument Cases, Maintenance, and Panels				
Remove and install an instrument. <i>Completion Standard: Demonstrates application of knowledge and ability to remove and install an instrument using appropriate data, tools, and equipment to a return-to-service standard.</i>				1.5
Install range marks on an instrument glass. <i>Completion Standard: Demonstrates application of knowledge and ability to install range marks using appropriate data, tools, and equipment to a return-to-service standard.</i>				1.5
Determine barometric pressure using an altimeter. <i>Completion Standard: Demonstrates skill of determining barometric pressure with limited assistance.</i>				0.5
Check for proper range markings on an instrument. <i>Completion Standard: Demonstrates application of knowledge and interpretation of appropriate maintenance data to check for range markings on an instrument.</i>				0.8
Lesson 2: Types of Instruments				

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Inspect a vacuum system filter for serviceability. <i>Completion Standard: Demonstrates basic knowledge and ability to perform inspection in accordance with acceptable or approved data.</i>				1.0
Adjust gyro/instrument air pressure/vacuum. <i>Completion Standard: Demonstrates correct interpretation of maintenance data to make adjustments with limited assistance.</i>				1.0
Inspect an aircraft's alternate air (static) source. <i>Completion Standard: Demonstrates basic knowledge and ability to perform inspection in accordance with acceptable or approved data.</i>				1.0
Locate the procedures for troubleshooting a vacuum-operated instrument system. <i>Completion Standard: Demonstrates ability to locate maintenance data pertinent to troubleshooting a vacuum-operated instrument system with assistance as needed.</i>				0.8
Select proper altimeter for installation on a given aircraft. <i>Completion Standard: Demonstrates application of knowledge and appropriate maintenance data to select an altimeter for a given aircraft.</i>				0.5
Perform a static system leak test. <i>Completion Standard: Demonstrates ability to perform a static system leak test using appropriate data, tools, and equipment with limited assistance.</i>				1.0
Lesson 3: Indicators and Magnetic Compass				
Locate and explain the adjustment procedures for a stall warning system. <i>Completion Standard: Demonstrates ability to locate and explain maintenance data pertinent to adjusting a stall warning system with assistance as needed.</i>				0.8
Inspect outside air temperature gauge for condition and operation. <i>Completion Standard: Demonstrates basic knowledge and ability to perform inspection in accordance with acceptable or approved data.</i>				1.0
Identify exhaust gas temperature system components. <i>Completion Standard: Correctly identifies exhaust system components using appropriate maintenance data and limited assistance.</i>				0.8
Inspect a magnetic compass. <i>Completion Standard: Demonstrates basic knowledge and ability to perform inspection in accordance with acceptable or approved data.</i>				1.0

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Phase 22: Communication and Navigation Systems	Practice	Perform	Manage	Total Time Estimate
Lesson 1: Radio Operating Principles				
Check VHF communications for operation. <i>Completion Standard: Demonstrates ability to perform an operational check on VHF communications using appropriate maintenance data and limited assistance.</i>				0.8
Lesson 2: Communication and Navigation Systems				
Make a list of required placards for communication and navigation avionic equipment. <i>Completion Standard: Demonstrates ability to locate and list required placards using appropriate maintenance data with limited assistance.</i>				0.8
Locate and explain autopilot inspection procedures. <i>Completion Standard: Demonstrates ability to locate and explain maintenance data pertinent to autopilot inspection with assistance as needed.</i>				0.8
List autopilot major components. <i>Completion Standard: Demonstrates ability to list autopilot components using appropriate maintenance data with limited assistance.</i>				0.8
Locate and identify navigation and communication antennas. <i>Completion Standard: Demonstrates ability to locate maintenance data pertinent to navigation and communication antennas and identify antennas on an aircraft with limited assistance.</i>				1.0
Inspect a coaxial cable installation for security. <i>Completion Standard: Demonstrates application of knowledge and ability to perform inspection in accordance with acceptable or approved data.</i>				1.0
Check an emergency locator transmitter for operation. <i>Completion Standard: Demonstrates ability to perform an operational check on and ELT using appropriate maintenance data and limited assistance.</i>				0.8
Inspect ELT batteries for expiration date and locate proper testing procedures. <i>Completion Standard: Demonstrates basic knowledge and ability to perform inspection in accordance with acceptable or approved data.</i>				1.0

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Inspect electronic equipment mounting base for security and condition. <i>Completion Standard: Demonstrates basic knowledge and ability to perform inspection in accordance with acceptable or approved data.</i>				1.0
Inspect electronic equipment shock mount bonding jumpers for resistance. <i>Completion Standard: Demonstrates basic knowledge and ability to perform inspection in accordance with acceptable or approved data.</i>				1.0
Inspect static discharge wicks for security and resistance. <i>Completion Standard: Demonstrates basic knowledge and ability to perform inspection in accordance with acceptable or approved data.</i>				1.0
Inspect a radio installation for security. <i>Completion Standard: Demonstrates basic knowledge and ability to perform inspection in accordance with acceptable or approved data.</i>				1.0
Locate and explain the installation procedures for antennas, including mounting and coaxial connections. <i>Completion Standard: Demonstrates ability to locate and explain maintenance data pertinent to antenna installation with assistance as needed.</i>				0.8
Phase 23: Aircraft Fuel Systems	Practice	Perform	Manage	Total Time Estimate
Lesson 1: Fuels, Fuel System Contamination and Design				
Locate fuel system crossfeed procedures. <i>Completion Standard: Demonstrates ability to locate maintenance data pertinent to fuel system crossfeed procedures with assistance as needed.</i>				0.8
Locate fuel system required placards. <i>Completion Standard: Demonstrates ability to locate maintenance data pertinent to required placards with limited assistance.</i>				0.8
Drain fuel system sump(s). <i>Completion Standard: Demonstrates application of knowledge and skill to drain fuel system sumps using appropriate data, tools, and equipment to a return-to-service standard.</i>				1.0
Service a fuel system strainer. <i>Completion Standard: Demonstrates application of appropriate data, tools, and equipment and skill to service a fuel system strainer to a return-to-service standard.</i>				1.5

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Inspect a metal, bladder, or integral fuel tank. <i>Completion Standard: Demonstrates application of knowledge and ability to perform inspection in accordance with acceptable or approved data.</i>				1.0
Lesson 2: Fuel System Components				
Remove and install a fuel quantity transmitter. <i>Completion Standard: Demonstrates application of knowledge and ability to remove and install a fuel quantity transmitter using appropriate data, tools, and equipment to a return-to-service standard.</i>				2.0
Inspect a fuel quantity indicating system. <i>Completion Standard: Demonstrates basic knowledge and ability to perform inspection in accordance with acceptable or approved data.</i>				1.0
Locate fuel system operating instructions. <i>Completion Standard: Demonstrates ability to locate maintenance data pertinent to fuel system operating instructions with assistance as needed.</i>				0.8
Locate fuel system inspection procedures. <i>Completion Standard: Demonstrates ability to locate maintenance data pertinent to fuel system inspection with assistance as needed.</i>				0.8
Inspect a fuel selector valve. <i>Completion Standard: Demonstrates application of knowledge and ability to perform inspection in accordance with acceptable or approved data.</i>				1.0
Inspect and check manually-operated fuel valves for proper operation and leaks. <i>Completion Standard: Demonstrates application of knowledge and ability to perform inspection in accordance with acceptable or approved data.</i>				1.0
Lesson 4: Fueling				
Locate fuel system defueling procedures. <i>Completion Standard: Demonstrates ability to locate maintenance data pertinent to fuel system defueling procedures with assistance as needed.</i>				0.8
Lesson 5: Troubleshooting the Fuel System				
Inspect, check, troubleshoot, or repair a fuel system. <i>Completion Standard: Demonstrates ability to perform inspection using approved or accepted maintenance data. Demonstrates application of knowledge and skill to troubleshoot, repair, and perform operational checks to a return-to-service standard.</i>				3.0

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<p>Troubleshoot and repair aircraft fuel system.</p> <p><i>Completion Standard: Demonstrates thorough application of knowledge in troubleshooting procedures and ability to locate appropriate data, tools, and equipment for troubleshooting and repairing an aircraft fuel system to a return-to-service standard.</i></p>				3.0
<p>Troubleshoot a fuel valve problem.</p> <p><i>Completion Standard: Demonstrates thorough application of knowledge in troubleshooting procedures and ability to locate appropriate data, tools, and equipment for troubleshooting a fuel valve problem.</i></p>				2.0
<p>Troubleshoot fuel pressure warning system.</p> <p><i>Completion Standard: Demonstrates thorough application of knowledge in troubleshooting procedures and ability to locate appropriate data, tools, and equipment for troubleshooting a fuel pressure warning system.</i></p>				2.0
<p>Locate troubleshooting procedures for fuel temperature systems.</p> <p><i>Completion Standard: Demonstrates ability to locate maintenance data pertinent to fuel temperature troubleshooting with assistance as needed.</i></p>				0.8
<p>Troubleshoot fuel quantity indicating system.</p> <p><i>Completion Standard: Demonstrates thorough application of knowledge in troubleshooting procedures and ability to locate appropriate data, tools, and equipment for troubleshooting a fuel quantity indicating system.</i></p>				2.0
Phase 24: Aircraft Electrical Systems	Practice	Perform	Manage	Total Time Estimate
Lesson 1: Electrical Wire				
<p>Secure wire bundles.</p> <p><i>Completion Standard: Demonstrates application of appropriate data, tools, and equipment and skill to secure wire bundles to a return-to-service standard.</i></p>				1.5
<p>Determine an electrical load in a given aircraft system.</p> <p><i>Completion Standard: Demonstrates application of knowledge of appropriate maintenance data to independently determine an electrical load.</i></p>				1.5

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Inspect aircraft wiring to verify installation and routing. <i>Completion Standard: Demonstrates application of knowledge and ability to perform inspection in accordance with acceptable or approved data.</i>				1.0
Perform wire terminating and splicing. <i>Completion Standard: Demonstrates application of appropriate data, tools, and equipment and skill to perform wire terminating and splicing to a return-to-service standard.</i>				1.5
Lesson 2: Electrical Systems				
Install bonding jumpers. <i>Completion Standard: Demonstrates application of knowledge and ability to install bonding jumpers using appropriate data, tools, and equipment to a return-to-service standard.</i>				1.5
Install airframe electrical wiring, switches, or protective devices. <i>Completion Standard: Demonstrates application of knowledge and ability to install wiring, switches, or protective devices using appropriate data, tools, and equipment to a return-to-service standard.</i>				2.0
Assemble an aircraft electrical connector. <i>Completion Standard: Demonstrates application of appropriate data, tools, and equipment and skill to assemble an electrical connector to a return-to-service standard.</i>				1.5
Lesson 8: Generators				
Perform a continuity test to verify the condition of a conductor. <i>Completion Standard: Demonstrates thorough application of knowledge and use of appropriate data, tools, and equipment to perform a continuity test and interpret test results.</i>				1.0
Perform a test on a conductor for a short to ground. <i>Completion Standard: Demonstrates thorough application of knowledge and use of appropriate data, tools, and equipment to perform a test for a short to ground and interpret test results.</i>				1.0
Perform a test on a conductor for a short to other conductors. <i>Completion Standard: Demonstrates thorough application of knowledge and use of appropriate data, tools, and equipment to perform a test for a short to other conductors and interpret test results.</i>				1.0
Inspect generator brush serviceability and brush spring tension. <i>Completion Standard: Demonstrates basic knowledge and ability to perform inspection in accordance with acceptable or approved data.</i>				1.0

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<p>Check output voltage of a DC generator.</p> <p><i>Completion Standard: Demonstrates ability to check output voltage of DC generator using appropriate data, tools, and equipment.</i></p>				1.0
Lesson 9: Electrical System Components				
<p>Check the resistance of an electrical system component.</p> <p><i>Completion Standard: Demonstrates ability to check component resistance using appropriate data, tools, and equipment with limited assistance.</i></p>				1.0
<p>Inspect components in an electrical system.</p> <p><i>Completion Standard: Demonstrates application of knowledge and ability to perform inspection in accordance with acceptable or approved data.</i></p>				1.0
Lesson 10: Lighting Systems and Schematics				
<p>Troubleshoot a DC electrical system supplied by an AC electrical system.</p> <p><i>Completion Standard: Demonstrates thorough application of knowledge in troubleshooting procedures and ability to locate appropriate data, tools, and equipment for troubleshooting an electrical system.</i></p>				2.0
<p>Identify components in an electrical schematic where AC is rectified to a DC voltage.</p> <p><i>Completion Standard: Demonstrates application of knowledge to correctly identify components in an electrical schematic with limited assistance.</i></p>				1.0
<p>Troubleshoot an airframe electrical circuit.</p> <p><i>Completion Standard: Demonstrates thorough application of knowledge in troubleshooting procedures and ability to locate appropriate data, tools, and equipment for troubleshooting an airframe electrical circuit.</i></p>				2.0
<p>Use a wiring circuit diagram to identify components.</p> <p><i>Completion Standard: Demonstrates interpretation of maintenance data to identify components in a wiring diagram with limited assistance.</i></p>				1.0
<p>Inspect and check anti-collision, position, and landing lights for proper operation.</p> <p><i>Completion Standard: Demonstrates application of knowledge and ability to perform inspection and operational checks in accordance with acceptable or approved data.</i></p>				1.5
Lesson 11: Soldering				

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Solder aircraft wiring. <i>Completion Standard: Demonstrates application of appropriate data, tools, and equipment and skill to solder aircraft wiring with limited assistance.</i>				1.5
Phase 25: Ice and Rain Control Systems	Practice	Perform	Manage	Total Time Estimate
Lesson 1: Ice Protection				
Inspect thermal anti-ice systems. <i>Completion Standard: Demonstrates basic knowledge and ability to perform inspection in accordance with acceptable or approved data.</i>				1.0
Inspect and operationally check pitot-static anti-ice system. <i>Completion Standard: Demonstrates basic knowledge and ability to perform inspection and operational checks in accordance with acceptable or approved data.</i>				1.5
Inspect and operationally check deicer boot. <i>Completion Standard: Demonstrates application of knowledge and ability to perform inspection and operational checks in accordance with acceptable or approved data.</i>				1.5
Clean a pneumatic deicer boot. <i>Completion Standard: Demonstrates application of appropriate data, tools, and equipment and skill to clean a pneumatic deicer boot with limited assistance.</i>				1.0
Lesson 2: Rain Protection and Ground Deicing				
Inspect and operationally check an electrically-heated windshield. <i>Completion Standard: Demonstrates basic knowledge and ability to perform inspection and operational checks in accordance with acceptable or approved data.</i>				1.5
Locate and explain the procedures for inspecting an electrically-operated windshield wiper system. <i>Completion Standard: Demonstrates ability to locate and explain maintenance data pertinent to inspecting windshield wiper systems with limited assistance.</i>				0.8
Locate and explain the procedures for replacing blades on a windshield wiper system. <i>Completion Standard: Demonstrates ability to locate and explain maintenance data pertinent to replacing windshield wipers with limited assistance.</i>				0.8

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<p>Locate and explain the procedures for inspecting a pneumatic rain removal system.</p> <p><i>Completion Standard: Demonstrates ability to locate and explain maintenance data pertinent to inspecting pneumatic rain removal systems with limited assistance.</i></p>				0.8
Lesson 3: Ice and Rain Protection Systems				
<p>Troubleshoot an electrically-heated pitot system.</p> <p><i>Completion Standard: Demonstrates thorough application of knowledge in troubleshooting procedures and ability to locate appropriate data, tools, and equipment for troubleshooting a pitot system.</i></p>				2.0
Phase 26: Airframe Fire Protection Systems	Practice	Perform	Manage	Total Time Estimate
Lesson 1: Detection Systems				
<p>Inspect a continuous-loop type fire detection system.</p> <p><i>Completion Standard: Demonstrates basic knowledge and ability to perform inspection in accordance with acceptable or approved data.</i></p>				1.0
<p>Inspect a smoke and toxic gas detection system.</p> <p><i>Completion Standard: Demonstrates basic knowledge and ability to perform inspection using maintenance data.</i></p>				1.0
<p>Inspect a carbon monoxide detector.</p> <p><i>Completion Standard: Demonstrates basic knowledge and ability to perform inspection using maintenance data.</i></p>				1.0
<p>Locate and explain the procedures for checking a smoke detection system.</p> <p><i>Completion Standard: Demonstrates ability to locate and explain maintenance data pertinent to checking smoke detection systems with assistance as needed.</i></p>				0.8
<p>Locate and explain the procedures for inspecting an overheat detection system.</p> <p><i>Completion Standard: Demonstrates ability to locate and thoroughly explain maintenance data pertinent to inspecting an overheat detection system.</i></p>				0.8
Lesson 2: Fire Extinguishing				

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<p>Troubleshoot an aircraft fire detection or extinguishing system.</p> <p><i>Completion Standard: Demonstrates thorough application of knowledge in troubleshooting procedures and ability to locate appropriate data, tools, and equipment for troubleshooting a fire detection or extinguishing system.</i></p>				2.0
<p>Determine proper container pressure for an installed fire extinguisher system.</p> <p><i>Completion Standard: Demonstrates thorough application of knowledge and use of appropriate data, tools, and equipment to determine proper container pressure.</i></p>				0.8
<p>Identify maintenance procedures for fire detection and extinguishing system(s) and system component(s).</p> <p><i>Completion Standard: Correctly identifies maintenance procedures for fire detection and extinguishing systems using appropriate maintenance data.</i></p>				0.8
<p>Inspect fire protection system cylinders and check for hydrostatic test date.</p> <p><i>Completion Standard: Demonstrates application of knowledge and ability to perform inspection in accordance with acceptable or approved data.</i></p>				1.0
<p>Inspect fire detection/protection system.</p> <p><i>Completion Standard: Demonstrates basic knowledge and ability to perform inspection in accordance with acceptable or approved data.</i></p>				1.0
<p>Perform operational check of fire detection/protection system.</p> <p><i>Completion Standard: Demonstrates thorough application of knowledge and use of appropriate data, tools, and equipment to perform an operational check of a fire detection/protection system.</i></p>				1.0
<p>Inspect fire extinguishing agent bottle discharge cartridge.</p> <p><i>Completion Standard: Demonstrates application of knowledge and ability to perform inspection in accordance with acceptable or approved data.</i></p>				1.0
Phase 27: Water and Waste Systems	Practice	Perform	Manage	Total Time Estimate
Lesson 1: Water and Waste Systems				

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Locate and explain the procedures for servicing a lavatory waste system. <i>Completion Standard: Demonstrates ability to locate and explain maintenance data pertinent to servicing lavatory systems with limited assistance.</i>				0.8
Locate and explain the procedures for servicing a potable water system. <i>Completion Standard: Demonstrates ability to locate and explain maintenance data pertinent to servicing potable water systems with limited assistance.</i>				0.8

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Powerplant Tasks

Phase 28: Reciprocating Engines	Practice	Perform	Manage	Total Time Estimate
Lesson 1: Reciprocating Engines				
Identify the parts of a crankshaft. <i>Completion Standard: Demonstrates application of knowledge to correctly identify parts of a crankshaft with limited assistance.</i>				0.8
Identify and inspect various types of bearings. <i>Completion Standard: Demonstrates application of knowledge to correctly identify various types of bearings and inspect them using appropriate maintenance data.</i>				1.0
Identify the parts of a cylinder. <i>Completion Standard: Demonstrates application of knowledge to correctly identify parts of a cylinder with limited assistance.</i>				0.8
Lesson 2: Reciprocating Engine Components and Maintenance				
Perform a cylinder assembly inspection. <i>Completion Standard: Demonstrates application of knowledge and use of approved or accepted data, tools, and equipment to perform a cylinder assembly inspection with limited assistance.</i>				1.0
Operate and troubleshoot a reciprocating engine. <i>Completion Standard: Demonstrates thorough application of knowledge in troubleshooting procedures and ability to locate appropriate data, tools, and equipment for operating and troubleshooting a reciprocating engine.</i>				2.0
Install piston and knuckle/wrist pin(s). <i>Completion Standard: Demonstrates application of knowledge and ability to install piston and wrist pins using appropriate data, tools, and equipment.</i>				1.0
Inspect and rig cable and push-pull engine controls. <i>Completion Standard: Demonstrates application of knowledge and ability to perform inspection in accordance with acceptable or approved data and rig cable and push-pull controls using appropriate data, tools, and maintenance to a return-to-service standard.</i>				2.0
Locate top dead-center position of number one cylinder. <i>Completion Standard: Demonstrates application of knowledge and use of appropriate maintenance data to locate top dead-center of the number one cylinder.</i>				1.5

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<p>Install a cylinder on a horizontally-opposed engine.</p> <p><i>Completion Standard: Demonstrates application of knowledge and ability to install a cylinder using appropriate data, tools, and equipment to a return-to-service standard.</i></p>				1.5
Phase 29: Turbine Engines	Practice	Perform	Manage	Total Time Estimate
Lesson 1: Turbine Engines				
<p>Identify different turbine compressors.</p> <p><i>Completion Standard: Demonstrates application of knowledge to correctly identify different turbine compressors with limited assistance.</i></p>				0.8
<p>Identify different types of turbine engine blades.</p> <p><i>Completion Standard: Demonstrates application of knowledge to correctly identify types of turbine engine blades with limited assistance.</i></p>				0.8
<p>Identify components of turbine engines.</p> <p><i>Completion Standard: Demonstrates application of knowledge to correctly identify turbine engine components with limited assistance.</i></p>				0.8
<p>Locate the procedures for the adjustment of a fuel control unit.</p> <p><i>Completion Standard: Demonstrates basic knowledge and use of appropriate maintenance data to locate procedures for fuel control unit adjustment.</i></p>				0.8
<p>Identify damaged turbine engine blades.</p> <p><i>Completion Standard: Demonstrates application of knowledge to correctly and independently identify damage to turbine engine blades.</i></p>				0.8
<p>Identify causes for turbine engine performance loss.</p> <p><i>Completion Standard: Demonstrates application of knowledge to correctly identify causes for turbine engine performance loss with limited assistance.</i></p>				0.8
<p>Map airflow direction and pressure changes in turbine engines.</p> <p><i>Completion Standard: Demonstrates application of knowledge and use of appropriate maintenance data to map airflow and pressure changes in turbine engines.</i></p>				1.0
Lesson 2: Turbine Engine Maintenance Procedures				
<p>Remove and install a fuel nozzle in a turbine engine.</p> <p><i>Completion Standard: Demonstrates application of knowledge and ability to install a fuel nozzle using appropriate data, tools, and equipment to a return-to-service standard.</i></p>				1.5

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Inspect a combustion liner. <i>Completion Standard: Demonstrates application of knowledge and ability to perform inspection in accordance with acceptable or approved data.</i>				1.0
Perform turbine engine inlet guide vane and compressor blade inspection. <i>Completion Standard: Demonstrates thorough application of knowledge and use of approved or accepted data, tools, and equipment to perform a turbine engine inlet guide vane and compressor blade inspection and interpret results.</i>				1.5
Locate the installation or removal procedures for a turbine engine. <i>Completion Standard: Demonstrates basic knowledge and use of appropriate maintenance data to locate installation or removal procedures for a turbine engine.</i>				0.8
Locate and explain the procedure for trimming a turbine engine. <i>Completion Standard: Demonstrates basic knowledge and use of appropriate maintenance data to locate and explain the procedure for trimming a turbine engine with assistance as needed.</i>				0.8
Inspect the first two stages of a turbine fan or compressor for foreign object damage. <i>Completion Standard: Demonstrates application of knowledge and ability to perform inspection in accordance with acceptable or approved data.</i>				1.0
Phase 30: Turbine Engine Air Systems	Practice	Perform	Manage	Total Time Estimate
Lesson 1: Gas Turbine Engines				
Inspect/check a bleed air system. <i>Completion Standard: Demonstrates application of knowledge and ability to perform inspection in accordance with acceptable or approved data.</i>				1.0
Lesson 2: Turbine Engine Sections				
Identify turbine engine ice and rain protection system components. <i>Completion Standard: Demonstrates application of knowledge to correctly identify turbine engine ice and rain protection system components with limited assistance.</i>				0.8

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Inspect a turbine engine air intake anti-ice system. <i>Completion Standard: Demonstrates application of knowledge and ability to perform inspection in accordance with acceptable or approved data.</i>				1.0
Identify turbine engine cooling air flow. <i>Completion Standard: Demonstrates application of knowledge to correctly identify turbine engine cooling air flow with limited assistance.</i>				0.8
Lesson 3: Turbine Engine Air Systems				
Perform an induction and cooling system inspection. <i>Completion Standard: Demonstrates thorough application of knowledge and use of approved or accepted data, tools, and equipment to perform an induction and cooling system inspection.</i>				1.5
Identify location of turbine engine insulation blankets. <i>Completion Standard: Demonstrates application of knowledge to correctly identify the location of turbine engine insulation blankets with limited assistance.</i>				0.8
Inspect turbine engine cooling ducting (rigid or flexible) or baffle seals. <i>Completion Standard: Demonstrates basic knowledge and ability to perform inspection using appropriate maintenance data.</i>				1.0
Inspect a particle separator. <i>Completion Standard: Demonstrates application of knowledge and ability to perform inspection in accordance with acceptable or approved data.</i>				1.0
Phase 31: Engine Inspection	Practice	Perform	Manage	Total Time Estimate
Lesson 1: Airworthiness				
Inspect engine records for time or cycles on life-limited parts. <i>Completion Standard: Demonstrates application of knowledge and ability to perform inspection in accordance with acceptable or approved data.</i>				1.0
Determine engine installation eligibility. <i>Completion Standard: Demonstrates application of knowledge of appropriate maintenance data to independently determine engine installation eligibility.</i>				1.0

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Determine compliance with engine specifications, TCDS, or engine listings. <i>Completion Standard: Demonstrates application of knowledge of appropriate maintenance data to independently determine compliance with various engine maintenance documents.</i>				1.5
Inspect for compliance with applicable ADs. <i>Completion Standard: Demonstrates application of knowledge and ability to perform an AD compliance inspection in accordance with acceptable or approved data.</i>				1.5
Perform a powerplant records inspection. <i>Completion Standard: Demonstrates thorough application of knowledge and use of approved or accepted data to perform a records inspection.</i>				1.5
Evaluate powerplant for compliance with FAA-approved or manufacturer data. <i>Completion Standard: Demonstrates thorough application of knowledge and use of appropriate data to evaluate a powerplant for compliance.</i>				1.5
Lesson 2: Reciprocating Engines				
Perform a compression check on a cylinder. <i>Completion Standard: Demonstrates thorough application of knowledge and use of appropriate data, tools, and equipment to perform a compression check on a cylinder and interpret test results.</i>				1.5
Perform a portion of a required inspection on an engine. <i>Completion Standard: Demonstrates thorough application of knowledge and use of approved or accepted data, tools, and equipment to perform a portion of an engine inspection.</i>				1.5
Check engine controls for proper operation and adjustment. <i>Completion Standard: Demonstrates application of knowledge of appropriate maintenance data to independently check engine controls and interpret the results appropriately.</i>				1.5
Inspect an engine for leaks after performing maintenance. <i>Completion Standard: Demonstrates application of knowledge and ability to perform inspection in accordance with acceptable or approved data.</i>				1.0
Inspect an aircraft engine accessory for serviceability. <i>Completion Standard: Demonstrates application of knowledge and ability to perform inspection in accordance with acceptable or approved data.</i>				1.0

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<p>Perform an engine start and inspect engine operational parameters.</p> <p><i>Completion Standard: Demonstrates thorough application of knowledge and use of approved or accepted data, tools, and equipment to perform an engine start and inspect operational parameters.</i></p>				1.5
<p>Perform a portion of a 100-hour inspection on an engine in accordance with part 43.</p> <p><i>Completion Standard: Demonstrates thorough application of knowledge and use of approved or accepted data to perform a portion of a 100-hour engine inspection.</i></p>				1.5
<p>Inspect an engine mount to determine serviceability.</p> <p><i>Completion Standard: Demonstrates application of knowledge and ability to perform inspection in accordance with acceptable or approved data.</i></p>				1.0
Phase 32: Engine Instrument Systems	Practice	Perform	Manage	Total Time Estimate
Lesson 1: Reciprocating Engines				
<p>Inspect an oil temperature probe.</p> <p><i>Completion Standard: Demonstrates basic knowledge and ability to perform inspection using appropriate maintenance data.</i></p>				1.0
<p>Check aircraft engine manifold pressure gauge for proper operation.</p> <p><i>Completion Standard: Demonstrates the knowledge and skill to check an engine manifold pressure gauge.</i></p>				0.8
<p>Inspect a manifold pressure system.</p> <p><i>Completion Standard: Demonstrates basic knowledge and ability to perform inspection using appropriate maintenance data.</i></p>				1.0
<p>Troubleshoot a tachometer system.</p> <p><i>Completion Standard: Demonstrates thorough application of knowledge in troubleshooting procedures and ability to use appropriate data, tools, and equipment for troubleshooting a tachometer system.</i></p>				2.0
<p>Replace a cylinder head temperature thermocouple.</p> <p><i>Completion Standard: Demonstrates application of knowledge and ability to replace a cylinder head temperature thermocouple using appropriate data, tools, and equipment to a return-to-service standard.</i></p>				1.5

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Inspect EGT probes. <i>Completion Standard: Demonstrates basic knowledge and ability to perform inspection using appropriate maintenance data.</i>				1.0
Troubleshoot an engine oil temperature/pressure instrument system. <i>Completion Standard: Demonstrates thorough application of knowledge in troubleshooting procedures and ability to locate appropriate data, tools, and equipment for troubleshooting an oil temperature/pressure instrument system.</i>				2.0
Troubleshoot a low fuel pressure indicating system. <i>Completion Standard: Demonstrates thorough application of knowledge in troubleshooting procedures and ability to locate appropriate data, tools, and equipment for troubleshooting a low fuel pressure indicating system.</i>				2.0
Remove, inspect, and install a fuel-flow transmitter. <i>Completion Standard: Demonstrates application of knowledge and ability to remove, inspect, and install a fuel-flow transmitter using approved or accepted data, appropriate tools, and equipment to a return-to-service standard.</i>				2.0
Remove, inspect, and install fuel-flow gauge. <i>Completion Standard: Demonstrates application of knowledge and ability to remove, inspect, and install a fuel-flow gauge using approved or accepted data, appropriate tools, and equipment to a return-to-service standard.</i>				2.0
Identify components of an electric tachometer system. <i>Completion Standard: Demonstrates application of knowledge to correctly identify tachometer system components with limited assistance.</i>				0.8
Check fuel-flow transmitter power supply. <i>Completion Standard: Demonstrates the knowledge and skill to check a fuel-flow transmitter power supply.</i>				0.8
Inspect tachometer markings for accuracy. <i>Completion Standard: Demonstrates application of knowledge and ability to perform inspection in accordance with acceptable or approved data.</i>				1.0
Perform resistance measurements of thermocouple indication system. <i>Completion Standard: Demonstrates thorough application of knowledge and use of appropriate data, tools, and equipment to perform resistance measurements and interpret results.</i>				1.0

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Remove, inspect, and install turbine engine exhaust gas temperature (EGT) component. <i>Completion Standard: Demonstrates application of knowledge of approved or accepted maintenance data to inspect an EGT component. Demonstrates skill to remove and install an EGT component using appropriate data, tools, and equipment to achieve a return-to-service standard.</i>				2.0
Lesson 2: Engine Instrument Systems				
Locate procedures for troubleshooting a turbine EPR system. <i>Completion Standard: Demonstrates ability to locate troubleshooting procedures, appropriate data, tools, and equipment for troubleshooting a turbine EPR system.</i>				1.0
Locate and inspect engine low fuel pressure warning system components. <i>Completion Standard: Demonstrates application of knowledge and use of approved or accepted maintenance data to locate and inspect fuel pressure warning system components.</i>				1.0
Repair a low oil pressure warning system. <i>Completion Standard: Demonstrates skill to complete a repair to return-to-service standard using appropriate data, tools, and equipment.</i>				1.5
Troubleshoot an EGT indicating system. <i>Completion Standard: Demonstrates thorough application of knowledge in troubleshooting procedures and ability to use appropriate data, tools, and equipment for troubleshooting an EGT indicating system.</i>				2.0
Phase 33: Engine Fire Protection Systems	Practice	Perform	Manage	Total Time Estimate
Lesson 1: Engine Fire Protection Systems				
Identify continuous-loop fire detection system components. <i>Completion Standard: Demonstrates application of knowledge to correctly identify fire detection system components with limited assistance.</i>				0.8
Inspect a fire extinguisher container discharge cartridge (squib). <i>Completion Standard: Demonstrates application of knowledge and ability to perform inspection in accordance with acceptable or approved data.</i>				0.8

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<p>Inspect fire extinguisher container and determine hydrostatic test requirements.</p> <p><i>Completion Standard: Demonstrates application of knowledge and ability to perform inspection in accordance with acceptable or approved data.</i></p>				0.8
<p>Inspect flame detectors for operation.</p> <p><i>Completion Standard: Demonstrates application of knowledge and ability to perform inspection in accordance with acceptable or approved data.</i></p>				0.8
<p>Inspect engine fire extinguisher system blowout plugs.</p> <p><i>Completion Standard: Demonstrates application of knowledge and ability to perform inspection in accordance with acceptable or approved data.</i></p>				1.0
<p>Inspect a turbine engine fire extinguisher container.</p> <p><i>Completion Standard: Demonstrates application of knowledge and ability to perform inspection in accordance with acceptable or approved data.</i></p>				0.8
<p>Inspect fire extinguisher discharge circuit.</p> <p><i>Completion Standard: Demonstrates application of knowledge and ability to perform inspection in accordance with acceptable or approved data.</i></p>				1.0
<p>Identify fire detection sensing units.</p> <p><i>Completion Standard: Demonstrates application of knowledge to correctly identify fire detection sensing units with limited assistance.</i></p>				0.8
<p>Inspect fire detection continuous loop system.</p> <p><i>Completion Standard: Demonstrates application of knowledge and ability to perform inspection in accordance with acceptable or approved data.</i></p>				1.0
<p>Inspect fire detection thermal switch or thermocouple system.</p> <p><i>Completion Standard: Demonstrates application of knowledge and ability to perform inspection in accordance with acceptable or approved data.</i></p>				1.0
Lesson 2: Maintenance on Fire Protection Systems				
<p>Troubleshoot and repair an engine fire detection system.</p> <p><i>Completion Standard: Demonstrates thorough application of knowledge in troubleshooting procedures and ability to use appropriate data, tools, and equipment for troubleshooting and repairing an engine fire detection system.</i></p>				2.5

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<p>Locate troubleshooting procedures for a fire detection system.</p> <p><i>Completion Standard: Demonstrates ability to locate troubleshooting procedures.</i></p>				1.0
<p>Troubleshoot and repair a fire extinguishing system.</p> <p><i>Completion Standard: Demonstrates thorough application of knowledge in troubleshooting procedures and ability to use appropriate data, tools, and equipment for troubleshooting and repairing a fire extinguishing system to a return-to-service standard.</i></p>				2.5
<p>Check operation of fire warning press-to-test and troubleshoot faults.</p> <p><i>Completion Standard: Demonstrates the knowledge and skill to check a fire warning press-to-test and troubleshoot any indicated faults using appropriate data, tools, and equipment.</i></p>				1.5
Phase 34: Engine Electrical Systems	Practice	Perform	Manage	Total Time Estimate
Lesson 1: Electrical Systems				
<p>Inspect engine electrical connectors.</p> <p><i>Completion Standard: Demonstrates application of knowledge and ability to perform inspection in accordance with acceptable or approved data.</i></p>				0.8
<p>Fabricate a bonding jumper.</p> <p><i>Completion Standard: Demonstrates application of knowledge and ability to fabricate a bonding jumper using appropriate data, tools, and equipment to a return-to-service standard.</i></p>				1.5
<p>Inspect an electrical system cable.</p> <p><i>Completion Standard: Demonstrates application of knowledge and ability to perform inspection in accordance with acceptable or approved data.</i></p>				0.8
<p>Determine wire size for engine electrical system.</p> <p><i>Completion Standard: Demonstrates application of knowledge of appropriate maintenance data to determine appropriate wire size for a given electrical system.</i></p>				1.0
<p>Repair a broken engine electrical system wire.</p> <p><i>Completion Standard: Demonstrates the knowledge and skill to repair a broken wire to a return-to-service standard using appropriate data, tools, and equipment.</i></p>				1.5

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<p>Replace a wire bundle lacing.</p> <p><i>Completion Standard: Demonstrates application of knowledge and ability to replace a wire bundle lacing using appropriate data, tools, and equipment to a return-to-service standard.</i></p>				1.0
<p>Inspect engine electrical wiring, switches, and protective devices.</p> <p><i>Completion Standard: Demonstrates application of knowledge and ability to perform inspection in accordance with acceptable or approved data.</i></p>				1.0
<p>Determine suitability of a replacement component by part number.</p> <p><i>Completion Standard: Demonstrates application of knowledge of appropriate maintenance data to determine the suitability for a component replacement.</i></p>				1.0
Lesson 2: Generators				
<p>Replace an engine-driven generator or alternator.</p> <p><i>Completion Standard: Demonstrates application of knowledge and ability to replace a generator or alternator using appropriate data, tools, and equipment to a return-to-service standard.</i></p>				2.0
<p>Inspect an engine-driven generator or alternator in accordance with manufacturer's instructions.</p> <p><i>Completion Standard: Demonstrates application of knowledge and ability to perform inspection in accordance with acceptable or approved data.</i></p>				1.0
<p>Troubleshoot an aircraft electrical generating system.</p> <p><i>Completion Standard: Demonstrates knowledge in troubleshooting procedures and ability to use appropriate data, tools, and equipment for troubleshooting an electrical generating system.</i></p>				2.0
Lesson 3: Electric Motors and Starters				
<p>Remove and install an engine direct-drive electric starter.</p> <p><i>Completion Standard: Demonstrates application of knowledge and ability to install a starter using appropriate data, tools, and equipment to a return-to-service standard.</i></p>				1.5
<p>Troubleshoot a direct-drive electric starter system.</p> <p><i>Completion Standard: Demonstrates knowledge in troubleshooting procedures and ability to use appropriate data, tools, and equipment for troubleshooting a starter system.</i></p>				2.0

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<p>Troubleshoot an electrical system using a schematic or wiring diagram.</p> <p><i>Completion Standard: Demonstrates knowledge in troubleshooting procedures and ability to use appropriate data, tools, and equipment for troubleshooting using a schematic or wiring diagram.</i></p>				2.0
<p>Inspect a turbine engine starter generator.</p> <p><i>Completion Standard: Demonstrates application of knowledge and ability to perform inspection in accordance with acceptable or approved data.</i></p>				1.0
Phase 35: Lubrication Systems	Practice	Perform	Manage	Total Time Estimate
Lesson 1: General				
<p>Determine approved oils for different climatic temperatures.</p> <p><i>Completion Standard: Demonstrates application of knowledge and use of appropriate maintenance data to correctly determine approved oils with limited assistance.</i></p>				0.8
<p>Locate procedures for obtaining oil samples.</p> <p><i>Completion Standard: Demonstrates basic knowledge and use of appropriate maintenance data to locate procedures for obtaining oil samples with assistance as needed.</i></p>				0.8
<p>Inspect an oil filter or screen.</p> <p><i>Completion Standard: Demonstrates application of knowledge and ability to perform inspection in accordance with acceptable or approved data.</i></p>				0.8
<p>Perform oil pressure adjustment.</p> <p><i>Completion Standard: Demonstrates thorough application of knowledge and use of appropriate data, tools, and equipment to perform an oil pressure adjustment to a return-to-service standard.</i></p>				1.5
<p>Identify oil system components.</p> <p><i>Completion Standard: Demonstrates application of knowledge to correctly identify oil system components with limited assistance.</i></p>				0.8
<p>Replace an oil system component.</p> <p><i>Completion Standard: Demonstrates application of knowledge and ability to replace an oil system component using appropriate data, tools, and equipment to a return-to-service standard.</i></p>				1.5

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Identify oil system flow. <i>Completion Standard: Demonstrates application of knowledge to correctly identify oil system flow with limited assistance.</i>				0.8
Inspect an oil cooler or oil lines. <i>Completion Standard: Demonstrates application of knowledge and ability to perform inspection in accordance with acceptable or approved data.</i>				1.0
Determine the correct type of oil for a specific engine. <i>Completion Standard: Demonstrates basic knowledge of appropriate maintenance data to determine a type of oil for a specific engine.</i>				0.8
Lesson 2: Turbine Engines				
Remove and inspect an engine chip detector. <i>Completion Standard: Demonstrates application of knowledge and ability to perform inspection in accordance with acceptable or approved data.</i>				1.0
Troubleshoot an engine oil temperature system. <i>Completion Standard: Demonstrates thorough application of knowledge in troubleshooting procedures and ability to use appropriate data, tools, and equipment for troubleshooting an oil temperature system.</i>				2.0
Identify turbine engine oil filter bypass indicator. <i>Completion Standard: Demonstrates application of knowledge to correctly identify an oil filter bypass indicator with limited assistance.</i>				0.8
Lesson 3: Reciprocating Engines				
Identify types of metal found in an oil filter. <i>Completion Standard: Demonstrates application of knowledge to correctly identify types of metal found in an oil filter using appropriate maintenance data, tools, and equipment.</i>				0.8
Troubleshoot an engine oil pressure malfunction. <i>Completion Standard: Demonstrates thorough application of knowledge in troubleshooting procedures and ability to use appropriate data, tools, and equipment for troubleshooting an oil pressure malfunction.</i>				2.0
Phase 36: Ignition and Starting Systems	Practice	Perform	Manage	Total Time Estimate
Lesson 1: Magnetos				

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Inspect a magneto impulse coupling. <i>Completion Standard: Demonstrates application of knowledge and ability to perform inspection in accordance with acceptable or approved data.</i>				0.8
Inspect magneto breaker points. <i>Completion Standard: Demonstrates application of knowledge and ability to perform inspection in accordance with acceptable or approved data.</i>				0.8
Set magneto internal timing. <i>Completion Standard: Demonstrates application of knowledge and ability to set magneto internal timing using appropriate data, tools, and equipment to a return-to-service standard.</i>				1.5
Time magneto to engine. <i>Completion Standard: Demonstrates application of knowledge and ability to time a magneto to an engine using appropriate data, tools, and equipment to a return-to-service standard.</i>				1.5
Lesson 2: Spark Plugs				
Inspect and check gap of spark plugs. <i>Completion Standard: Demonstrates application of knowledge and ability to perform inspection in accordance with acceptable or approved data and demonstrates skill to check spark plug gap.</i>				1.0
Identify the correct spark plugs used for replacement installation. <i>Completion Standard: Demonstrates application of knowledge to correctly identify a spark plug replacement for a given installation using appropriate maintenance data.</i>				0.8
Remove, clean, and install spark plug. <i>Completion Standard: Demonstrates application of knowledge and ability to remove, clean, and install a spark plug using appropriate data, tools, and equipment to a return-to-service standard.</i>				2.0
Lesson 3: Ignition Systems				
Troubleshoot ignition switch circuit. <i>Completion Standard: Demonstrates thorough application of knowledge in troubleshooting procedures and ability to use appropriate data, tools, and equipment for troubleshooting an ignition switch circuit.</i>				2.0
Inspect an ignition harness. <i>Completion Standard: Demonstrates application of knowledge and ability to perform inspection in accordance with acceptable or approved data.</i>				0.8

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<p>Troubleshoot and repair an ignition system.</p> <p><i>Completion Standard: Demonstrates thorough application of knowledge in troubleshooting procedures and ability to use appropriate data, tools, and equipment for troubleshooting and repairing an ignition system to a return-to-service standard.</i></p>				2.5
Lesson 4: Turbine Ignition Systems				
<p>Troubleshoot a turbine or reciprocating engine ignition system.</p> <p><i>Completion Standard: Demonstrates thorough application of knowledge in troubleshooting procedures and ability to use appropriate data, tools, and equipment for troubleshooting a turbine or reciprocating engine ignition system.</i></p>				2.0
<p>Identify the correct igniter plug and replace turbine engine igniter plugs.</p> <p><i>Completion Standard: Demonstrates application of knowledge and interpretation of maintenance data to correctly identify the correct igniter plug for an installation and the skill to replace turbine igniter plugs using appropriate maintenance data, tools, and equipment to a return-to-service standard.</i></p>				1.0
<p>Troubleshoot turbine engine igniters.</p> <p><i>Completion Standard: Demonstrates thorough application of knowledge in troubleshooting procedures and ability to use appropriate data, tools, and equipment for troubleshooting turbine engine igniters.</i></p>				2.0
<p>Inspect turbine engine ignition system.</p> <p><i>Completion Standard: Demonstrates application of knowledge and ability to perform inspection in accordance with acceptable or approved data.</i></p>				1.0
<p>Inspect igniters.</p> <p><i>Completion Standard: Demonstrates application of knowledge and ability to perform inspection in accordance with acceptable or approved data.</i></p>				0.8
Lesson 5: Turbine Starting Systems				
<p>Inspect an electrical starting system.</p> <p><i>Completion Standard: Demonstrates application of knowledge and ability to perform inspection in accordance with acceptable or approved data.</i></p>				1.0
<p>Troubleshoot an electrical starting system.</p> <p><i>Completion Standard: Demonstrates thorough application of knowledge in troubleshooting procedures and ability to use appropriate data, tools, and equipment for troubleshooting a starting system.</i></p>				2.0

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Phase 37: Engine Fuel and Fuel Metering Systems	Practice	Perform	Manage	Total Time Estimate
Lesson 1: Reciprocating Engines				
<p>Troubleshoot abnormal fuel pressure.</p> <p><i>Completion Standard: Demonstrates thorough application of knowledge in troubleshooting procedures and ability to use appropriate data, tools, and equipment for troubleshooting abnormal fuel pressure.</i></p>				2.0
<p>Troubleshoot engine fuel pressure fluctuation.</p> <p><i>Completion Standard: Demonstrates thorough application of knowledge in troubleshooting procedures and ability to use appropriate data, tools, and equipment for troubleshooting fuel pressure fluctuation.</i></p>				2.0
<p>Inspect engine fuel system fluid lines and components.</p> <p><i>Completion Standard: Demonstrates application of knowledge and ability to perform inspection in accordance with acceptable or approved data.</i></p>				1.0
<p>Inspect fuel pressure warning light function.</p> <p><i>Completion Standard: Demonstrates knowledge and ability to perform inspection using appropriate maintenance data with limited assistance.</i></p>				0.8
<p>Adjust fuel pump fuel pressure.</p> <p><i>Completion Standard: Demonstrates skill of adjusting fuel pump fuel pressure to a return-to-service standard using appropriate data, tools, and equipment.</i></p>				1.5
<p>Inspect fuel boost pump.</p> <p><i>Completion Standard: Demonstrates application of knowledge and ability to perform inspection in accordance with acceptable or approved data.</i></p>				0.8
<p>Remove and install an engine-driven fuel pump.</p> <p><i>Completion Standard: Demonstrates application of knowledge and ability to remove and install an engine-driven fuel pump using appropriate data, tools, and equipment to a return-to-service standard.</i></p>				1.5
<p>Inspect a remotely-operated fuel valve for proper operation.</p> <p><i>Completion Standard: Demonstrates application of knowledge and ability to perform inspection in accordance with acceptable or approved data.</i></p>				1.0

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Locate and identify fuel selector placards. <i>Completion Standard: Demonstrates application of knowledge to correctly identify placards with limited assistance.</i>				0.8
Inspect a main fuel filter assembly for leaks. <i>Completion Standard: Demonstrates application of knowledge and ability to perform inspection in accordance with acceptable or approved data.</i>				1.0
Identify components of an engine fuel system. <i>Completion Standard: Demonstrates application of knowledge to correctly identify fuel system components with limited assistance.</i>				0.8
Identify carburetor components. <i>Completion Standard: Demonstrates application of knowledge to correctly identify carburetor components with limited assistance.</i>				0.8
Lesson 2: Reciprocating-Idle				
Adjust carburetor idle speed and mixture. <i>Completion Standard: Demonstrates skill of adjusting idle speed and mixture to a return-to-service standard using appropriate data, tools, and equipment.</i>				1.5
Lesson 3: Reciprocating-Mixture				
Inspect fuel metering cockpit controls for proper adjustment. <i>Completion Standard: Demonstrates knowledge and ability to perform inspection using appropriate maintenance data with limited assistance.</i>				1.0
Lesson 4: Reciprocating-Carburetor Icing				
Identify fuel and air flow through a float-type carburetor. <i>Completion Standard: Demonstrates application of knowledge to correctly identify fuel and air flow through a carburetor with limited assistance.</i>				0.8
Lesson 6: Maintaining Carburetors				
Inspect the needle, seat, and float level on a float-type carburetor. <i>Completion Standard: Demonstrates application of knowledge and ability to perform inspection in accordance with acceptable or approved data.</i>				1.0
Remove and install a float-type carburetor. <i>Completion Standard: Demonstrates application of knowledge and ability to remove and install a float-type carburetor using appropriate data, tools, and equipment to a return-to-service standard.</i>				1.5

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Remove and install a carburetor main metering jet. <i>Completion Standard: Demonstrates application of knowledge and ability to remove and install a carburetor main metering jet using appropriate data, tools, and equipment to a return-to-service standard.</i>				1.5
Inspect a carburetor fuel inlet screen. <i>Completion Standard: Demonstrates application of knowledge and ability to perform inspection in accordance with acceptable or approved data.</i>				1.0
Lesson 7: Fuel Injection				
Inspect fuel selector valve. <i>Completion Standard: Demonstrates application of knowledge and ability to perform inspection in accordance with acceptable or approved data.</i>				0.8
Remove, clean, and reinstall an engine fuel filter. <i>Completion Standard: Demonstrates application of knowledge and ability to remove, clean, and install an engine fuel filter using appropriate data, tools, and equipment to a return-to-service standard.</i>				2.0
Adjust a continuous-flow fuel injection system. <i>Completion Standard: Demonstrates skill of adjusting a continuous-flow fuel injection system to a return-to-service standard using appropriate data, tools, and equipment.</i>				1.5
Inspect, troubleshoot, and repair a continuous-flow fuel injection system. <i>Completion Standard: Demonstrates application of knowledge and ability to perform inspection in accordance with acceptable or approved data. Demonstrates skill to troubleshoot and repair fuel injection system to a return-to-service standard using appropriate data, tools, and equipment.</i>				2.5
Lesson 8: Turbine Engines				
Remove, inspect, and install a turbine engine fuel nozzle. <i>Completion Standard: Demonstrates application of knowledge and ability to perform inspection in accordance with acceptable or approved data. Demonstrates skill to remove and install fuel nozzles to a return-to-service standard using appropriate data, tools, and equipment.</i>				2.0
Locate procedures for a turbine engine revolutions per minute (rpm) overspeed inspection. <i>Completion Standard: Demonstrates application of knowledge and use of appropriate maintenance data to locate procedures for turbine overspeed inspection.</i>				0.8

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<p>Locate procedures for adjusting a hydromechanical fuel control unit.</p> <p><i>Completion Standard: Demonstrates application of knowledge and use of appropriate maintenance data to locate procedures for adjusting fuel control units.</i></p>				0.8
<p>Locate and explain procedures for removing and installing a turbine engine fuel control unit.</p> <p><i>Completion Standard: Demonstrates application of knowledge and use of appropriate maintenance data to locate and explain procedures for removing and installing fuel control units.</i></p>				1.0
<p>Locate and identify a turbine engine fuel heater.</p> <p><i>Completion Standard: Demonstrates application of knowledge and use of appropriate maintenance data to locate and identify a turbine engine fuel heater.</i></p>				0.8
<p>Locate the procedures for troubleshooting a turbine engine fuel heater system.</p> <p><i>Completion Standard: Demonstrates knowledge in troubleshooting procedures and ability to locate and use appropriate data, tools, and equipment for troubleshooting a turbine fuel heater system.</i></p>				2.0
<p>Determine correct fuel nozzle spray pattern.</p> <p><i>Completion Standard: Demonstrates application of knowledge of appropriate maintenance data to independently determine correct fuel nozzle spray pattern.</i></p>				1.0
<p>Phase 38: Reciprocating Engine Induction and Cooling Systems</p>	Practice	Perform	Manage	Total Time Estimate
<p>Lesson 1: Induction Systems</p>				
<p>Identify components of a turbocharger induction system.</p> <p><i>Completion Standard: Demonstrates application of knowledge to correctly identify turbocharger components with limited assistance.</i></p>				0.8
<p>Service an induction air filter.</p> <p><i>Completion Standard: Demonstrates application of knowledge and ability to service an induction air filter using appropriate data, tools, and equipment to a return-to-service standard.</i></p>				1.5
<p>Inspect a turbocharger for leaks and security.</p> <p><i>Completion Standard: Demonstrates knowledge and ability to perform inspection using appropriate maintenance data.</i></p>				0.8

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<p>Inspect and service a turbocharger waste gate.</p> <p><i>Completion Standard: Demonstrates application of knowledge and ability to perform inspection in accordance with acceptable or approved data. Demonstrates skill to service turbocharger waste gate using appropriate data, tools, and equipment to achieve a return-to-service standard.</i></p>				1.5
<p>Inspect an induction system for obstruction.</p> <p><i>Completion Standard: Demonstrates application of knowledge and ability to perform inspection in accordance with acceptable or approved data.</i></p>				1.0
<p>Inspect an induction system drain for proper operation.</p> <p><i>Completion Standard: Demonstrates application of knowledge and ability to perform inspection in accordance with acceptable or approved data.</i></p>				1.0
<p>Inspect a carburetor heat system.</p> <p><i>Completion Standard: Demonstrates knowledge and ability to perform inspection using appropriate maintenance data with limited assistance.</i></p>				1.0
Lesson 2: Reciprocating Engine Cooling Systems				
<p>Perform an induction and cooling system inspection.</p> <p><i>Completion Standard: Demonstrates thorough application of knowledge and use of approved or accepted data to perform an induction and cooling system inspection.</i></p>				1.5
<p>Inspect an alternate air valve for proper operation.</p> <p><i>Completion Standard: Demonstrates knowledge and ability to perform inspection using appropriate maintenance data with limited assistance.</i></p>				0.8
<p>Inspect engine exhaust augments cooling system.</p> <p><i>Completion Standard: Demonstrates application of knowledge and ability to perform inspection in accordance with acceptable or approved data.</i></p>				1.0
<p>Inspect an air intake manifold for leaks.</p> <p><i>Completion Standard: Demonstrates application of knowledge and ability to perform inspection in accordance with acceptable or approved data.</i></p>				0.8
<p>Locate the proper specifications for coolant used in a liquid-cooled engine.</p> <p><i>Completion Standard: Demonstrates application of knowledge and use of appropriate maintenance data to locate liquid-cooled engine specifications.</i></p>				0.8

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Inspect reciprocating engine cooling ducting (rigid or flexible) or baffle seals. <i>Completion Standard: Demonstrates knowledge and ability to perform inspection using appropriate maintenance data.</i>				0.8
Identify exhaust augments-cooled engine components. <i>Completion Standard: Demonstrates application of knowledge to correctly identify engine components with limited assistance.</i>				0.8
Inspect an air inlet duct for security. <i>Completion Standard: Demonstrates knowledge and ability to perform inspection using appropriate maintenance data.</i>				0.8
Repair a cylinder baffle. <i>Completion Standard: Demonstrates application of knowledge and ability to repair a cylinder baffle using appropriate data, tools, and equipment to a return-to-service standard.</i>				1.5
Inspect cylinder baffling. <i>Completion Standard: Demonstrates knowledge and ability to perform inspection using appropriate maintenance data.</i>				0.8
Inspect cowl flap system for normal operation. <i>Completion Standard: Demonstrates application of knowledge and ability to perform inspection in accordance with acceptable or approved data.</i>				0.8
Inspect cylinder cooling fins. <i>Completion Standard: Demonstrates knowledge and ability to perform inspection using appropriate maintenance data.</i>				0.8
Phase 39: Engine Exhaust and Reverser Systems	Practice	Perform	Manage	Total Time Estimate
Lesson 1: Exhaust Systems				
Identify the type of exhaust system on a particular aircraft. <i>Completion Standard: Demonstrates application of knowledge to correctly identify types of exhaust systems with limited assistance.</i>				0.8
Inspect a turbine engine exhaust system component. <i>Completion Standard: Demonstrates knowledge and ability to perform inspection using appropriate maintenance data.</i>				0.8

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Inspect a reciprocating engine exhaust system. <i>Completion Standard: Demonstrates application of knowledge and ability to perform inspection in accordance with acceptable or approved data.</i>				1.0
Inspect exhaust system internal baffles or diffusers. <i>Completion Standard: Demonstrates application of knowledge and ability to perform inspection in accordance with acceptable or approved data.</i>				0.8
Inspect exhaust heat exchanger. <i>Completion Standard: Demonstrates application of knowledge and ability to perform inspection in accordance with acceptable or approved data.</i>				0.8
Locate procedures for testing and troubleshooting a turbine thrust reverser system. <i>Completion Standard: Demonstrates ability to locate and use appropriate data, tools, and equipment for troubleshooting turbine thrust reverser systems.</i>				2.0
Perform a pressure leak check of a reciprocating engine exhaust system. <i>Completion Standard: Demonstrates application of knowledge and use of appropriate data, tools, and equipment to perform a pressure leak check with limited assistance.</i>				1.0
Phase 40: Propellers	Practice	Perform	Manage	Total Time Estimate
Lesson 3: Maintenance and Operation				
Remove and install a propeller. <i>Completion Standard: Demonstrates application of knowledge and ability to remove and install a propeller using appropriate data, tools, and equipment to a return-to-service standard.</i>				2.5
Check blade static tracking. <i>Completion Standard: Demonstrates application of knowledge and ability to check blade static tracking using appropriate data, tools, and equipment to a return-to-service standard.</i>				2.0
Inspect a propeller for condition and airworthiness. <i>Completion Standard: Demonstrates application of knowledge and ability to perform inspection in accordance with acceptable or approved data.</i>				1.0

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<p>Measure propeller blade angle.</p> <p><i>Completion Standard: Demonstrates application of knowledge and ability to measure blade angle using appropriate data, tools, and equipment to a return-to-service standard.</i></p>				1.0
<p>Perform a minor repair to a metal propeller blade.</p> <p><i>Completion Standard: Demonstrates thorough application of knowledge and use of appropriate data, tools, and equipment to perform a minor repair to a metal propeller blade to a return-to-service standard.</i></p>				2.0
<p>Perform propeller lubrication.</p> <p><i>Completion Standard: Demonstrates thorough application of knowledge and use of appropriate data, tools, and equipment to lubricate a propeller.</i></p>				1.0
<p>Locate and explain the procedures for balancing a fixed-pitch propeller.</p> <p><i>Completion Standard: Demonstrates basic knowledge and use of appropriate maintenance data to locate and explain procedures for balancing a propeller with assistance as needed.</i></p>				0.8
<p>Adjust a propeller governor.</p> <p><i>Completion Standard: Demonstrates skill of adjusting a propeller governor to a return-to-service standard using appropriate data, tools, and equipment.</i></p>				1.5
<p>Identify propeller range of operation.</p> <p><i>Completion Standard: Demonstrates application of knowledge to correctly identify propeller range of operation with limited assistance.</i></p>				0.8
<p>Perform a 100-hour inspection of a propeller and determine airworthiness.</p> <p><i>Completion Standard: Demonstrates thorough application of knowledge and use of approved or accepted data to perform a 100-hour inspection and determine airworthiness.</i></p>				1.5
<p>Determine what minor propeller alterations are acceptable using the propeller specifications, TCDS, and listings.</p> <p><i>Completion Standard: Demonstrates application of knowledge of appropriate maintenance data to independently determine acceptable propeller alterations.</i></p>				1.5
<p>Inspect and repair a propeller anti-icing or de-icing system.</p> <p><i>Completion Standard: Demonstrates application of knowledge and ability to perform inspection using appropriate maintenance data. Demonstrates skill to perform repair using appropriate data, tools, and equipment.</i></p>				1.5