2014 RECURRENT TRAINING EXAM (BASED ON 2013 ISSUES)

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AMT AIRCRAFT MAINTENANCE TECHNOLOGY

Informing the Maintenance Professional

Course: C-IND-IM-121016-K-006-003

Expires: December 31, 2014

Instructions for marking this answer sheet:

Completely darken only one box for each question. Do not use (X) or (√). Use black lead pencil to mark. To make corrections erase darkened-in box and place a slash (/) through the incorrect answer to indicate a change has been made. Questions are arranged in vertical sequence as indicated by the arrows. IAs MUST RETURN THE EXAM BY MARCH 6, 2014, TO ENSURE RECEIVING THEIR FOUR-HOUR CERTIFICATE BY THE END OF MARCH. OTHERWISE PLEASE ALLOW SIX TO EIGHT WEEKS FOR RETURN OF CERTIFICATE.
EXAM EXPIRES DEC. 31, 2014.

Tear here

Do not FAX

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180	A	B	C	D

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Informing the Maintenance Professional

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Did you make sure to:

- Check that your name and address on reverse side is completely filled out?
- Include your A&P/IA/Repairman number?
- Answer all questions?
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AMT AIRCRAFT MAINTENANCE TECHNOLOGY
Informing the Maintenance Professional

2014 Recurrent Training Exam

(based on 2013 AMT issues)

- Good for four hours of credit toward IA renewal and six hours credit for the FAA Aviation Maintenance Technician Awards Program or Transport Canada's recurrent training requirements.
- Select only one answer per question on the answer sheet.
- Must pass with 85 percent or better for credit!
- Four hours credit is only accepted for year in which exam is published. (Note: For Canadian approval, the associated organization (AMO) must be TC approved for this recognition by amending its MCM.)
- To order back issues at $10 a copy, call (920) 563-6388.

Tips for completing this exam:

Mark all answers on the answer sheet provided. This is an open book exam. So place all issues in a pile, beginning with the January/February 2013, and follow through all 2013 issues until the exam is complete. You can find the articles on www.AviationPros.com by putting the headline in the search box.

The exam is also available online.

AMT EXAM

JANUARY/FEBRUARY 2013

Cover Story: Scott's Bell 47 Helicopter

1. The Model 47 was the first helicopter to be issued a civilian Type Certificate by the FAA.

A. True
B. False

2. How many different Type Certificates are there for the different groups of Model 47 helicopters?

A. 2
B. 3
C. 4
D. 5

3. The use of composite materials for a main rotor blade will enable SB47 to produce a blade with having:

A. Shorter life limit
B. Longer life limit
C. Same life limit
D. No life limit

4. Lycoming continues to build the vertical-mounted engine for the Model 47.

A. True
B. False

5. Examples of Model 47 replacement parts certificated under an FAA STC Approval include:

A. Cooling fan belt sets
B. Main-rotor grips
C. Fluid hoses
D. None of the above

6. Currently there are no STCs available for a turbine engine upgrade to the Model 47.

A. True
B. False

Airframe Technology: Maintenance Training the Robinson Way

7. Some of the maintenance tasks taught in the class included:

A. Adjusting coning friction and drive belt tension
B. Methods to check the clutch shaft angle
C. Adjusting track and balance of the main rotor
D. All of the above

8. Some of the tips and hints mentioned by RHC instructors were:

A. Wash your helicopter weekly
B. Rebalance after all maintenance
C. If there's no instruction for a repair in the manual call your IA holder
D. C only

9. Older blades had an aluminum spar/leading edge.

A. True
B. False

10. During the week students spend about one-fourth of their time in the classroom and the other three-fourths twisting wrenches.

A. True
B. False

11. The daily preflight inspection required by Airworthiness Directive (AD) 2011-12-10 of some main rotor blades inspects the blades for:

A. Painted composite metal of the spar-to-skin joint
B. Exposed metal of the spar-to-skin joint
C. Painted metal of the tail rotor blade
D. Exposed metal of the tail rotor blade

Avionics Technology: Air Data Today

12. Pitot tubes are externally fit on aircraft to sense:

A. Ambient temperature
B. Static pressure
C. Ram pressure
D. Aircraft positioning

13. The most common culprit of pitot tube inlet blockage is:

A. Water
B. Sand
C. Protective cover
D. Bug infestation

14. Leaks are another common occurrence in:

A. Electronic air data systems
B. Pneumatic air data systems
C. Both A and B
D. Neither A or B

15. An Angle of Attack (AOA) is only considered an option or nice to have system on aircraft flying today.

A. True
B. False

16. Plating material coming loose at the pitot tube air inlet can have a _____ impact on displayed airspeed.

A. Intermittent
B. Annual inspection
C. 100-hour inspection
D. Significant

Turbine Technology: Elastomeric Components

17. Excessive vibration creates dynamic loads that affect only the tail section of the helicopter.

A. True
B. False

18. Elastomeric components are comprised of:

A. Bonded-rubber elements
B. Coiled metal springs
C. Coiled composite springs
D. All of the above

19. Elastomeric isolators are installed to:

A. Attenuate dynamic motions
B. Accommodate dynamic motions
C. Minimize the transmission of dynamic loads
D. Maximize the transmission of dynamic loads

20. To determine overload or tension loading fatigue of elastomeric parts, mechanics should look for:

A. Bulk extrusion between shims
B. Large clean cracks in the elastomer
C. Bent or cracked shims
D. All of the above

21. Each elastomeric part will degrade _____ over time.

A. Equally
B. The same
C. Differently
D. None of the above

From The FAA: Are You Using FAA HF Products?

22. The FAA Maintenance Fatigue Awareness Training is:

A. An 8-hour training program
B. A 4-hour classroom training course
C. An interactive web-based training program
D. None of the above

23. Voluntary reporting programs help:

A. Individuals
B. Organizations
C. Both A and B
D. Neither A or B

24. There is no return on investment (ROI) when implementing a human factors program.

A. True
B. False

MARCH 2013

Turbine Technology: Aircraft Recycling

25. Aircraft Fleet Recycling Association (AFRA) was formed to promote which of the following:

A. Aircraft disassembly instructions
B. Financial incentives
C. Environmental best practices
D. All of the above

26. The Aircraft Demolition crew uses sophisticated _____ to identify metal composition including precious metals.

A. Handheld chemical testing equipment
B. Handheld X-ray instruments
C. Floor mounted X-ray equipment
D. Chemical bath equipment

Management Matters: Under Pressure

27. Cognition refers to mental processes such as:

A. Awareness
B. Reasoning
C. Judgment
D. All of the above

28. A study on driver fatigue found that after 7 to 9 hours without sleep, performance on some tests was equivalent or worse than that at 0.05 percent blood alcohol content.

A. True
B. False

29. The NTSB investigation of the Air Midwest Flight 5481 crash concluded that the pilot was unable to keep the nose down because of:

A. Improperly rigged power levers
B. Improperly rigged leading edge flaps
C. Improperly rigged elevator control cables
D. Improperly rigged aileron trim tabs

30. The British Airways Flight 5390 event investigation concluded only one contributing factor: the effect of fatigue on the aircraft mechanic.

A. True
B. False

31. Studies reveal data that sleep deprivation is a cultural norm in the aviation maintenance workplace.

A. True
B. False

32. Fatigue management is a partnership between:

A. Employee and spouse
B. Employer and FAA
C. Employee and FAA
D. Employer and the employee

Avionics Technology: The New Need for Awareness

33. Transport category aircraft certified in the United States are intended to be designed and manufactured in compliance with Federal Air Regulation (FAR):

A. Part 21
B. Part 23
C. Part 25
D. Part 43

34. Subpart H titled "Electrical Wiring Interconnection Systems" was created:

A. Last year
B. Less than 3 years ago
C. More than 5 years ago
D. More than 15 years ago

35. Impedance is an electrical property associated with:

A. Resistance
B. Inductance
C. Capacitance
D. All of the above

36. Network digital buses consist of _____ independent conductors.

A. Only one
B. Only two
C. Several
D. None

37. Older aircraft instruments used to display speed and altitude were powered by:

A. Air pressure changes
B. Battery power
C. Generator power
D. Wind generator

Airframe Technology: MROs Developing the Air Carrier Interface

38. MROs must work on each operator's aircraft in accordance with applicable provisions of the air carrier's maintenance and inspection program.

A. True
B. False

39. Printed hardcopy work instructions from electronic media must be:

A. Used on all like aircraft for 30 days
B. Date stamped
C. Signed by the technician
D. Signed by the supervisor

40. An air carrier's general maintenance manual will describe the requirements for:

A. MRO work schedules
B. Record keeping
C. Inspection criteria
D. B and C

41. The required inspection item (RII) processes of two B-737s parked together in a hangar bay at the same time:

A. Will always be the same
B. Will always be different
C. May be different
D. None of the above

AMT EXAM

Technical Tip: When is a Bolt Not a Bolt?

42. On the Learjet, the control yoke pivots fore-and-aft on two pins/bearings plus a _____ bearing block.

A. Aft
B. Right
C. Left
D. Center

43. The example in this article states mechanics thought they were seeing a:

A. Hex head bolt
B. Hex head pivot pin
C. Hex head roll pin
D. All of the above

ARSA Outlook: Searching for Regulatory Clarity

44. FAA's rulemaking is designed to ensure and enhance aviation safety and at times causes:

A. Remarkable results
B. Regulatory compliance
C. Unintended consequences
D. Unintended compliance

45. The acronym ARC stands for:

A. Aviation Regulatory Commission
B. Aviation Rulemaking Committee
C. Aviation Regulatory Committee
D. Aviation Rulemaking Commission

46. The most common way to participate in the rulemaking process is by:

A. Calling FAA headquarters
B. Filing comments to proposed rules
C. Calling your senator
D. Filling comments after the final rule

APRIL 2013

MRO Operations: Regional Jet Landing Gear Systems

47. Modern regional jet landing gear, on average, remain in service:

A. 3 to 5 years
B. 5 to 8 years
C. 8 to 10 years
D. 10 to 15 years

48. Aviation Representatives Inc. (Av-Reps), a Canadian repair station, holds certificates from:

A. Transport Canada
B. FAA
C. Both A and B
D. Neither A or B

49. Corrosion on landing gear is often found under bushings and on:

A. Gland nuts and mating threads
B. Nose gear wheel halves
C. Main gear wheel halves
D. None of the above

50. The company in the article suggests which of the following best practices:

A. Keep the oleo strut serviced
B. Follow the work cards
C. Keep all the gear links lubricated
D. All of the above

51. The company in the article suggests when looking at chrome surfaces on struts and actuators to:

A. Inspect for FOD damage
B. Inspect for clamp damage
C. Inspect for paint damage
D. Inspect for placard damage

Turbine Technology: Low Plasticity Burnishing

52. In this article the acronym SCC refers to:

A. Stress cracking carbon
B. Stress corrosion cracking
C. Straight corrosion cracking
D. None of the above

53. LPB is an electronic means to combat fatigue initiating damage, including foreign object damage (FOD), corrosion pitting, fretting-induced cracking, and SCC.

A. True
B. False

54. Tension in metallic components induces crack formation from stress concentrations formed by:

A. Over torqueing
B. Heavy braking
C. Over inflation
D. Surface damage

55. LPB is a PMA replacement part.

A. True
B. False

56. Robotic LPB systems can be used in a:

A. Climate-controlled shop only
B. Hangar environment
C. Specialized 145 repair station environment only
D. All of the above

Industry Viewpoint: Documenting Minor Maintenance Discrepancies

57. The author of this article suggests careful documentation of findings and recording even minor maintenance discrepancies.

A. True
B. False

58. A worn or illegible decal that demonstrates how to open the cabin door in the event of an emergency:

A. Is not an important item
B. Can lead to aircraft grounding
C. Should be mentioned to the flight attendant
D. All of the above

Airframe Technology: Air Carriers Developing the MRO Interface

59. As a rule, auditors are checking for compliance to:

A. FAR Part 65
B. FAR Part 135
C. FAR Part 121
D. FAR Part 145

60. Everyone's concept of what constitutes the "applicable portion" of an air carrier's manual is:

A. The same
B. Defined by FAA guidance
C. Defined by Washington
D. Is different

61. A good example of a successful standardization effort was the development of the:

A. 8110-3 Statement of Compliance with Airworthiness Standards Form
B. 8130-3 Authorized Release Form
C. FAA 337 Major Repair and Alteration Form
D. 8110-4 Malfunction or Defect Report

62. Special requirements by the operator created by provisions in their vendor instructions may _____ heavy check performance.

A. Enhance
B. Hobble
C. Reduce cost
D. Reduce downtime

MAY 2013

Cover Story: A Salute to the V2500

63. International Aero Engines (IAE) is a consortium of companies which includes Japanese Aero Engine Corporation (JAEC).

A. True
B. False

64. The V2500 incorporates which of the following design elements:

A. Modularly
B. Two-shaft
C. Geared fan
D. A and B

65. Today there are four V2500 models with thrust ratings ranging from:

A. 12,000 to 18,000 pounds
B. 18,000 to 22,000 pounds
C. 22,000 to 28,000 pounds
D. 22,000 to 33,000 pounds

66. The acronym GOC stands for:

A. Golden Operations Center
B. Global Organization Control
C. Geared fan On wing Center
D. Global Operations Center

67. V2500 models power which of the following aircraft:

A. A320 family
B. A330 family
C. A380 family
D. None of the above

68. The combustor and high-pressure turbine modules for the V2500 are produced by:

A. JAEC
B. Pratt & Whitney
C. MTU
D. Rolls-Royce

Airframe Technology: Virtual Turbine Engine Test Bench

69. The WESTT CS/BV virtual engine test bench is based on operating the following engine:

A. The DGEN 380
B. The DGEN 480
C. The IAE V2500
D. The PW GTF

70. The WESTT CS/BV is a multipurpose simulation bench which can be used for educational purposes.

A. True
B. False

71. In order to simulate modern technologies, which of the following hardware is included?

A. FADEC
B. APU
C. EWIS
D. B and C

72. Failure modes can be programmed into the WESTT CS/BV to simulate:

A. Spontaneous failure
B. Sensor malfunction
C. Only A
D. A and B

73. Code can be changed _____ so students can see how different operating scenarios affect the engine while it happens.

A. By sending the unit back to France
B. After shutdown
C. In real-time
D. By factory engineers

74. Some of the data recorded for calculations and research includes:

A. Engine speed rates
B. EGT
C. Control system regulation
D. All of the above

MRO Operations: 3-D Laser Inspection of Jet Engine Blades

75. Sulfur corrosion is similar to rust resulting from oxidation of ferrous-based metals.

A. True
B. False

76. Blade deterioration usually affects the blades in the following way.

A. Blade edge
B. Blade thickness variation
C. Blade twist
D. All of the above

77. The dynamic range of a mechanical probe is basically:

A. .001 - .010
B. .010 - .020
C. Zero
D. One

78. Nextec's WIZblade 3-D laser-based scanning combines:

A. Laser and photo technologies
B. Laser and vision technologies
C. Vision and chemical technologies
D. All of the above

79. One of the key challenges of blade measurement is the:

A. Blade fixture
B. Micrometer
C. Blade alignment
D. Caliper

From The FAA: Human Factors Implications

80. The Notice of Proposed Amendment (NPA) on Jan. 21, 2013 by EASA addresses all aspects of:

A. Maintenance repair station training
B. Maintenance airline training
C. Maintenance SMS
D. Maintenance certification

81. The acronym NAA refers to:

A. National Aviation Associations
B. National Aeronautics Associations
C. National Aviation Administration
D. National Aviation Authorities

82. EASA Part 145 certificate holders do not need to include human factors requirements into their program.

A. True
B. False

83. EASA requires qualifications of a human factors trainer.

A. True
B. False

84. Standardization of SMS across the world will help all organizations reinforce the responsibility and commitment to:

A. Revenue
B. Safety
C. On-time performance
D. Education

85. EASA NPA 2013-1 proposes steps to ensure the best possible SMS for those that choose the:

A. NAA endorsement
B. FAA endorsement
C. JCAB endorsement
D. EASA endorsement

Recip Technology: Foreign (Non-U.S. Citizen) A&P Applicants

86. The process for non-U.S. citizens to prepare and test for the FAA A&P certificate is _____ from their U.S. citizen counterparts.

A. The same
B. Easier
C. Different
D. Found in FAR 43

87. The Designated Mechanic Examiner (DME) makes the final decision if the applicant can:

A. Read English
B. Write in English
C. Speak and understand English
D. All of the above

88. Foreign military experience is not acceptable toward authorization to take the knowledge test based on the context of 65.77.

A. True
B. False

89. After passing the written exams, the foreign applicant for an FAA A&P must take the practical test with a DME located in:

A. The country of origin
B. The United States
C. An EASA country
D. Wherever the applicant chooses

Industry Viewpoint: Workarounds and AD Compliance

90. Workarounds when an Airworthiness Directive is involved are acceptable when:

A. The IA holder says it's OK
B. The supervisor says it's OK
C. Not acceptable
D. Service Bulletin says it's OK

91. The author suggests for AD-related procedures that you believe are incorrect you should file a report with:

A. Your supervisor
B. Your department manager
C. FAA's Aviation Safety Hotline
D. FAA's FSDO

JULY 2013

Editor's Viewpoint

92. How much does the General Aviation industry contribute to the U.S. economy?

A. $3.5 billion
B. $150 billion
C. 100 billion
D. $50 billion

Recip Technology: SMA's Compression-Ignition Engine

93. The SMA engine is a turbocharged four-cylinder air- and oil-cooled diesel-cycle engine that produces 337 take off horsepower at 12.2 gallons per hour.

A. True
B. False

94. The SMA engine is installed on the Cessna JT-A and the time between overhaul is rated at how many hours?

A. 2,500 hours
B. 2,400 hours
C. 2,300 hours
D. 2,250 hours

95. The SMA engine control unit downloads faults, sensor data, operating time and

A. Oil pressure
B. Oil temperature
C. A and B
D. None of the above

96. What company has contracted with Cessna to support the SMA engine?

A. SAFRAN
B. Continental
C. Lycoming
D. Rolls-Royce

Cover Story: Maintenance Tips for the Aging GA Fleet

97. The biggest challenge in maintaining vintage general aviation aircraft is:

A. Corrosion
B. Mechanical and electrical components and systems
C. Finding replacement parts
D. All of the above

98. The original documentation and history of the Navion aircraft indicates it was intended to last how many years?

A. Sixty years
B. Five years
C. Fifteen years
D. Twenty years

99. Airworthiness Directives have focused on:

A. Keeping older systems working
B. Interface issues between new and old systems
C. Training AMTs on modern technology components
D. Determining how new technology filters down to aging aircraft

100. As an airplane ages the normal annual inspection minimum requirements may not change.

A. True
B. False

101. Special inspections may be needed because of:

A. Owner's history and use
B. Planned modifications
C. Storage conditions
D. Regular maintenance over the years

Recip Technology: Tips From Lycoming Technical Support

102. Lycoming requires a tear-down inspection be done when

A. A strike occurs that results in propeller damage where a repair is required
B. While being towed if the prop hits the hangar door and has to be repaired
C. Any strike with an object that causes a sudden decrease in rpm and requires propeller repair
D. All of the above

103. Why don't the parts I order from the parts catalog match the parts in my engine?

A. Parts catalog is out of date
B. Parts manufacturer changed the design and composition
C. Parts from a different manufacturer
D. A and B

104. What is frequently overlooked during oil and filter changes?

A. The suction screen inspection
B. Evidence of metal particles
C. A and B
D. None of the above

105. To help troubleshoot engine problems:

A. Have the current technical publication
B. Call Lycoming Technical Support
C. Know the engine serial number
D. All of the above

Industry Viewpoint: Aging GA Aircraft

106. What is critical to the condition of an aircraft but difficult to determine from aircraft records?

A. Where and how the aircraft was stored
B. What the climatic conditions were in the area where owner lived
C. How long the aircraft was inactive
D. How much you can charge for your time

Airframe Technology: More on S-LSA Maintenance

107. Two federal laws encourage the use of industry-developed consensus standards in federal government regulatory and procurement activities. They are:

A. NISTA and NTAA
B. NATA and NBAA
C. IATA and EASA
D. None of the above

108. FARS trump consensus standards since FARs are adopted pursuant to the rule-making procedure and the consensus standards are not approved.

A. True
B. False

109. Restrictions on AMT authority to perform maintenance on Special Light Sport Aircraft can be found where?

A. ASTM consensus standards
B. Manufacturer's maintenance manuals
C. Federal Aviation Regulations
D. A and B

Staying Legal: Criminal Liability and Aviation Safety

110. What was the first large criminal investigation into the facts and circumstances of a major U.S. aircraft disaster?

A. Sunjet Aviation and Payne Stewart case
B. Continental Airlines and the Concorde case
C. SabreTech and the Valujet case
D. American Airlines and US Airways merger

111. There is a fear that as time goes on the trend toward criminal investigations in aircraft accidents will continue to become a routine part of the process.

A. True
B. False

112. Who has led the way in aircraft investigation by providing for the nondisclosure of witness statements so that they may not be used for any disciplinary or criminal actions, or any other administrative proceedings?

A. French courts
B. U.S. Air Force
C. NTSB
D. U.S. Army

113. The FAA has authority to grant immunity from administrative action to witnesses in accident cases when it believes it will aid in the discovery of the cause of an accident. What programs are involved?

A. Aviation Safety Reporting Program
B. Flight Operations Quality Assurance
C. Aviation Safety Action Program
D. All of the above

Management Matters: Success with Standardization

114. Tribal knowledge is a type of training that allows senior members of the organization to share how tasks are to be done.

A. This form of training fails to guarantee consistency
B. Training of this type allows anyone to ask why it is done this way
C. It promotes a culture of continuous improvement
D. All of the above

115. Standardized practices:

A. Improve completion times and quality of work
B. Reduce the chance of bad experiences of customers being shared across the Internet
C. Must be part of the company culture to be enforceable
D. All of the above

Management Matters: Ground Safety Affects Us All

116. Areas of risk once an airplane lands do not include:

A. Marshalling and parking
B. Passenger safety and security
C. Fueling and maintenance operations
D. Airport security

117. Direct costs associated with aircraft damage on the apron and in maintenance facilities are more than

A. $2.1 billion a year
B. $3.5 billion a year
C. $1.2 billion a year
D. $5 billion a year

118. What is the five-second rule?

A. Before you begin any task, ask yourself what harm or damage could result from your actions.
B. Wait five seconds and ask your boss what you should do.
C. If you can't figure out a solution in five seconds, let someone else handle it.
D. None of the above.

Industry Viewpoint: Electronic Distractions

119. Distractions from the use of cell phones during aircraft maintenance are prohibited by some companies but not the FAA.

A. True
B. False

ARSA Outlook: Words Matter

120. Public aircraft means an aircraft is being used for regular operations and is covered by FAA oversight.

A. True
B. False

AUGUST 2013

Professionalism: Fueling Your Career with JiET-A

121. Currently, more than _____employees in the aerospace industry sector work in the Rockford, IL, area, making it the ____ in the nation in terms of concentration of aerospace production employment.

A. 8,000 employees, fifth in the nation
B. 6,500 employees, sixth in the nation
C. 7,000 employees, fourth in the nation
D. 6,500 employees, seventh in the nation

122. Jeff Kaney says the No. 1 limiting factor to growth for Rockford companies is:

A. Lack of qualified manpower
B. Not enough diversity
C. Lack of senior management involved in the community
D. They aren't interested in hiring employees

123. The Joint Institute of Engineering & Technology, Aerospace is working with Rock Valley College, Northern Illinois University, Rockford College, and Embry-Riddle to:

A. Have graduates participate in local internships
B. Educate students so they move away to better jobs
C. Provide impractical job experience
D. Develop the Alaskan pipeline

Airframe Technology: FARs vs. Consensus Standards

124. When maintenance should occur on Light Sport Aircraft is determined by:

A. The FAA
B. Manufacturers who publish manuals on annual and 100-hour inspection checklists
C. Manufacturers who issue instructions for continued safe operation through safety directives
D. Both B and C

125. According to the FAA, S-LSA manufacturers are permitted to impose training, experience, or certification requirements beyond the FARs.

A. True
B. False

Cover Story: KC-135 Stratotanker

126. CAStLE's goal is to research ways to keep the Air Force's aging fleet in operation by ensuring extended life cycles, lower maintenance costs, and improved pilot safety.

A. True
B. False

127. As part of its contract with CAStLE, Sabreliner began a __ year teardown for an analysis of the 1957 Model KC-135E Stratotanker fuselage, empennage, and wings.

A. Three
B. Two
C. One and one-half
D. One

128. After cutting the aircraft into sections, disassembled into parts, parts were stripped of paint and sealant, photographed, and inspected for fatigue cracks and corrosion, the findings were detailed in a __ page report.

A. 1,500
B. 1,734
C. 1,437
D. 1,537

Military Operations: F-35 Joint Strike Fighter

129. The F-35 was designed for simplicity; manufacturers worked in parallel, addressing potential obstacles in real time. Manufacturers did not include:

A. Pratt & Whitney
B. Lockheed Martin
C. Rolls-Royce
D. Northrop Grumman

130. To improve maintenance procedures, the F-35:

A. Has an access panel near the fuel port on the starboard nacelle that allows a laptop hookup
B. 97 percent of the electronics are first-tier accessible
C. The cockpits, weapons, and avionics are identical across all platforms
D. All of the above

Industry Viewpoint: One Helicopter Accident, Many Maintenance Lessons

131. AN NTSB accident report on a helicopter crash outside Las Vegas that was caused due to improper maintenance identified these main issues related to maintenance:

A. Improper reuse of degraded self-locking nuts
B. Maintenance personnel fatigue and fatigue recognition training
C. Need for workcards with inadequately detailed steps
D. A and B

From The FAA: What if There Was a Maintenance Fatigue Rule?

132. Fatigue-related maintenance errors would usually not contribute to:

A. A serious accident
B. Maintenance rework
C. Costly aircraft ground damage
D. Personnel injury

133. Knowledge of fatigue hazards can become clouded by the necessity of meeting deadlines, fulfilling delivery promises, or pocketing extra overtime wages.

A. True
B. False

134. The FAA offers maintenance fatigue safety practices through all of these except:

A. Aircraft Maintenance Technology
B. Web-based courses
C. Safety inspectors speaking at industry forums
D. An iPad app

135. If hours are exceeded, a fatigue risk management policy according to EASA should include:

A. Additional supervision and independent inspection
B. Limitation of tasks to non-safety critical
C. Use of additional rest breaks or nap in accordance to established guidelines
D. All of the above

Legal Matters: FAA SMS … Boom or Bust?

136. The FAA proposes to add the SMS rule, a performance-based regulation, to existing regulations and technical operating standards to deal with gaps best addressed through improved management practices.

A. True
B. False

137. The SMS is an attempt by the FAA to create a safety system that meshes with what other SMS programs?

A. NATA and NBAA
B. ICAO and EASA
C. ATOS and ASAP
D. FDAP and FOQA

Management Matters: Be the Best Instructor You Can Be

138. What are the different types of learners?

A. Visual
B. Audible
C. Tactile
D. All of the above

139. When developing training content:

A. Have a clear understanding of the subject with practical examples
B. The material should be easy to follow and understand
C. A and B
D. Don't worry about skill level of students or trainees

140. What is the preferred student to trainer ratio?

A. 15:1
B. 30:1
C. 12:1
D. 20:1

141. The author claims the trainers don't need to be experts, but they should be capable of fielding questions and following up with further research.

A. True
B. False

AMTSociety Update: Spreading the Message

142. AMTSociety is developing relationships with other associations to grow the organization and to deliver more to the members. What association is not mentioned?

A. ARSA
B. RAA
C. NBAA
D. EAA

SEPTEMBER 2013

MRO Operations: AJW Technique

143. The AJW Group stocks a core inventory of spares with a value of about _____ for the modern Boeing and Airbus fleets.

A. $600 million
B. $500 million
C. $500 billion
D. $50 million

144. AJW Technique achieved full TCCA/FAA and EASA certification in ____ months.

A. Six
B. Eight
C. Seven
D. Nine

Airframe Technology: "Hey! This is Your Airplane Talking to You!"

145. What are the main inhibitors to a constant stream of all data from the aircraft while in flight?

A. Cost and data throughput
B. Maintenance training
C. Airlines holding back on new technology
D. FARs

146. What connections create a collaborative effort to rectify the situation or determine the root cause of the event?

A. Electronic
B. Wiring
C. Industry
D. OEM

Cover Story: More Than Just an Oil Change

147. By offering improved high temperature performance, today's HPC lubricants are augmenting the on-wing life of the engine by reducing scheduled and unscheduled maintenance activity.

A. True
B. False

148. The cost of fleet engine oils represents _____ percent of the annual operating cost for a twin-engine, single aisle standard body commercial aircraft.

A. 1 percent
B. 0.01 percent
C. 5 percent
D. 2 percent

Airframe Technology: The ABC's of Composite Repair

149. The National Institute of Aviation Research projects that the use of composites in aircraft construction will _____ over the next 20 years.

A. Quadruple
B. Triple
C. Double
D. Stay the same

150. There is a gap between the manufacturer's development and production of the composite aircraft and the maintenance industry to maintain them. The problem?

A. Not enough technicians trained and experienced in composite inspection and repair
B. Little standardization of repair procedures among manufacturers
C. Both A and B
D. OEMs aren't offering training specific to their aircraft

From The FAA: Support for Human Factors Training: Look Down Under

151. The Australian Civil Aviation Safety Authority (CASA)'s Safety Behaviours – Human Factors for Engineers contains:

A. Video
B. Update of Dirty Dozen and PEAR model
C. Workbook with activities for each chapter
D. All of the above

Management Matters: Where Am I Going and How Do I Get There?

152. To achieve your career goals, the author says you should:

A. Write down your goals
B. Take one step at a time
C. Tell others what your goals are
D. All of the above

Staying Legal: U.S. Constitution Dead or Alive?

153. The article identifies what organization for threatening general aviation pilots?

A. Local sheriffs and police
B. Department of Homeland Security
C. The FAA
D. TSA

ARSA Outlook: The Next Generation

154. The author says it's up to _____ of modern aircraft to ensure that regulators and maintenance providers understand design requirements and special conditions before creating maintenance or alteration actions.

A. The designer
B. The FAA
C. Director of maintenance
D. All of the above

OCTOBER 2013

Cover Story: Reimagined, Rebuilt, Reborn

155. The Nextant 400 XTi has roots to the:

A. Cessna Citation
B. Beech King Air
C. Mitsubishi MU-300
D. Learjet

156. After the new interior installation, the ambient noise level in the cabin is:

A. Higher
B. The same
C. Lower
D. None of the above

157. The Nextant facility production line is set up similar to:

A. An OEM
B. A modification shop
C. A STC line
D. A PMA line

158. As the airplanes are completed they are given which of the following:

A. New data plate
B. New date of manufacture
C. New production number
D. All of the above

159. In the horizontal tail stronger ribs and other components are used to:

A. Reduce paint wear
B. Reduce inspection time
C. Reduce fretting and loosening of rivets
D. A and B

160. Redesign of the nacelle structure creates:

A. A nacelle baggage area
B. A lifting surface
C. A negative lift effect
D. No change

Airframe Technology: The Complexity of PMA and STC Approvals

161. Parts Manufacturer Approval (PMA) is an approval granted by the OEM.

A. True
B. False

162. Supplemental Type Certificate (STC) is issued six months before an applicant has received FAA approval to modify an aircraft from its original design.

A. True
B. False

163. In most cases the STC applicant has the option of justifying their design by:

A. Field approval
B. Testing
C. Engineering analysis
D. B or C

164. A DER oversees the process and submits a Form _____ to the FAA recommending that a product be given approval.

A. 337
B. 8130-3
C. 8110-7
D. 8110-3

165. In the example used, a 9G forward-loading condition for seats would require engineering analysis to prove the design to be _____ 9G:

A. 1.3 times
B. 1.5 times
C. 1.9 times
D. Equal to

Avionics Technology: The Magic in the Cabin

166. In this article the acronym CMS refers to:

A. Crew Maneuvering Systems
B. Cabin Management Systems
C. Crew Management Systems
D. Cabin Maintenance Systems

167. Transferring digital data efficiently makes software and data storage possible in remote devices which can lessen the number and size of control components.

A. True
B. False

168. In this article the acronym EWIS refers to:

A. Electrical Wiring Interior System
B. Electrical Wiring Interface Schematic
C. Electrical Wiring Interface System

169. Bend radius for a CAT 5 Ethernet cable is referenced in Advisory Circular 43.13.

A. True
B. False

170. Primary maintenance training schools for technicians typically include in their curriculum:

A. Reciprocating engine technology
B. Ethernet technology
C. Sheetmetal and structures
D. A and C

171. Bluetooth wireless devices have been found to _____ Wi-Fi networks in aircraft.

A. Supplement
B. Enhance
C. Corrupt
D. Have no effect

Recip Technology: Let's Bring Part 23 Rules Up To Date

172. Federal Aviation Regulation (FAR) Part 23 airworthiness standards currently govern certification of:

A. Large airplanes
B. Small airplanes
C. Turbine engines
D. Turboprop propellers

173. The acronym ARC refers to:

A. Airport Runway Committee
B. Aviation Rulemaking Chapter
C. Aviation Rulemaking Committee
D. None of the above

174. The Part 23 ARC was limited to which region:

A. The USA
B. Europe
C. Asia
D. None of the above

175. The average age of the piston-engine airplane in the United States is:

A. 20 years old
B. 30 years old
C. 40 years old
D. 50 years old

Turbine Technology: Pushing the Envelope for Aircraft Health Monitoring and Maintenance Technology

176. Receiving and analyzing data collected from aircraft systems' performance can drive:

A. Scheduled maintenance to become unscheduled maintenance
B. Unscheduled maintenance to become scheduled maintenance
C. Dispatch delays
D. Poor reliability

177. The article suggests primary technician training is not keeping up with the skills needed to maintain modern aircraft.

A. True
B. False

178. With the aircraft health and trend monitoring system, after each flight the data is transmitted:

A. Automatically
B. By the pilot
C. By the technician
D. By the operations center

ARSA Outlook: Take Protective Measures

179. The author suggests when making a maintenance entry to keep the entry:

A. As vague as possible
B. As skimpy as possible
C. Do not include your name
D. None of the above

180. If the regulators ask questions about your maintenance entry you should answer based upon memory and not fact.

A. True
B. False

TECHNICIAN AWARD ELIGIBILITY

The FAA encourages all eligible technicians and employers to participate in the awards program each year. Continuous participation in the FAA William (Bill) O'Brien Awards Program for regulatory, airworthiness, and safety awareness training will reinforce and promote/foster a high level of professionalism and safety within the industry:

a. An FAA-certificated mechanic or repairman (technician) in general aviation, repair station, or air carrier maintenance working on aircraft component parts for 14 CFR parts 91, 121, 125, 127, 129, 133, 135, 137, 141, or 145 entities.

b. A noncertificated maintenance technician employed by a part 121/135 air carrier or a part 145 repair station and working on aircraft or component parts.

c. A student in an FAA-certificated part 147 Aviation Maintenance Technician School who is maintaining a course average grade of "C" or better. The student must receive training required by this award program outside of his or her regular part 147 school curriculum.

d. An apprentice mechanic working full time or part time performing aircraft maintenance under an FAA-certificated mechanic or repairman is also eligible to receive an award.

All phases require that individuals register at http://www.FAASafety.gov, enroll in the William (Bill) O'Brien Awards Program, and complete the Core Training Course/Courses, which can be found in the Aviation Learning Center at http://www.FAASafety.gov.

AMT AWARD REQUIREMENTS

a. Phase I. Bronze (total training – 12 hours)

(1) Complete Mandatory Core Training available at Aviation Learning Center at www.FAASafety.gov.

(2) Satisfactorily complete 12 hours of aviation maintenance training.

b. Phase II. Silver (total training – 40 hours)

(1) Complete Mandatory Core Training available at Aviation Learning Center at www.FAASafety.gov.

(2) Satisfactorily complete 40 hours of aviation maintenance training.

c. Phase III. Gold (total training – 80 hours)

(1) Complete Mandatory Core Training available at Aviation Learning Center at www.FAASafety.gov.

(2) Complete college level course or three credit hours or 40 classroom hours in Mathematics, English, Science, Aviation Safety, Human Factors, Quality Control, or similar aviation career related courses.

(3) Satisfactorily complete 80 hours of maintenance training.

NOTE FROM *AMT*:

Are you ready to take the exam, but don't have all of the back issues of Aircraft Maintenance Technology from 2013?

Well, you have several options. You can go to your buddy who receives the magazine and ask to borrow his issues. If by chance he is unwilling to part with his copies, you still have other options.

You can call us at (920) 563-6388 to order any back issues you are missing. Back issues are $10 per copy. Or you can also visit our web site www.AviationPros.com. You will be able to perform a search by article title.

While you are there, you can also browse through all that AviationPros.com has to offer. Read the latest industry news, industry videos, and AMT Webinars. While you're there, be sure to check out the most recent blogs and the AMTSociety IA Renewal schedule.

While there, why not sign up for our electronic newsletter delivered to you weekly via email, or any of the other electronic products we offer.

Just a reminder that things have changed over the last several years. AC 65-25E requires 12 hours for a Bronze Award, 40 hours for a Silver, and 80 hours for a Gold.

As last year, the exam is now available online and can be submitted online. If you prefer to submit the paper version, please be sure that all of the information on the answer sheet is filled in. We receive several tests each year that we can't issue a certificate for because the return address information is not filled out. It is also a good idea to photocopy your completed test just in case it doesn't make it to our offices.

Good luck on the exam!

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