8/10/2021

AMP - Aviation Maintenance Technician Powerplant

The following sample questions for Aviation Maintenance Technician Powerplant (AMP) are suitable study material to satisfy the powerplant portion of the Aviation Maintenance Technician test. These questions are a representation of questions that can be found on AMP test. The applicant must realize that these questions are to be used as a study guide, and are not necessarily actual test questions. The full AMP test contains 100 questions. The Application Identification, Information Verification, and Authorization Requirements Matrix lists all FAA exams. It is available at

www.faa.gov/training_testing/testing/media/testing_matrix.pdf

The FAA testing system is supported by a series of supplement publications. These publications include the graphics, legends, and maps that are needed to successfully respond to certain test questions. FAA-CT-8080-4G, Airman Knowledge Testing Supplement for Aviation Maintenance Technician – General, Airframe, and Powerplant; and Parachute Rigger is available at

www.faa.gov/training_testing/testing/supplements/media/amt_pr_akts.pdf

The Learning Statement Reference Guide for Airman Knowledge Testing contains listings of learning statements with their associated codes. Matching the learning statement codes with the codes listed on your Airman Knowledge Test Report assists in the evaluation of knowledge areas missed on your exam. It is available at

www.faa.gov/training_testing/testing/media/LearningStatementReferenceGuide.pdf

The online Aviation Maintenance Technician Powerplant (AMP) practice test is available on the PSI website at

https://faa.psiexams.com/FAA/login

NOTE: Some questions in the PSI Practice Test may contain the reference "Refer to FAA-CT-8080 . ." You may access the referred to supplement by opening the following link in a separate window while taking the test.
www.faa.gov/training_testing/testing/supplements/media/amt_pr_akts.pdf

1. **Which type of bearings are generally used for connecting rods and cam shafts?**

   A. **Plain.**
   B. **Roller.**
   C. **Ball.**

   Metadata: LSCCode : AMP056

2. **The five events of a four-stroke cycle engine in the order of their occurrence are**

   A. **intake, ignition, compression, power, and exhaust.**
   B. **intake, compression, power, ignition, and exhaust.**
   C. **intake, compression, ignition, power, and exhaust.**

   Metadata: LSCCode : AMP056

3. **What is likely to occur if a reciprocating engine is operated at high power settings before it is properly warmed up?**

   A. **Oil starvation of bearings and other parts.**
   B. **Excessive engine oil pressure.**
   C. **Thermal shock of cylinders.**

   Metadata: LSCCode : AMP030

4. **During the inspection of an engine control system in which push pull control rods are used, the threaded rod ends should**

   A. **ensure that the safety wire passes through the hole in the shank of the rod end.**
   B. **be checked for thread engagement of at least two threads but not more than four threads.**
   C. **be checked for the amount of thread engagement by means of the inspection holes.**

   Metadata: LSCCode : AMP056

5. **If the ignition switch is moved from BOTH to either LEFT or RIGHT during an engine ground check, normal operation is usually indicated by a slight**

   A. **increase in manifold pressure.**
   B. **bump in propeller rpm.**
   C. **drop in torquemeter pressure indication.**

   Metadata: LSCCode : AMP063

6. **Some cylinder barrels are hardened by**

   A. **nitriding.**
   B. **honing.**
   C. **quenching.**

   Metadata: LSCCode : AMP056

7. **What is the purpose of installing two or more springs on each valve in an aircraft engine?**

   A. **To equalize side pressure on the valve stem.**
   B. **To eliminate valve spring vibration or surging.**
   C. **To help equalize valve face loading.**

   Metadata: LSCCode : AMP056

8. **The volume of a cylinder equals 70 cubic inches when the piston is at bottom center. When the piston is at the top of the cylinder, the volume equals 10 cubic inches. What is the compression ratio?**

   A. **10:7**
   B. **10:1**
   C. **7:1**

   Metadata: LSCCode : AMP056

9. **Three types of turbine blades are**

   A. **impulse, converging, and impulse-converging.**
   B. **impulse, reaction, and impulse-reaction.**
   C. **impulse, diverging, and impulse-diverging.**

   Metadata: LSCCode : AMP068

10. **Who establishes the recommended operating time between overhauls (TBO) of a turbine engine used in general aviation?**

    A. **Engine manufacturer.**
    B. **TBO does not apply to turbine engines.**
    C. **Aircraft manufacturer.**

    Metadata: LSCCode : AMP068

11. **Which of the following may be used to mark turbine engine components exposed to high temperatures?**

    A. **Grease or wax pencil.**
    B. **Layout dye.**
    C. **Graphite lead pencil.**

    Metadata: LSCCode : AMP004

12. **Who establishes mandatory replacement times for critical components of turbine engines?**

    A. **Aircraft manufacturer.**
    B. **Component manufacturer.**
    C. **Engine manufacturer.**

    Metadata: LSCCode : AMP058

13. **What is the first engine instrument indication of a successful start of a turbine engine?**

    A. **A rise in engine rpm.**
    B. **A rise in oil temperature.**
    C. **A rise in the exhaust gas temperature.**

    Metadata: LSCCode : AMP068

14. **When starting a turbine engine, a hung start is indicated if the engine**

    A. **exhaust gas temperature exceeds specified limits.**
    B. **fails to reach idle rpm.**
    C. **N1 is normal, but N2 is low.**

    Metadata: LSCCode : AMP068

15. **Turbine blades are generally more susceptible to operating damage than compressor blades because of**

    A. **the high probability of carbon deposits.**
    B. **exposure to high temperatures.**
    C. **less exposure to solution during engine pressure wash.**

    Metadata: LSCCode : AMP068

16. **The non-rotating axial-flow compressor airfoils in an aircraft gas turbine engine are called**

    A. **rotor blades.**
    B. **stator vanes.**
    C. **disc rims.**

    Metadata: LSCCode : AMP068

17. **A turbine engine hot section is particularly susceptible to which kind of damage?**

    A. **Erosion.**
    B. **Cracking.**
    C. **Elongation.**

    Metadata: LSCCode : AMP069

18. **Which of the following acts as a diffuser in a turbine engine and converts velocity to pressure?**

    A. **Impeller.**
    B. **Manifold.**
    C. **Stators.**

    Metadata: LSCCode : AMP068

19. **How is the flow range of the fuel discharge nozzles installed in a fuel injected reciprocating engine indicated?**

    A. **By a letter stamped on the hex of the nozzle body.**
    B. **By a number stamped on the hex of the nozzle body.**
    C. **By the code located on the engine data plate.**

    Metadata: LSCCode : AMP041

20. What publication is used for guidance to determine whether a powerplant repair is major or minor?

A. Airworthiness Directives
B. 14 CFR Part 43
C. Aircraft Owner`s Manual

Metadata: LSCCode : AMP048

21. Which of the following instrument conditions is acceptable and does not require immediate correction?

A. Case paint chipped.
B. Instrument glass fogged.
C. Mounting screws loose.

Metadata: LSCCode : AMP012

22. Turbine engine EGT thermocouples are constructed of

A. iron and constantan.
B. copper and constantan.
C. chromel and alumel.

Metadata: LSCCode : AMP066

23. Which of the following is a good indication of a malfunctioning fuel nozzle when inspecting the exhaust section of an aircraft turbine engine?

A. Buckling of the combustion liner.
B. Hotspots on the tail cone.
C. Carbon build up in the exhaust.

Metadata: LSCCode : AMP056

24. The thermocouple leads used to measure cylinder temperature on an aircraft reciprocating engine

A. should be cut and trimmed to fit if the lead is too long.
B. are connected to the electrical wiring on one end and the cylinder on the other end.
C. connected to the cylinder can only be bayonet type.

Metadata: LSCCode : AMP009

25. Which statement best describes the blowout type indicator disk on a fixed fire extinguishing system?

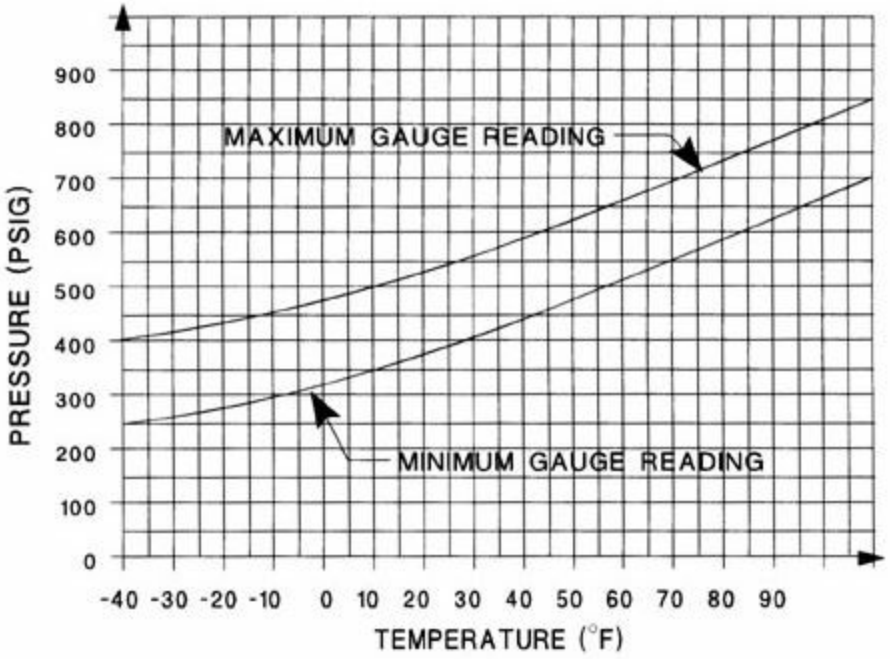
A. When the red indicator disk is missing, it indicates the fire extinguishing system is charged and ready for use.

B. When the yellow indicator disk is missing, it indicates the fire extinguishing system has been normally discharged.

C. When the green indicator disk is missing, it indicates that the fire extinguishing system may have been normally discharged.

Metadata: LSCCode : AMP036

26. (Refer to FAA-CT-8080-4G, Appendix 2, Figure 3.) What are the fire-extinguisher container pressure limits when the temperature is 50°F?



A. 425 - 575 PSIG.

B. 435 - 605 PSIG.

C. 475 - 625 PSIG.

Metadata: LSCCode : AMP036

27. Which of the following fire detection systems are commonly used in an engine nacelle?

A. Fire detection control unit.

B. Thermocouple detector.

C. Kidde continous-loop.

Metadata: LSCCode : AMP041

28. What is used to polish commutators or slip rings?

- **A. Double-0 sandpaper.**
- **B. Stiff bristle brushes.**
- **C. Emery cloths.**

Metadata: LSCCode : AMP063

29. When installing electrical wiring parallel to a fuel line, the wiring should be

- **A. below the fuel line.**
- **B. beside the fuel line.**
- **C. above the fuel line.**

Metadata: LSCCode : AMP026

30. The reason for flashing the field in a generator is to

- **A. restore residual magnetism to the field frame.**
- **B. ensure proper operation of the capacitor.**
- **C. relieve the unit of any residual electrical energy.**

Metadata: LSCCode : AMP044

31. A term commonly used when two or more electrical terminals are installed on a single lug of a terminal strip is

- **A. strapping.**
- **B. piggy backing.**
- **C. stacking.**

Metadata: LSCCode : AMP026

32. Aircraft wire size is determined by using a(n)

- **A. ohmeter.**
- **B. wire gauge.**
- **C. dial caliper.**

Metadata: LSCCode : AMP026

33. Starter brushes should be replaced when they are worn down to

- **A. one-half of the original length.**
- **B. three-quarters of the original length.**
- **C. one-quarter of the original length.**

Metadata: LSCCode : AMP006

34. The viscosity of a liquid is a measure of its

- **A. resistance to flow.**
- **B. rate of change.**
- **C. weight or density.**

Metadata: LSCCode : AMP029

35. Which of the following helps determine the proper grade of oil to use in a particular engine?

- **A. Adequate lubrication in various attitudes of flight.**
- **B. Positive introduction of oil to the bearings.**
- **C. Operating speeds of bearings.**

Metadata: LSCCode : AMP029

36. Specific gravity is a comparison of the weight of a substance to the weight of an equal volume of

- **A. oil at a specific temperature.**
- **B. distilled water at a specific temperature.**
- **C. mercury at a specific temperature.**

Metadata: LSCCode : AMP030

37. Which of the following has the greatest effect on the viscosity of lubricating oil?

- **A. Temperature.**
- **B. Engine rpm.**
- **C. Oil pressure.**

Metadata: LSCCode : AMP029

38. **In order to maintain a constant oil pressure as the clearances between the moving parts of an engine increase through normal wear, the supply pump output**

    A. **increases as the resistance offered to the flow of oil increases with more oil being returned to the pump inlet by the relief valve.**
    B. **remains relatively constant (at a given rpm) with less oil being returned to the pump inlet by the relief valve.**
    C. **remains relatively constant (at a given rpm) with more oil being returned to the pump inlet by the relief valve.**

    Metadata: LSCCode : AMP056

39. **Which of the following prevents oil from entering the main accessory case when the engine is not running?**

    A. **Pressure valve.**
    B. **Hydraulic fuse.**
    C. **Check valve.**

    Metadata: LSCCode : AMP030

40. **Which of the following factors has the least effect on the oil consumption of a specific engine?**

    A. **Mechanical efficiency.**
    B. **Engine rpm.**
    C. **Lubricant characteristics.**

    Metadata: LSCCode : AMP056

41. **If an oil filter element becomes completely clogged, the**

    A. **oil flow to the engine will be restricted.**
    B. **oil will be bypassed back to the oil tank.**
    C. **bypass valve will open, and the oil pump will supply unfiltered oil.**

    Metadata: LSCCode : AMP030

42. **Which of the following are distinct circuits of a high tension magneto?**

    A. **Magnetic, primary, and secondary.**
    B. **Magnetic, E-gap, and P lead.**
    C. **Primary, P lead, and secondary.**

    Metadata: LSCCode : AMP063

43. Advantages of dual ignition in aircraft engines include providing a backup magneto system, increasing the output power of the engine, and

A. permitting the use of lower grade fuels.
B. increasing the intensity of the spark at the spark plugs.
C. increasing the output power of the engine.

Metadata: LSCCode : AMP063

44. Defective spark plugs will cause the engine to run rough

A. during run up.
B. during cruise.
C. at all speeds.

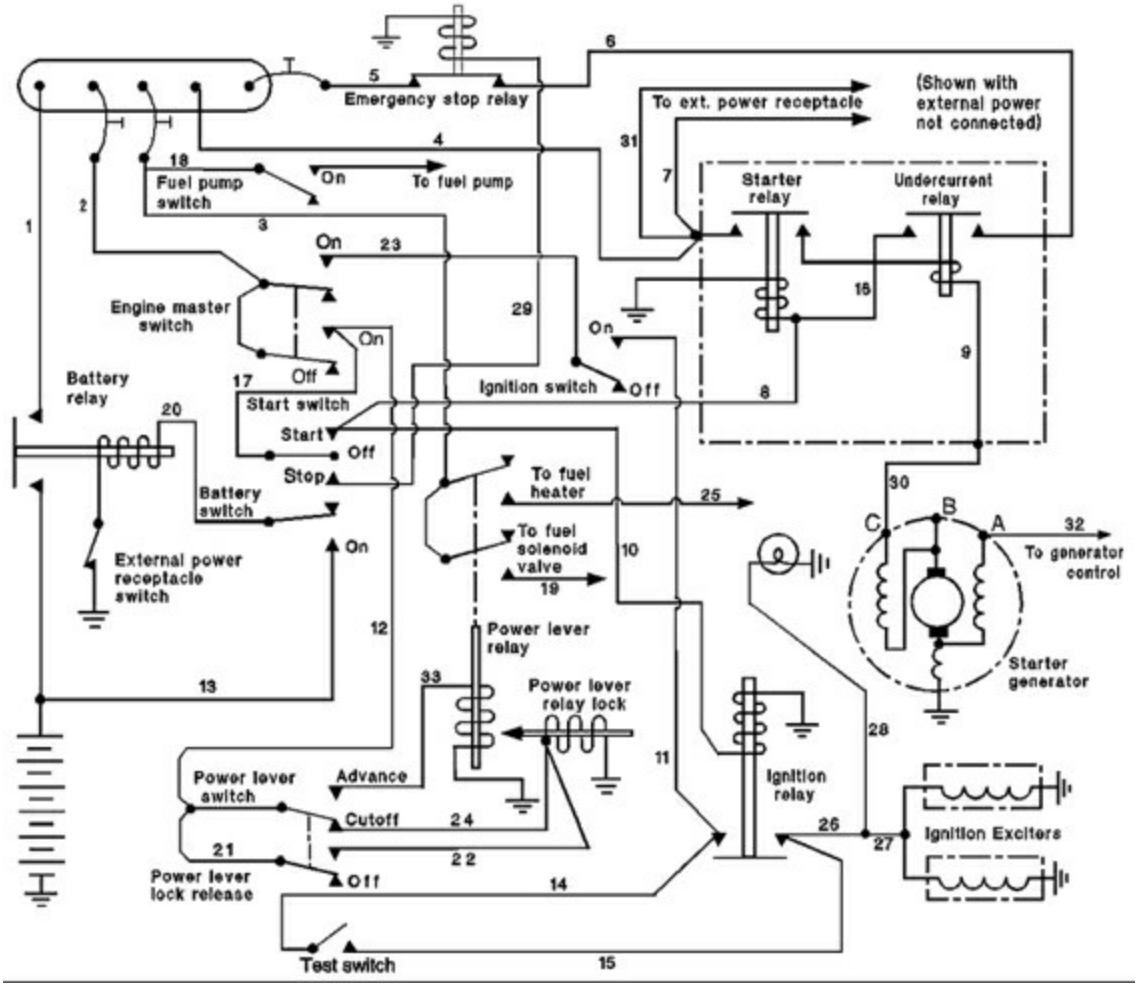
Metadata: LSCCode : AMP064

45. The primary advantage of pneumatic (air turbine) starters over comparable electric starters for turbine engines is

A. a significant lack of wear to the commutator.
B. that it does not disengage until the engine reaches idle.
C. its high power-to-weight ratio.

Metadata: LSCCode : AMP063

46. (Refer to FAA-CT-8080-4G, Appendix 2, Figure 5.) With power applied to the bus bar, what wire supplies standby power to the starter relay contact?



A. 4

B. 7

C. 8

Metadata: LSCCode : AMP068

47. The secondary coil of a magneto is grounded through the

A. ignition switch.

B. primary coil.

C. ground side of the breaker points.

Metadata: LSCCode : AMP063

48. The capacitor type ignition system is used almost universally on turbine engines primarily because of its high voltage and

A. low amperage.
B. long life.
C. high heat intensity.

Metadata: LSCCode : AMP068

49. In a turbine engine DC capacitor discharge ignition system, where are the high voltage pulses formed?

A. At the breaker.
B. At the triggering transformer.
C. At the rectifier.

Metadata: LSCCode : AMP068

50. Igniter plugs used in turbine engines have a long service life because they

A. have a high intensity spark.
B. operate continuously with a lower spark.
C. do not require continuous operation.

Metadata: LSCCode : AMP068

51. When a magneto is operating, what is the probable cause for a shift in internal timing?

A. The rotating magnet loses its magnetism.
B. The distributor gear teeth are wearing on the rotor gear teeth.
C. The cam follower wear and/or the breaker points wear.

Metadata: LSCCode : AMP047

52. The magnetic circuit of a magneto consists of a permanent multi-pole rotating magnet. The core is made of

A. hard steel.
B. soft iron.
C. electrical steel.

Metadata: LSCCode : AMP047

53. When troubleshooting an engine that will not idle, what would be a probable cause?

A. Economizer valve is not operating correctly.
B. Mixture setting is too rich.
C. Manifold valve is not operating properly.

Metadata: LSCCode : AMP042

54. What carburetor component limits the maximum airflow into the engine at full throttle?

A. Throttle valve.
B. Venturi.
C. Main metering jet.

Metadata: LSCCode : AMP022

55. What component is used to ensure fuel delivery during periods of rapid engine acceleration?

A. Acceleration pump.
B. Engine-driven fuel pump.
C. Power enrichment unit.

Metadata: LSCCode : AMP037

56. If fuel is found running from the carburetor with the engine not running, the likely cause is that the

A. float needle valve is not seated properly.
B. float level is adjusted too low.
C. main air bleed is clogged.

Metadata: LSCCode : AMP038

57. What corrective action should be taken when a carburetor is found to be leaking fuel from the discharge nozzle?

A. Replace the needle valve and seat.
B. Adjust the mixture control.
C. Adjust throttle linkage.

Metadata: LSCCode : AMP022

58. The primary purpose of the air bleed openings used with continuous flow fuel injector nozzles is to

- **A. provide for automatic mixture control.**
- **B. maintain constant fuel pressure.**
- **C. aid in proper fuel vaporization.**

Metadata: LSCCode : AMP041

59. Which of the following best describes the function of an automatic mixture control (AMC)?

- **A. It compensates for change in the air density due to temperature and altitude.**
- **B. It compensates for the air pressure above the fuel in the float chamber.**
- **C. It compensates for the air pressure in the venturi of a float-type carburetor.**

Metadata: LSCCode : AMP056

60. An electronic engine control (EEC) is a system that receives engine operating information and

- **A. adjusts a standard hydromechanical fuel control unit to obtain the most effective engine operation.**
- **B. develops the commands to various actuators to control engine parameters.**
- **C. controls engine operation according to ambient temperature, pressure, and humidity.**

Metadata: LSCCode : AMP068

61. Prior to performing engine trimming, you should

- **A. call the control tower to obtain current sea level barometric pressure and temperature.**
- **B. observe the reading on the aircraft Outside Air Temperature (OAT) gauge.**
- **C. obtain a true temperature reading comparable to that of the air that enters the engine.**

Metadata: LSCCode : AMP068

62. Where is the main fuel strainer located in the aircraft fuel system?

- **A. At the highest point in the fuel system.**
- **B. At the lowest point in the fuel system.**
- **C. At the inlet chamber of the carburetor.**

Metadata: LSCCode : AMP042

63. Which of the following is a function of the differential pressure controller?

A. It limits the maximum manifold pressure that can be produced by the turbocharger at full throttle conditions.
B. It controls all positions of the waste gate except at fully open position.
C. It controls the position of the waste gate after the aircraft has reached its critical altitude.

Metadata: LSCCode : AMP070

64. A method commonly used to prevent carburetor icing is to

A. preheat the intake air.
B. mix alcohol with the fuel.
C. electrically heat the throttle valve.

Metadata: LSCCode : AMP003

65. If a fire starts in the induction system during the engine starting procedure, what should the operator do?

A. Turn off the fuel pump switches.
B. Continue cranking the engine.
C. Turn off the magneto switches.

Metadata: LSCCode : AMP065

66. The position of the cowl flaps during normal cruise flight conditions is

A. closed.
B. open.
C. neutral.

Metadata: LSCCode : AMP056

67. Cracks in cooling fins that do not extend into the cylinder head

A. should be left alone and monitored.
B. may be repaired by removing the affected area and contour filing within limits.
C. may be repaired by adding a stiffener.

Metadata: LSCCode : AMP056

68. A bent cooling fin on an aluminum cylinder head should be

- **A. sawed off and filed smooth.**
- **B. left alone if no crack has formed.**
- **C. straightened out as much as possible without breaking.**

Metadata: LSCCode : AMP056

69. The rearward thrust capability of an engine with the thrust reverser system deployed is

- **A. less than its forward capability.**
- **B. greater than its forward capability.**
- **C. equal to its forward capability.**

Metadata: LSCCode : AMP071

70. Which of the following statements is true regarding thrust reverser systems?

- **A. The reverser system must be able to withstand high temperatures, be mechanically strong, relatively light in weight, and reliable.**
- **B. Engine thrust reversers on the aircraft usually will operate independently of each other.**
- **C. Mechanical blockage system design permits a deployment position aft of the exhaust nozzle only.**

Metadata: LSCCode : AMP008

71. Dislodged internal muffler baffles on a small reciprocating aircraft engine may cause

- **A. excessive exhaust back pressure.**
- **B. an engine overspeed problem.**
- **C. high oil consumption.**

Metadata: LSCCode : AMP056

72. The pressure between the turbocharger and the throttle valve is called

- **A. turbocharger boost pressure.**
- **B. induction manifold pressure.**
- **C. upper deck pressure.**

Metadata: LSCCode : AMP070

73. Propellers exposed to salt spray should be flushed with

A. engine oil.
B. fresh water.
C. soapy water.

Metadata: LSCCode : AMP052

74. Inspection of aluminum propeller blades by dye-penetrant inspection is accomplished to detect

A. fatigue failure.
B. material debond.
C. warpage.

Metadata: LSCCode : AMP052

75. Propeller blade station numbers increase from

A. hub center line to tip.
B. tip to hub center line.
C. blade shank butt to tip.

Metadata: LSCCode : AMP053

76. Which of the following determines oil and grease specifications for lubrication of propellers?

A. Lubricant manufacturer`s instructions.
B. Engine manufacturer`s instructions.
C. Propeller manufacturer`s instructions.

Metadata: LSCCode : AMP052

77. Ice formation on a propeller blade will

A. produce unbalance and vibration.
B. increase thrust and drag.
C. cause a change in blade angle.

Metadata: LSCCode : AMP053

78. How is anti-icing fluid ejected from the slinger ring on a propeller?

A. By pump pressure.
B. By centripetal force.
C. By centrifugal force.

Metadata: LSCCode : AMP053

79. If a flanged propeller shaft has dowel pins,

A. install the propeller so the blades are positioned for hand propping.
B. the propeller can only be installed in a given position.
C. the front cone should be checked for bottoming against the pins.

Metadata: LSCCode : AMP052

80. How does the propeller overspeed governor on a turboprop engine decrease propeller rpm?

A. When oil pressure is decreased, the return spring and counterweights force the oil out of the servo piston.
B. As oil pressure increases, the servo piston is pushed forward, and the feather spring is compressed.
C. When oil pressure is increased, the return spring and counterweights force the oil out of the servo piston.

Metadata: LSCCode : AMP053

81. Which of the following statements concerning the installation of a new fixed pitch wood propeller is true?

A. Inspect the bolts for proper torque after every 50 hours and annual inspection.
B. Install and tighten the bolts to the proper torque during installation; no inspection interval after that.
C. Inspect the bolts for proper torque after the first flight and after the first 25 hours of flying.

Metadata: LSCCode : AMP052

82. After proper removal of aluminum blade damage, the affected surface should be polished with

A. fine steel wool or scotch-brite.
B. very fine sandpaper or a crocus cloth.
C. soapstone or a wire brush.

Metadata: LSCCode : AMP052

83. Which of the following generally renders an aluminum alloy propeller unrepairable?

A. Blade face surface damage.
B. Leading or trailing edge damage.
C. Transverse cracks of any size.

Metadata: LSCCode : AMP052

84. Which of the following defects is a cause for rejection of wood propellers?

A. Dye penetrant inspection failure.
B. Bonding or separation of the trailing edge of the propeller blade.
C. Delamination found by conducting a tap test.

Metadata: LSCCode : AMP052

85. When lubricating a newly overhauled steel hub propeller, you should lubricate the propeller

A. after 10 hours of operation.
B. at the next 100-hour inspection.
C. after one to two hours of operation.

Metadata: LSCCode : AMP052

86. Fuel is normally supplied to an APU from the

A. APU independent fuel tank.
B. airplane`s header fuel tank.
C. airplane`s main fuel tank.

Metadata: LSCCode : AMP017