06/09/2006
Bank: (Aviation Mechanic Powerplant)
Airman Knowledge Test Question Bank

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1. A03P AMP

If the oil pressure of a cold engine is higher than at normal operating temperatures, the

A) oil system relief valve should be readjusted.

B) engine's lubrication system is probably operating normally.

C) oil dilution system should be turned on immediately.

2. A03P AMP

An engine misses in both the right and left positions of the magneto switch. The quickest method for locating the trouble is to

A) check for one or more cold cylinders.

B) perform a compression check.

C) check each spark plug.

3. A03P AMP

Engine crankshaft runout is usually checked

1. during engine overhaul.

2. during annual inspection.

3. after a 'prop strike' or sudden engine stoppage.

4. during 100-hour inspection.

A) 1, 3, and 4.

B) 1 and 3.

C) 1, 2 and 3.

4. A03P AMP

If an engine cylinder is to be removed, at what position in the cylinder should the piston be?

A) Bottom dead center.

B) Top dead center.

C) Halfway between top and bottom dead center.

5. A03P AMP

The horsepower developed in the cylinders of a reciprocating engine is known as the

A) shaft horsepower.

B) indicated horsepower.

C) brake horsepower.

6. A03P AMP

What does valve overlap promote?

A) Lower intake manifold pressure and temperatures.

B) A backflow of gases across the cylinder.

C) Better scavenging and cooling characteristics.

7. A03P AMP

Which fuel/air mixture will result in the highest engine temperature (all other factors remaining constant)?

A) A mixture leaner than a rich best power mixture of .085.

B) A mixture richer than a full rich mixture of .087.

C) A mixture leaner than a manual lean mixture of .060.

8. A03P AMP

When does valve overlap occur in the operation of an aircraft reciprocating engine?

A) At the end of the exhaust stroke and the beginning of the intake stroke.

B) At the end of the power stroke and the beginning of the exhaust stroke.

C) At the end of the compression stroke and the beginning of the power stroke.

9. A03P AMP

What is the best indication of worn valve guides?

A) High oil consumption.

B) Low compression.

C) Low oil pressure.

10. A03P AMP

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

A) large drop in RPM.

B) momentary interruption of both ignition systems.

C) slight drop in RPM.

11. A03P AMP

Engine operating flexibility is the ability of the engine to

A) deliver maximum horsepower at a specific altitude.

B) meet exacting requirements of efficiency and low weight per horsepower ratio.

C) run smoothly and give the desired performance at all speeds.

12. A03P AMP

If the oil pressure gauge fluctuates over a wide range from zero to normal operating pressure, the most likely cause is

A) low oil supply.

B) broken or weak pressure relief valve spring.

C) air lock in the scavenge pump intake.

13. A03P AMP

A characteristic of dyna focal engine mounts as applied to aircraft reciprocating engines is that the

A) shock mounts eliminate the torsional flexing of the powerplant.

B) engine attaches to the shock mounts at the engine's center of gravity.

C) shock mounts point toward the engine's center of gravity.

14. A03P AMP

Excessive valve clearance results in the valves opening

A) late and closing early.

B) early and closing late.

C) late and closing late.

15. A03P AMP

After spark plugs from an opposed engine have been serviced, in what position should they be reinstalled?

A) Next in firing order to the one from which they were removed.

B) Swapped bottom to top.

C) Next in firing order to the one from which they were removed and swapped bottom to top.

16. A03P AMP

What is the purpose of a power check on a reciprocating engine?

A) To check magneto drop.

B) To determine satisfactory performance.

C) To determine if the fuel/air mixture is adequate.

17. A01P AMP

Which statement is true regarding bearings used in high powered reciprocating aircraft engines?

A) The outer race of a single row, self aligning ball bearing will always have a radius equal to the radius of the balls.

B) There is less rolling friction when ball bearings are used than when roller bearings are employed.

C) Crankshaft bearings are generally of the ball-type due to their ability to withstand extreme loads without overheating.

18. A01P AMP

The five events of a four stroke cycle engine in the order of their occurrence are

A) intake, ignition, compression, power, exhaust.

B) intake, power, compression, ignition, exhaust.

C) intake, compression, ignition, power, exhaust.

19. A01P AMP

Which of the following is a characteristic of a thrust bearing used in most radial engines?

A) Tapered roller.

B) Double row ball.

C) Deep groove ball.

20. A01P AMP

What is the principal advantage of using propeller reduction gears?

A) To enable the propeller RPM to be increased without an accompanying increase in engine RPM.

B) To enable the engine RPM to be increased with an accompanying increase in power and allow the propeller to remain at a lower, more efficient RPM.

C) To enable the engine RPM to be increased with an accompanying increase in propeller RPM.

21. A01P AMP

Which condition would be the least likely to be caused by failed or failing engine bearings?

A) Excessive oil consumption.

B) High oil temperatures.

C) Low oil temperatures.

22. A04P AMP

What is the basic operational sequence for reducing the power output of an engine equipped with a constant speed propeller?

A) Reduce the RPM, then the manifold pressure.

B) Reduce the manifold pressure, then retard the throttle to obtain the correct RPM.

C) Reduce the manifold pressure, then the RPM.

23. A04P AMP

When will small induction system air leaks have the most noticeable effect on engine operation?

A) At high RPM.

B) At maximum continuous and takeoff power settings.

C) At low RPM.

24. A04P AMP

Which of the following would most likely cause a reciprocating engine to backfire through the induction system at low RPM operation?

A) Idle mixture too rich.

B) Clogged derichment valve.

C) Lean mixture.

25. A04P AMP

Which of the following conditions would most likely lead to detonation?

A) Late ignition timing.

B) Use of fuel with too high an octane rating.

C) Use of fuel with too low an octane rating.

26. A04P AMP

Which of the following engine servicing operations generally requires engine pre oiling prior to starting the engine?

A) Engine oil and filter change.

B) Engine installation.

C) Replacement of oil lines.

27. A04P AMP

Increased water vapor (higher relative humidity) in the incoming air to a reciprocating engine will normally result in which of the following?

A) Decreased engine power at a constant RPM and manifold pressure.

B) Increased power output due to increased volumetric efficiency.

C) A leaning effect on engines which use non automatic carburetors.

28. A04P AMP

An increase in manifold pressure with a constant RPM will cause the bearing load in an engine to

A) decrease.

B) remain relatively constant.

C) increase.

29. A04P AMP

Direct mechanical push pull carburetor heat control linkages should normally be adjusted so that the stop located on the diverter valve will be contacted

A) before the stop at the control lever is reached in both HOT and COLD positions.

B) before the stop at the control lever is reached in the HOT position and after the stop at the control lever is reached in the COLD position.

C) after the stop at the control lever is reached in both HOT and COLD positions.

30. A04P AMP

One cause of afterfiring in an aircraft engine is

A) sticking intake valves.

B) an excessively lean mixture.

C) an excessively rich mixture.

31. A04P AMP

To what altitude will a turbo charged engine maintain sea level pressure?

A) Critical altitude.

B) Service ceiling.

C) Pressure altitude.

32. A02P AMP

Master rod bearings are generally what type?

A) Plain.

B) Roller.

C) Ball.

33. A02P AMP

Grinding the valves of a reciprocating engine to a feather edge is likely to result in

A) normal operation and long life.

B) excessive valve clearance.

C) preignition and burned valves.

34. A02P AMP

The primary concern in establishing the firing order for an opposed engine is to

A) provide for balance and eliminate vibration to the greatest extent possible.

B) keep power impulses on adjacent cylinders as far apart as possible in order to obtain the greatest mechanical efficiency.

C) keep the power impulses on adjacent cylinders as close as possible in order to obtain the greatest mechanical efficiency.

35. A02P AMP

The actual power delivered to the propeller of an aircraft engine is called

A) friction horsepower.

B) brake horsepower.

C) indicated horsepower.

36. A02P AMP

Cam ground pistons are installed in some aircraft engines to

A) provide a better fit at operating temperatures.

B) act as a compensating feature so that a compensated magneto is not required.

C) equalize the wear on all pistons.

37. A02P AMP

If the hot clearance is used to set the valves when the engine is cold, what will occur during operation of the engine?

A) The valves will open early and close early.

B) The valves will open late and close early.

C) The valves will open early and close late.

38. A02P AMP

Full floating piston pins are those which allow motion between the pin and

A) the piston.

B) both the piston and the large end of the connecting rod.

C) both the piston and the small end of the connecting rod.

39. A02P AMP

When is the fuel/air mixture ignited in a conventional reciprocating engine?

A) When the piston has reached top dead center of the intake stroke.

B) Shortly before the piston reaches the top of the compression stroke.

C) When the piston reaches top dead center on the compression stroke.

40. A02P AMP

On which part of the cylinder walls of a normally operating engine will the greatest amount of wear occur?

A) Near the center of the cylinder where piston velocity is greatest.

B) Near the top of the cylinder.

C) Wear is normally evenly distributed.

41. A02P AMP

Some cylinder barrels are hardened by

A) nitriding.

B) shot peening.

C) tempering.

42. A02P AMP

If an engine with a stroke of 6 inches is operated at 2,000 RPM, the piston movement within the cylinder will be

A) at maximum velocity around TDC.

B) constant during the entire 360° of crankshaft travel.

C) at maximum velocity 90° after TDC.

43. A02P AMP

Some aircraft engine manufacturers equip their product with choked or taper-ground cylinders in order to

A) provide a straight cylinder bore at operating temperatures.

B) flex the rings slightly during operation and reduce the possibility of the rings sticking in the grooves.

C) increase the compression pressure for starting purposes.

44. A02P AMP

Ignition occurs at 28° BTDC on a certain four-stroke cycle engine, and the intake valve opens at 15° BTDC. How many degrees of crankshaft travel after ignition does the intake valve open? (Consider one cylinder only.)

A) 707°.

B) 373°.

C) 347°.

45. A02P AMP

During overhaul, the disassembled parts of an engine are usually degreased with some form of mineral spirits solvent rather than water mixed degreasers primarily because

A) solvent degreasers are much more effective.

B) water mixed degreaser residues may cause engine oil contamination in the overhauled engine.

C) water-mixed degreasers cause corrosion.

46. A02P AMP

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) 1:7.

B) 7:10.

C) 7:1.

47. A02P AMP

(1) Cast iron piston rings may be used in chrome plated cylinders.

(2) Chrome plated rings may be used in plain steel cylinders.

Regarding the above statements,

A) only No. 1 is true.

B) neither No. 1 nor No. 2 is true.

C) both No. 1 and No. 2 are true.

48. A02P AMP

Compression ratio is the ratio between the

A) piston travel on the compression stroke and on the intake stroke.

B) combustion chamber pressure on the combustion stroke and on the exhaust stroke.

C) cylinder volume with piston at bottom dead center and at top dead center.

49. B02P AMP

How does a dual axial flow compressor improve the efficiency of a turbojet engine?

A) More turbine wheels can be used.

B) Higher compression ratios can be obtained.

C) The velocity of the air entering the combustion chamber is increased.

50. B02P AMP

The diffuser section of a jet engine is located between

A) the burner section and the turbine section.

B) station No. 7 and station No. 8.

C) the compressor section and the burner section.

51. B02P AMP

Where do stress rupture cracks usually appear on turbine blades?

A) Across the blade root, parallel to the fir tree.

B) Along the leading edge, parallel to the edge.

C) Across the leading or trailing edge at a right angle to the edge length.

52. B02P AMP

An advantage of the axial flow compressor is its

A) low starting power requirements.

B) low weight.

C) high peak efficiency.

53. B02P AMP

What is one purpose of the stator blades in the compressor section of a turbine engine?

A) Stabilize the pressure of the airflow.

B) Control the direction of the airflow.

C) Increase the velocity of the airflow.

54. B02P AMP

What is the primary factor which controls the pressure ratio of an axial flow compressor?

A) Number of stages in compressor.

B) Compressor inlet pressure.

C) Compressor inlet temperature.

55. B02P AMP

The stator vanes in an axial flow compressor

A) convert velocity energy into pressure energy.

B) convert pressure energy into velocity energy.

C) direct air into the first stage rotor vanes at the proper angle.

56. B02P AMP

What is the proper starting sequence for a turbojet engine?

A) Ignition, starter, fuel.

B) Starter, ignition, fuel.

C) Starter, fuel, ignition.

57. B02P AMP

The pressure of supersonic air as it flows through a divergent nozzle

A) increases.

B) decreases.

C) is inversely proportional to the temperature.

58. B02P AMP

What is used in turbine engines to aid in stabilization of compressor airflow during low thrust engine operation?

A) Stator vanes and rotor vanes.

B) Variable guide vanes and/or compressor bleed valves.

C) Pressurization and dump valves.

59. B02P AMP

The air passing through the combustion chamber of a turbine engine is

A) used to support combustion and to cool the engine.

B) entirely combined with fuel and burned.

C) speeded up and heated by the action of the turbines.

60. B02P AMP

The purpose of a bleed valve, located in the beginning stages of the compressor, in an aircraft gas turbine engine is to

A) vent some of the air overboard to prevent a compressor stall.

B) Control excessively high RPM to prevent a compressor stall.

C) Vent high ram air pressure overboard to prevent a compressor stall.

61. B02P AMP

What is the major function of the turbine assembly in a turbojet engine?

A) Directs the gases in the proper direction to the tailpipe.

B) Supplies the power to turn the compressor.

C) Increases the temperature of the exhaust gases.

62. B02P AMP

What type of turbine blade is most commonly used in aircraft jet engines?

A) Reaction.

B) Impulse.

C) Impulse-reaction.

63. B02P AMP

What is the primary advantage of an axial flow compressor over a centrifugal compressor?

A) High frontal area.

B) Less expensive.

C) Greater pressure ratio.

64. B02P AMP

Which two elements make up the axial flow compressor assembly?

A) Rotor and stator.

B) Compressor and manifold.

C) Stator and diffuser.

65. B02P AMP

An advantage of the centrifugal flow compressor is its high

A) pressure rise per stage.

B) ram efficiency.

C) peak efficiency.

66. B02P AMP

Which turbine engine compressor offers the greatest advantages for both starting flexibility and improved high altitude performance?

A) Dual stage, centrifugal flow.

B) Split spool, axial flow.

C) Single spool, axial flow.

67. B02P AMP

Which of the following engine variables is the most critical during turbine engine operation?

A) Compressor inlet air temperature.

B) Compressor RPM.

C) Turbine inlet temperature.

68. B02P AMP

Which of the following is the ultimate limiting factor of turbine engine operation?

A) Compressor inlet air temperature.

B) Turbine inlet temperature.

C) Burner can pressure.

69. B02P AMP

Hot section inspections for many modern turbine engines are required

A) only at engine overhaul.

B) only when an overtemperature or overspeed has occurred.

C) on a time or cycle basis.

70. B02P AMP

Between each row of rotating blades in a turbine engine compressor, there is a row of stationary blades which act to diffuse the air. These stationary blades are called

A) buckets.

B) rotors.

C) stators.

71. B02P AMP

When aircraft turbine blades are subjected to excessive heat stress, what type of failures would you expect?

A) Bending and torsion.

B) Torsion and tension.

C) Stress rupture.

72. B02P AMP

Using standard atmospheric conditions, the standard sea level temperature is

A) 59 °F.

B) 59 °C.

C) 29 °C.

73. B02P AMP

The velocity of subsonic air as it flows through a convergent nozzle

A) increases.

B) decreases.

C) remains constant.

74. B03P AMP

A cool-off period prior to shutdown of a turbine engine is accomplished in order to

A) allow the turbine wheel to cool before the case contracts around it.

B) prevent vapor lock in the fuel control and/or fuel lines.

C) prevent seizure of the engine bearings.

75. B03P AMP

At what stage in a turbine engine are gas pressures the greatest?

A) Compressor inlet.

B) Turbine outlet.

C) Compressor outlet.

76. B03P AMP

Hot spots in the combustion section of a turbojet engine are possible indicators of

A) faulty igniter plugs.

B) dirty compressor blades.

C) malfunctioning fuel nozzles.

77. B03P AMP

In what section of a turbojet engine is the jet nozzle located?

A) Combustion.

B) Turbine.

C) Exhaust.

78. B03P AMP

Newton's First Law of Motion, generally termed the Law of Inertia, states:

A) To every action there is an equal and opposite reaction.

B) Force is proportional to the product of mass and acceleration.

C) Every body persists in its state of rest, or of motion in a straight line, unless acted upon by some outside force.

79. B03P AMP

If the RPM of an axial flow compressor remains constant, the angle of attack of the rotor blades can be changed by

A) changing the velocity of the airflow.

B) changing the compressor diameter.

C) increasing the pressure ratio.

80. B03P AMP

Dirt particles in the air being introduced into the compressor of a turbine engine will form a coating on all but which of the following?

A) Turbine blades.

B) Casings.

C) Inlet guide vanes.

81. B03P AMP

The Brayton cycle is known as the constant

A) pressure cycle.

B) temperature cycle.

C) mass cycle.

82. B03P AMP

The exhaust section of a turbine engine is designed to

A) impart a high exit velocity to the exhaust gases.

B) increase temperature, therefore increasing velocity.

C) decrease temperature, therefore decreasing pressure.

83. B03P AMP

What is the possible cause when a turbine engine indicates no change in power setting parameters, but oil temperature is high?

A) High scavenge pump oil flow.

B) Engine main bearing distress.

C) Turbine damage and/or loss of turbine efficiency.

84. B01P AMP

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

A) The engine manufacturer.

B) The operator (utilizing manufacturer data and trend analysis) working in conjunction with the FAA.

C) The FAA.

85. B01P AMP

(1) Welding and straightening of turbine engine rotating airfoils does not require special equipment.

(2) Welding and straightening of turbine engine rotating airfoils is commonly recommended by the manufacturer.

Regarding the above statements,

A) only No. 1 is true.

B) only No. 2 is true.

C) neither No. 1 nor No. 2 is true.

86. B01P AMP

Main bearing oil seals used with turbine engines are usually what type(s)?

A) Labyrinth and/or carbon rubbing.

B) Teflon and synthetic rubber.

C) Labyrinth and/or silicone rubber.

87. B01P AMP

A turbine engine compressor which contains vanes on both sides of the impeller is a

A) double entry centrifugal compressor.

B) double entry axial flow compressor.

C) single entry axial flow compressor.

88. B01P AMP

What must be done after the fuel control unit has been replaced on an aircraft gas turbine engine?

A) perform a full power engine run to check fuel flow

B) Recalibrate the fuel nozzles.

C) Retrim the engine.

89. B01P AMP

The function of the exhaust cone assembly of a turbine engine is to

A) collect the exhaust gases and act as a noise suppressor.

B) swirl and collect the exhaust gases into a single exhaust jet.

C) straighten and collect the exhaust gases into a solid exhaust jet.

90. B01P AMP

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) RPM exceeds specified operating speed.

91. B01P AMP

The blending of blades and vanes in a turbine engine

A) is usually accomplished only at engine overhaul.

B) should be performed parallel to the length of the blade using smooth contours to minimize stress points.

C) may sometimes be accomplished with the engine installed, ordinarily using power tools.

92. B01P AMP

During inspection, turbine engine components exposed to high temperatures may only be marked with such materials as allowed by the manufacturer. These materials generally include

1. layout dye.

2. commercial felt tip marker.

3. wax or grease pencil.

4. chalk.

5. graphite lead pencil.

A) 1, 2, and 4.

B) 1, 3, and 4.

C) 2, 4, and 5.

93. B01P AMP

The turbine section of a jet engine

A) increases air velocity to generate thrust forces.

B) utilizes heat energy to expand and accelerate the incoming gas flow.

C) drives the compressor section.

94. B01P AMP

What is the profile of a turbine engine compressor blade?

A) The leading edge of the blade.

B) A cutout that reduces blade tip thickness.

C) The curvature of the blade root.

95. B01P AMP

The abbreviation P_{t7} used in turbine engine terminology means

A) the total inlet pressure.

B) pressure and temperature at station No. 7.

C) the total pressure at station No. 7.

96. B01P AMP

Which statement is true regarding jet engines?

A) At the lower engine speeds, thrust increases rapidly with small increases in RPM.

B) At the higher engine speeds, thrust increases rapidly with small increases in RPM.

C) The thrust delivered per pound of air consumed is less at high altitude than at low altitude.

97. B01P AMP

Turbine nozzle diaphragms located on the upstream side of each turbine wheel, are used in the gas turbine engine to

A) decrease the velocity of the heated gases flowing past this point.

B) direct the flow of gases parallel to the vertical line of the turbine blades.

C) increase the velocity of the heated gases flowing past this point.

98. B01P AMP

An exhaust cone placed aft of the turbine in a jet engine will cause the pressure in the first part of the exhaust duct to

A) increase and the velocity to decrease.

B) increase and the velocity to increase.

C) decrease and the velocity to increase.

99. B01P AMP

One function of the nozzle diaphragm in a turbine engine is to

A) decrease the velocity of exhaust gases.

B) center the fuel spray in the combustion chamber.

C) direct the flow of gases to strike the turbine blades at the desired angle.

100. C01P AMP

(1) Serviceability limits for turbine blades are much more stringent than are those for turbine nozzle vanes.

(2) A limited number of small nicks and dents can usually be permitted in any area of a turbine blade.

Regarding the above statements,

A) both No. 1 and No. 2 are true.

B) neither No. 1 nor No. 2 is true.

C) only No. 1 is true.

101. C01P AMP

What section in the instructions for continued airworthiness is FAA approved?

A) Engine maintenance manual or section.

B) Engine overhaul manual or section.

C) Airworthiness limitations section.

102. C01P AMP

What publication contains the mandatory replacement time for parts of a turbine engine?

A) Engine Manufacturer's service instructions.

B) Engine Manufacturer's maintenance manual.

C) Airworthiness directive issued by the engine manufacturer.

103. C01P AMP

What maintenance record(s) is/are required following a major repair of an aircraft engine?

A) Entries in engine maintenance records and a list of discrepancies for the FAA.

B) Entries in the engine maintenance record and FAA Form 337.

C) Entry in logbook.

104. C01P AMP

The airworthiness standards for the issue of type certificates for small airplanes with nine or less passenger seats in the normal, utility, and acrobatic categories may be found in the

A) Supplemental Type Certificate.

B) Federal Aviation Regulations, Part 23.

C) Federal Aviation Regulations, Part 21.

105. C01P AMP

Which of the following can inspect and approve an engine major repair for return to service?

A) Certificated mechanic with airframe and powerplant ratings.

B) Certificated mechanic with a powerplant rating.

C) Certificated mechanic with inspection authorization.

106. C01P AMP

Which of the following is used to monitor the mechanical integrity of the turbines, as well as to check engine operating conditions of a turbine engine?

A) Engine oil pressure.

B) Exhaust gas temperature.

C) Engine pressure ratio.

107. C01P AMP

(Refer to Powerplant figure 1.) Determine which portion of the AD is applicable for Model O-690 series engine, serial No. 5863-40 with 283 hours` time in service.

A) (B), (1).

B) (A).

C) (B), (2).

108. C01P AMP

Straightening nitrided crankshafts is

A) recommended.

B) not recommended.

C) approved by the manufacturer.

109. C01P AMP

You are performing a 100-hour inspection on an R985-22 aircraft engine. What does the '985' indicate?

A) The total piston displacement of the engine.

B) The pistons will pump a maximum of 985 cubic inches of air per crankshaft revolution.

C) The total piston displacement of one cylinder.

110. C01P AMP

Which of the following contains a table that lists the engines to which a given propeller is adaptable?

A) Aircraft Type Certificate Data Sheets.

B) Propeller Type Certificate Data Sheets.

C) Engine Type Certificate Data Sheets.

111. C01P AMP

Which of the following contains a minimum checklist for 100-hour inspections of engines?

A) 14 CFR Part 33 Appendix A.

B) 14 CFR Part 43 Appendix D.

C) Engine Specifications or Type Certificate Data Sheets.

112. C01P AMP

Select the Airworthiness Directive applicability statement which applies to an IVO 355 engine, serial number T8164, with 2,100 hours' total time and 300 hours since rebuilding.

A) Applies to all IVO 355 engines, serial numbers T8000 through T8300, having less than 2,400 hours' total time.

B) Applies to all IVO 355 engines, serial numbers T8000 through T8900 with 2,400 hours or more total time.

C) Applies to all I.O. and TV10-355 engines, all serial numbers regardless of total time or since overhaul.

113. C01P AMP

A Cessna 180 aircraft has a McCauley propeller Model No. 2A34C50/90A. The propeller is severely damaged in a ground accident, and this model propeller is not available for replacement. Which of the following should be used to find an approved alternate replacement?

A) Summary of Supplemental Type Certificates.

B) Aircraft Specifications/Type Certificate Data Sheets.

C) Aircraft Engine and Propeller Specifications/ Type Certificate Data Sheets.

114. H02P AMP

An indication of unregulated power changes that result in continual drift of manifold pressure indication on a turbosuper-charged aircraft engine is known as

A) Overshoot.

B) Waste gate fluctuation.

C) Bootstrapping.

115. H02P AMP

A Bourdon tube instrument may be used to indicate

1. pressure.

2. temperature.

3. position.

4. quantity.

A) 1 and 2.

B) 1 and 3.

C) 2 and 4.

116. H02P AMP

Which of the following instrument discrepancies require replacement of the instrument?

1. Red line missing from glass.
2. Glass cracked.
3. Case paint chipped.
4. Will not zero out.
5. Pointer loose on shaft.
6. Mounting screw loose.
7. Leaking at line B nut.
8. Fogged.

A) 2, 3, 7, 8.

B) 2, 4, 5, 8.

C) 1, 2, 4, 7.

117. H02P AMP

Instruments that measure relatively high fluid pressures, such as oil pressure gauges, are usually what type?

A) Vane with calibrated spring.

B) Bourdon tube.

C) Diaphragm or bellows.

118. H02P AMP

In what units are turbine engine tachometers calibrated?

A) Percent of engine RPM.

B) Actual engine RPM.

C) Percent of engine pressure ratio.

119. H02P AMP

What would be the possible cause if a gas turbine engine has high exhaust gas temperature, high fuel flow, and low RPM at all engine power settings?

A) Fuel control out of adjustment.

B) Loose or corroded thermocouple probes for the EGT indicator.

C) Turbine damage or loss of turbine efficiency.

120. H02P AMP

In regard to using a turbine engine oil analysis program, which of the following is NOT true?

A) Generally, an accurate trend forecast may be made after an engine's first oil sample analysis.

B) It is best to start an oil analysis program on an engine when it is new.

C) A successful oil analysis program should be run over an engine's total operating life so that normal trends can be established.

121. H02P AMP

A red triangle, dot, or diamond mark on an engine instrument face or glass indicates

A) the maximum operating limit for all normal operations.

B) the maximum limit for high transients such as starting.

C) a restricted operating range.

122. H02P AMP

The EGT gauge used with reciprocating engines is primarily used to furnish temperature readings in order to

A) obtain the best mixture setting for fuel efficiency.

B) obtain the best mixture setting for engine cooling.

C) prevent engine overtemperature.

123. H02P AMP

On an aircraft turbine engine, operating at a constant power, the application of engine anti-icing will result in

A) noticeable shift in EPR.

B) a false EPR reading.

C) an increase in EPR.

124. H02P AMP

Which of the following is a primary engine instrument?

A) Tachometer.

B) Fuel flowmeter.

C) Airspeed indicator.

125. H02P AMP

Which statement is true regarding a thermocouple type cylinder head temperature measuring system?

A) The resistance required for cylinder head temperature indicators is measured in farads.

B) The voltage output of a thermocouple system is determined by the temperature difference between the two ends of the thermocouple.

C) When the master switch is turned on, a thermocouple indicator will move off scale to the low side.

126. H02P AMP

Basically, the indicator of a tachometer system is responsive to change in

A) current flow.

B) frequency.

C) voltage.

127. H02P AMP

Which of the following types of electric motors are commonly used in electric tachometers?

A) Direct current, series wound motors.

B) Synchronous motors.

C) Direct current, shunt-wound motors.

128. H02P AMP

A manifold pressure gauge is designed to

A) maintain constant pressure in the intake manifold.

B) indicate differential pressure between the intake manifold and atmospheric pressure.

C) indicate absolute pressure in the intake manifold.

129. H02P AMP

(1) Powerplant instrument range markings show whether the current state of powerplant operation is normal, acceptable for a limited time, or unauthorized.

(2) Powerplant instrument range markings are based on installed engine operating limits which may not exceed (but are not necessarily equal to) those limits shown on the engine Type Certificate Data Sheet.

Regarding the above statements,

A) both No. 1 and No. 2 are true.

B) neither No. 1 nor No. 2 is true.

C) only No. 1 is true.

130. H02P AMP

(1) Engine pressure ratio (EPR) is a ratio of the exhaust gas pressure to the engine inlet air pressure, and indicates the thrust produced.

(2) Engine pressure ratio (EPR) is a ratio of the exhaust gas pressure to the engine inlet air pressure, and indicates volumetric efficiency.

Regarding the above statements,

A) only No. 1 is true.

B) only No. 2 is true.

C) both No. 1 and No. 2 are true.

131. H02P AMP

Thermocouple leads

A) may be installed with either lead to either post of the indicator.

B) are designed for a specific installation and may not be altered.

C) may be repaired using solderless connectors.

132. H02P AMP

If the thermocouple leads were inadvertently crossed at installation, what would the cylinder temperature gauge pointer indicate?

A) Normal temperature for prevailing condition.

B) Moves off scale on the zero side of the meter.

C) Moves off scale on the high side of the meter.

133. H02P AMP

(1) Generally, when a turbine engine indicates high EGT for a particular EPR (when there is no significant damage), it means that the engine is out of trim.

(2) Some turbine powered aircraft use RPM as the primary indicator of thrust produced, others use EPR as the primary indicator.

Regarding the above statements,

A) only No. 1 is true.

B) only No. 2 is true.

C) both No. 1 and No. 2 are true.

134. H01P AMP

The fuel flow indication data sent from motor driven impeller and turbine, and motorless type fuel flow transmitters is a measure of

A) fuel mass flow.

B) fuel volume flow.

C) engine burner pressure drop.

135. H01P AMP

The fuel flow indication system used with many fuel-injected opposed engine airplanes utilizes a measure of

A) fuel flow volume.

B) fuel pressure.

C) fuel flow mass.

136. H01P AMP

Motor driven impeller and turbine fuel flow transmitters are designed to transmit data

A) using aircraft electrical system power.

B) mechanically.

C) by fuel pressure.

137. H01P AMP

The fuel flowmeter used with a continuous-fuel injection system installed on an aircraft horizontally opposed reciprocating engines measures the fuel pressure drop across the

A) manifold valve.

B) fuel nozzles.

C) metering valve.

138. I01P AMP

In a fixed fire-extinguishing system, there are two small lines running from the system and exiting overboard. These line exit ports are covered with a blowout type indicator disc. Which of the following statements is true?

A) When the red indicator disc is missing, it indicates the fire extinguishing system has been normally discharged.

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

C) When the green indicator disc is missing, it indicates the fire extinguishing system has had a thermal discharge.

139. I01P AMP

Which of the following fire detection systems measures temperature rise compared to a reference temperature?

A) Thermocouple.

B) Thermal switch.

C) Lindberg continuous element.

140. I01P AMP

How are most aircraft turbine engine fire extinguishing systems activated?

A) Electrically discharged cartridges.

B) Manual remote control valve.

C) Pushrod assembly.

141. I01P AMP

Why does one type of Fenwal fire detection system use spot detectors wired in parallel between two separate circuits?

A) To provide an installation that is equal to two separate systems: a primary system and a secondary, or back-up system.

B) So that a double fault may exist in the system without sounding a false alarm.

C) So that a single fault may exist in the system without sounding a false alarm

142. I01P AMP

A fuel or oil fire is defined as a

A) class B fire.

B) class A fire.

C) class C fire.

143. I01P AMP

The explosive cartridge in the discharge valve of a fire extinguisher container is

A) a life dated unit.

B) not a life dated unit.

C) mechanically fired.

144. I01P AMP

The most satisfactory extinguishing agent for a carburetor or intake fire is

A) carbon dioxide.

B) dry chemical.

C) methyl bromide.

145. I01P AMP

(Refer to Powerplant figure 2.) Determine the fire extinguisher container pressure limits when the temperature is 75 °F.

A) 326 minimum and 415 maximum.

B) 330 minimum and 419 maximum.

C) 338 minimum and 424 maximum.

146. I01P AMP

The fire detection system that uses a single wire surrounded by a continuous string of ceramic beads in a tube is the

A) Fenwal system.

B) Kidde system.

C) thermocouple system.

147. I01P AMP

A continuous loop fire detector is what type of detector?

A) Spot detector.

B) Overheat detector.

C) Rate of temperature rise detector.

148. I01P AMP

After a fire is extinguished, or overheat condition removed in aircraft equipped with a Systron-Donner fire detector, the detection system

A) must be manually reset.

B) automatically resets.

C) sensing component must be replaced.

149. I01P AMP

What is the function of a fire detection system?

A) To discharge the powerplant fire extinguishing system at the origin of the fire.

B) To activate a warning device in the event of a powerplant fire.

C) To identify the location of a powerplant fire.

150. I01P AMP

What retains the nitrogen charge and fire extinguishing agent in a high rate of discharge (HRD) container?

A) Breakable disk and fusible disk.

B) Pressure switch and check tee valve.

C) Pressure gauge and cartridge.

151. I01P AMP

The pulling out (or down) of an illuminated fire handle in a typical large jet aircraft fire protection system commonly accomplishes what events?

A) Closes all firewall shutoff valves, disconnects the generator, and discharges a fire bottle.

B) Closes fuel shutoff, closes hydraulic shutoff, disconnects the generator field, and arms the fire extinguishing system.

C) Closes fuel shutoff, closes hydraulic shutoff, closes the oxygen shutoff, disconnects the generator field, and arms the fire-extinguishing system.

152. I01P AMP

Which of the following fire detectors are commonly used in the power section of an engine nacelle?

A) CO detectors.

B) Smoke detectors.

C) Rate of temperature rise detectors.

153. J02P AMP

When selecting an electrical switch for installation in an aircraft circuit utilizing a direct current motor,

A) a switch designed for dc should be chosen.

B) a derating factor should be applied.

C) only switches with screw type terminal connections should be used.

154. J02P AMP

When the starter switch to the aircraft gas turbine engine starter-generator is energized and the engine fails to rotate, one of the probable causes would be the

A) power lever switch is defective.

B) undercurrent solenoid contacts are defective.

C) starter solenoid is defective.

155. J02P AMP

The maximum allowable voltage drop between the generator and the bus bar is

A) 1 percent of the regulated voltage.

B) 2 percent of the regulated voltage.

C) less than the voltage drop permitted between the battery and the bus bar.

156. J02P AMP

Bonding jumpers should be designed and installed in such a manner that they

A) are not subjected to flexing by relative motion of airframe or engine components.

B) provide a low electrical resistance in the ground circuit.

C) prevent buildup of a static electrical charge between the airframe and the surrounding atmosphere.

157. J02P AMP

(Refer to Powerplant figure 4.) In a 28-volt system, what is the maximum continuous current that can be carried by a single No. 10 copper wire 25 feet long, routed in free air?

A) 20 amperes.

B) 35 amperes.

C) 28 amperes.

158. J02P AMP

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

A) in metal conduit.

B) in a non-conductive fire-resistant sleeve.

C) above the fuel line.

159. J02P AMP

What type of lubricant may be used to aid in pulling electrical wires or cables through conduits?

A) Silicone grease.

B) Soapstone talc.

C) Rubber lubricant.

160. J02P AMP

Which Federal Aviation Regulation requirement prevents the use of automatic reset circuit breakers?

A) 14 CFR Part 21.

B) 14 CFR Part 23.

C) 14 CFR Part 91.

161. J02P AMP

What is the maximum number of bonding jumper wires that may be attached to one terminal grounded to a flat surface?

A) Two.

B) Three.

C) Four.

162. J02P AMP

Which of the following is regulated in a generator to control its voltage output?

A) Speed of the armature.

B) Number of windings in the armature.

C) The strength of the field.

163. J02P AMP

(1) Electrical circuit protection devices are rated based on the amount of current that can be carried without overheating the wiring insulation.

(2) A 'trip free' circuit breaker makes it impossible to manually hold the circuit closed when excessive current is flowing.

Regarding the above statements,

A) only No. 1 is true.

B) only No. 2 is true.

C) both No. 1 and No. 2 are true.

164. J02P AMP

What is the smallest terminal stud allowed for aircraft electrical power systems?

A) No. 6.

B) No. 8.

C) No. 10.

165. J02P AMP

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

A) strapping.

B) stepping.

C) stacking.

166. J02P AMP

When does current flow through the coil of a solenoid operated electrical switch?

A) Continually, as long as the aircraft's electrical system master switch is on.

B) Continually, as long as the control circuit is complete.

C) Only until the movable points contact the stationary points.

167. J02P AMP

Aircraft electrical wire size is measured according to the

A) Military Specification system.

B) American Wire Gauge system.

C) Technical Standard Order system.

168. J02P AMP

Aircraft copper electrical wire is coated with tin, silver, or nickel in order to

A) improve conductivity.

B) add strength.

C) prevent oxidization.

169. J02P AMP

As a general rule, starter brushes are replaced when they are approximately

A) one half their original length.

B) one-third their original length.

C) two-thirds their original length.

170. J01P AMP

Alternators (ac generators) that are driven by a constant-speed drive (CSD) mechanism are used to regulate the alternator to a constant

A) voltage output.

B) amperage output.

C) hertz output.

171. J01P AMP

A high surge of current is required when a dc electric motor is first started. As the speed of the motor increases,

A) the counter emf decreases proportionally.

B) the applied emf increases proportionally.

C) the counter emf builds up and opposes the applied emf, thus reducing the current flow through the armature.

172. J01P AMP

If a generator is malfunctioning, its voltage can be reduced to residual by actuating the

A) rheostat.

B) generator master switch.

C) master solenoid.

173. J01P AMP

Electric motors are often classified according to the method of connecting the field coils and armature. Aircraft engine starter motors are generally of which type?

A) Compound.

B) Series.

C) Shunt (parallel).

174. J01P AMP

The generating system of an aircraft charges the battery by using

A) constant current and varying voltage.

B) constant voltage and varying current.

C) constant voltage and constant current.

175. J01P AMP

What is the frequency of most aircraft alternating current?

A) 115 Hertz.

B) 60 Hertz.

C) 400 Hertz.

176. J01P AMP

What are two types of ac motors that are used to produce a relatively high torque?

A) Shaded pole and shunt field.

B) Shunt field and single phase.

C) Three phase induction and capacitor start.

177. J01P AMP

Generator voltage will not build up when the field is flashed and solder is found on the brush cover plate. These are most likely indications of

A) an open armature.

B) excessive brush arcing.

C) armature shaft bearings overheating.

178. J01P AMP

Why is it unnecessary to flash the field of the exciter on a brushless alternator?

A) The exciter is constantly charged by battery voltage.

B) Brushless alternators do not have exciters.

C) Permanent magnets are installed in the main field poles.

179. J01P AMP

One way that the automatic ignition relight systems are activated on gas turbine engines is by a

A) drop in compressor discharge pressure.

B) sensing switch located in the tailpipe.

C) drop in fuel flow.

180. J01P AMP

If the points in a vibrator type voltage regulator stick in the closed position while the generator is operating, what will be the probable result?

A) Generator output voltage will decrease.

B) Generator output voltage will not be affected.

C) Generator output voltage will increase.

181. J01P AMP

What is a basic advantage of using ac for electrical power for a large aircraft?

A) AC systems operate at higher voltage than dc systems and therefore use less current and can use smaller and lighter weight wiring.

B) AC systems operate at lower voltage than dc systems and therefore use less current and can use smaller and lighter weight wiring.

C) AC systems operate at higher voltage than dc systems and therefore use more current and can use smaller and lighter weight wiring.

182. J01P AMP

According to the electron theory of the flow of electricity, when a properly functioning dc alternator and voltage regulating system is charging an aircraft's battery, the direction of current flow through the battery

A) is into the negative terminal and out the positive terminal.

B) is into the positive terminal and out the negative terminal.

C) cycles back and forth with the number of cycles per second being controlled by the rotational speed of the alternator.

183. J01P AMP

Why is a constant speed drive used to control the speed of some aircraft engine driven generators?

A) So that the voltage output of the generator will remain within limits.

B) To eliminate uncontrolled surges of current to the electrical system.

C) So that the frequency of the alternating current output will remain constant.

184. J01P AMP

The stationary field strength in a direct current generator is varied

A) by the reverse-current relay.

B) because of generator speed.

C) according to the load requirements.

185. J01P AMP

What device is used to convert alternating current, which has been induced into the loops of the rotating armature of a dc generator, to direct current?

A) A rectifier.

B) A commutator.

C) An inverter.

186. K01P AMP

What will be the result of operating an engine in extremely high temperatures using a lubricant recommended by the manufacturer for a much lower temperature?

A) The oil pressure will be higher than normal.

B) The oil temperature and oil pressure will be higher than normal.

C) The oil pressure will be lower than normal.

187. K01P AMP

Upon what quality or characteristic of a lubricating oil is its viscosity index based?

A) Its resistance to flow at a standard temperature as compared to high grade paraffin base oil at the same temperature.

B) Its rate of change in viscosity with temperature change.

C) Its rate of flow through an orifice at a standard temperature.

188. K01P AMP

The oil used in reciprocating engines has a relatively high viscosity due to

A) the reduced ability of thin oils to maintain adequate film strength at altitude (reduced atmospheric pressure).

B) the relatively high rotational speeds.

C) large clearances and high operating temperatures.

189. K01P AMP

In addition to lubricating (reducing friction between moving parts), engine oil performs what functions?

1. Cools.

2. Seals.

3. Cleans.

4. Prevents corrosion.

5. Cushions impact (shock) loads.

A) 1, 2, 3, 4.

B) 1, 2, 3, 4, 5.

C) 1, 3, 4.

190. K01P AMP

Which of the following factors 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.

191. K01P AMP

High tooth pressures and high rubbing velocities, such as occur with spur type gears, require the use of

A) an EP lubricant.

B) straight mineral oil.

C) metallic ash detergent oil.

192. K01P AMP

What type of oil do most engine manufacturers recommend for new reciprocating engine break in?

A) Ashless dispersant oil.

B) Straight mineral oil.

C) Semi synthetic oil.

193. K03P AMP

How are the teeth of the gears in the accessory section of an engine normally lubricated?

A) By splashed or sprayed oil.

B) By submerging the load bearing portions in oil.

C) By surrounding the load bearing portions with baffles or housings within which oil pressure can be maintained.

194. K03P AMP

If the oil in the oil cooler core and annular jacket becomes congealed, what unit prevents damage to the cooler?

A) Oil pressure relief valve.

B) Airflow control valve.

C) Surge protection valve.

195. K03P AMP

What will result if an oil filter becomes completely blocked?

A) Oil will flow at a reduced rate through the system.

B) Oil flow to the engine will stop.

C) Oil will flow at the normal rate through the system.

196. K03P AMP

The vent line connecting the oil supply tank and the engine in some dry sump engine installations permits

A) pressurization of the oil supply to prevent cavitation of the oil supply pump.

B) oil vapors from the engine to be condensed and drained into the oil supply tank.

C) the oil tank to be vented through the normal engine vent.

197. K03P AMP

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.

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.

198. K03P AMP

An engine lubrication system pressure relief valve is usually located between the

A) oil cooler and the scavenger pump.

B) scavenger pump and the external oil system.

C) pump and the internal oil system.

199. K03P AMP

A drop in oil pressure may be caused by

A) the temperature regulator sticking open.

B) the bypass valve sticking open.

C) foreign material under the relief valve.

200. K03P AMP

Which type valve prevents oil from entering the main accessory case when the engine is not running?

A) Bypass.

B) Relief.

C) Check.

201. K03P AMP

As a general rule, a small amount of small fuzzy particles or gray metallic paste on a turbine engine magnetic chip detector

A) is considered to be the result of normal wear.

B) indicates an imminent component failure.

C) indicates accelerated generalized wear.

202. K03P AMP

The purpose of a dwell chamber in a turbine engine oil tank is to provide

A) a collection point for sediments.

B) for a pressurized oil supply to the oil pump inlet.

C) separation of entrained air from scavenged oil.

203. K03P AMP

The purpose of a relief valve installed in the tank venting system of a turbine engine oil tank is to

A) prevent oil pump cavitation by maintaining a constant pressure on the oil pump inlet.

B) maintain internal tank air pressure at the ambient atmospheric level regardless of altitude or rate of change in altitude.

C) maintain a positive internal pressure in the oil tank after shutdown to prevent oil pump cavitation on engine start.

204. K03P AMP

From the following, identify the factor that has the least effect on the oil consumption of a specific engine.

A) Mechanical efficiency.

B) Engine RPM.

C) Lubricant characteristics.

205. K03P AMP

How is the oil collected by the piston oil ring returned to the crankcase?

A) Down vertical slots cut in the piston wall between the piston oil ring groove and the piston skirt.

B) Through holes drilled in the piston oil ring groove.

C) Through holes drilled in the piston pin recess.

206. K03P AMP

As an aid to cold weather starting, the oil dilution system thins the oil with

A) kerosene.

B) alcohol.

C) gasoline.

207. K03P AMP

Where is the oil temperature bulb located on a dry sump reciprocating engine?

A) Oil inlet line.

B) Oil cooler.

C) Oil outlet line.

208. K03P AMP

If a full flow oil filter is used on an aircraft engine, and the filter becomes completely clogged, the

A) oil supply to the engine will be blocked.

B) oil will be bypassed back to the oil tank hopper where larger sediments and foreign matter will settle out prior to passage through the engine.

C) bypass valve will open and the oil pump will supply unfiltered oil to the engine.

209. K03P AMP

Oil accumulation in the cylinders of an inverted in line engine and in the lower cylinders of a radial engine is normally reduced or prevented by

A) reversed oil control rings.

B) routing the valve operating mechanism lubricating oil to a separate scavenger pump.

C) extended cylinder skirts.

210. K03P AMP

Why is an aircraft reciprocating engine oil tank on a dry sump lubrication system equipped with a vent line?

A) To prevent pressure buildup in the reciprocating engine crankcase.

B) To eliminate foaming in the oil tank.

C) To prevent pressure buildup in the oil tank.

211. K03P AMP

The purpose of the flow control valve in a reciprocating engine oil system is to

A) direct oil through or around the oil cooler.

B) deliver cold oil to the hopper tank.

C) compensate for volumetric increases due to foaming of the oil.

212. K03P AMP

What determines the minimum particle size which will be excluded or filtered by a cuno type (stacked disc, edge filtration) filter?

A) The disc thickness.

B) The spacer thickness.

C) Both the number and thickness of the discs in the assembly.

213. K03P AMP

The pumping capacity of the scavenger pump in a dry sump aircraft engine's lubrication system

A) is greater than the capacity of the oil supply pump.

B) is less than the capacity of the oil supply pump.

C) is usually equal to the capacity of the oil supply pump in order to maintain constant oiling conditions.

214. K02P AMP

Oil picks up the most heat from which of the following turbine engine components?

A) Rotor coupling.

B) Compressor bearing.

C) Turbine bearing.

215. K02P AMP

What prevents pressure within the lubricating oil tank from rising above or falling below ambient pressure (reciprocating engine)?

A) Oil tank check valve.

B) Oil pressure relief valve.

C) Oil tank vent.

216. K02P AMP

What is the purpose of the last chance oil filters?

A) To prevent damage to the oil spray nozzle.

B) To filter the oil immediately before it enters the main bearings.

C) To assure a clean supply of oil to the lubrication system.

217. K02P AMP

In a reciprocating engine oil system, the temperature bulb senses oil temperature

A) at a point after the oil has passed through the oil cooler.

B) while the oil is in the hottest area of the engine.

C) immediately before the oil enters the oil cooler.

218. K02P AMP

At cruise RPM, some oil will flow through the relief valve of a gear type engine oil pump. This is normal as the relief valve is set at a pressure which is

A) lower than the pump inlet pressure.

B) lower than the pressure pump capabilities.

C) higher than pressure pump capabilities.

219. K02P AMP

The oil dampened main bearing utilized in some turbine engines is used to

A) provide lubrication of bearings from the beginning of starting rotation until normal oil pressure is established.

B) provide an oil film between the outer race and the bearing housing in order to reduce vibration tendencies in the rotor system, and to allow for slight misalignment.

C) dampen surges in oil pressure to the bearings.

220. K02P AMP

The engine oil temperature regulator is usually located between which of the following on a dry sump reciprocating engine?

A) The engine oil supply pump and the internal lubrication system.

B) The scavenger pump outlet and the oil storage tank.

C) The oil storage tank and the engine oil supply pump.

221. K02P AMP

Possible failure related ferrous metal particles in turbine engine oil cause an (electrical) indicating type magnetic chip detector to indicate their presence by

A) disturbing the magnetic lines of flux around the detector tip.

B) bridging the gap between the detector center (positive) electrode and the ground electrode.

C) generating a small electric current that is caused by the particles being in contact with the dissimilar metal of the detector tip.

222. K02P AMP

What is the primary purpose of the oil to fuel heat exchanger?

A) Cool the fuel.

B) Cool the oil.

C) De aerate the oil.

223. K02P AMP

Low oil pressure can be detrimental to the internal engine components. However, high oil pressure

A) should be limited to the engine manufacturer's recommendations.

B) has a negligible effect.

C) will not occur because of pressure losses around the bearings.

224. K02P AMP

The type of oil pumps most commonly used on turbine engines are classified as

A) positive displacement.

B) variable displacement.

C) constant speed.

225. L02P AMP

What is the relationship between distributor and crankshaft speed of aircraft reciprocating engines?

A) The distributor turns at one half crankshaft speed.

B) The distributor turns at one and one half crankshaft speed.

C) The crankshaft turns at one half distributor speed.

226. L02P AMP

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

1. Magnetic.

2. Primary.

3. E gap.
4. P lead.
5. Secondary.
A) 1, 2, 5.
B) 1, 3, 4.
C) 2, 4, 5.

227. L02P AMP
Which of the following are advantages of dual ignition in aircraft engines?
1. Gives a more complete and quick combustion of the fuel.
2. Provides a backup magneto system.
3. Increases the output power of the engine.
4. Permits the use of lower grade fuels.
5. Increases the intensity of the spark at the spark plugs.
A) 2, 3, 4.
B) 2, 3, 5.
C) 1, 2, 3.

228. L02P AMP
Ignition check during engine runup indicates a slow drop in RPM. This is usually caused by
A) defective spark plugs.
B) a defective high tension lead.
C) incorrect ignition timing or valve adjustment.

229. L02P AMP
Using a cold spark plug in a high-compression aircraft engine would probably result in
A) normal operation.
B) a fouled plug.
C) detonation.

230. L02P AMP
Ignition check during engine runup indicates excessive RPM drop during operation on the right magneto. The major portion of the RPM loss occurs rapidly after switching to the right magneto position (fast drop). The most likely cause is
A) faulty or fouled spark plugs.
B) incorrect ignition timing on both magnetos.
C) one or more dead cylinders.

231. L02P AMP

Upon inspection of the spark plugs in an aircraft engine, the plugs were found caked with a heavy black soot. This indicates

A) worn oil seal rings.

B) a rich mixture.

C) a lean mixture.

232. L02P AMP

Which of the following would be cause for rejection of a spark plug?

A) Carbon fouling of the electrode and insulator.

B) Insulator tip cracked.

C) Lead fouling of the electrode and insulator.

233. L02P AMP

Defective spark plugs will cause the engine to run rough at

A) high speeds only.

B) low speeds only.

C) all speeds.

234. L02P AMP

The type of ignition system used on most turbine aircraft engines is

A) high resistance.

B) low tension.

C) capacitor discharge.

235. L02P AMP

Which of the following statements most accurately describes spark plug heat range?

A) The length of the threaded portion of the shell usually denotes the spark plug heat range.

B) A hot plug is designed so that the insulator tip is reasonably short to hasten the rate of heat transfer from the tip through the spark plug shell to the cylinder head.

C) A cold plug is designed so that the insulator tip is reasonably short to hasten the rate of heat transfer from the tip through the spark plug shell to the cylinder head.

236. L02P AMP

The secondary coil of a magneto is grounded through the

A) ignition switch.

B) primary coil.

C) grounded side of the breaker points.

237. L02P AMP

When removing a shielded spark plug, which of the following is most likely to be damaged?

A) Center electrode.

B) Shell section.

C) Core insulator.

238. L02P AMP

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.

239. L02P AMP

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.

240. L02P AMP

Which of the following statements regarding magneto switch circuits is NOT true?

A) In the BOTH position, the right and left magneto circuits are grounded.

B) In the OFF position, neither the right nor left magneto circuits are open.

C) In the RIGHT position, the right magneto circuit is open and the left magneto circuit is grounded.

241. L02P AMP

Hot spark plugs are generally used in aircraft powerplants

A) with comparatively high compression or high operating temperatures.

B) with comparatively low operating temperatures.

C) which produce high power per cubic inch displacement.

242. L02P AMP

The term 'reach,' as applied to spark plug design and/or type, indicates the

A) linear distance from the shell gasket seat to the end of the threads on the shell skirt.

B) length of center electrode exposed to the flame of combustion.

C) length of the shielded barrel.

243. L02P AMP

A spark plug's heat range is the result of

A) the area of the plug exposed to the cooling airstream.

B) its ability to transfer heat from the firing end of the spark plug to the cylinder head.

C) the heat intensity of the spark.

244. L02P AMP

Which of the following, obtained during magneto check at 1,700 RPM, indicates a short (grounded) circuit between the right magneto primary and the ignition switch?

A) BOTH-1,700 RPM; R-1,625 RPM; L-1,700 RPM; OFF-1,625 RPM.

B) BOTH-1,700 RPM; R-0 RPM; L-1,700 RPM; OFF-0 RPM.

C) BOTH-1,700 RPM; R-0 RPM; L-1,675 RPM; OFF-0 RPM.

245. L02P AMP

Sharp bends should be avoided in ignition leads primarily because

A) weak points may develop in the insulation through which high tension current can leak.

B) ignition lead wire conductor material is brittle and may break.

C) ignition lead shielding effectiveness will be reduced.

246. L02P AMP

Spark plugs are considered worn out when the

A) electrodes have worn away to about one-half of their original dimensions.

B) center electrode edges have become rounded.

C) electrodes have worn away to about two-thirds of their original dimensions.

247. L02P AMP

Igniter plugs used in turbine engines are subjected to high intensity spark discharges and yet they have a long service life because they

A) operate at much lower temperatures.

B) are not placed directly into the combustion chamber.

C) do not require continuous operation.

248. L02P AMP

Generally, when removing a turbine engine igniter plug, in order to eliminate the possibility of the technician receiving a lethal shock, the ignition switch is turned off and

A) disconnected from the power supply circuit.

B) the igniter lead is disconnected from the plug and the center electrode grounded to the engine after disconnecting the transformer-exciter input lead and waiting the prescribed time.

C) the transformer exciter input lead is disconnected and the center electrode grounded to the engine after disconnecting the igniter lead from the plug and waiting the prescribed time.

249. L02P AMP

The constrained gap igniter plug used in some gas turbine engines operates at a cooler temperature because

A) it projects into the combustion chamber.

B) the applied voltage is less.

C) the construction is such that the spark occurs beyond the face of the combustion chamber liner.

250. L02P AMP

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

A) The rotating magnet looses 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.

251. L02P AMP

If an aircraft ignition switch is turned off and the engine continues to run normally, the trouble is probably caused by

A) an open ground lead in the magneto.

B) arcing magneto breaker points.

C) primary lead grounding.

252. L03P AMP

When using an electric starter motor, the current flow through it

A) remains relatively constant throughout the starting cycle.

B) is highest at the start of motor rotation.

C) is highest just before starter cutoff (at highest RPM.)

253. L03P AMP

The purpose of an under current relay in a starter-generator system is to

A) provide a backup for the starter relay.

B) disconnect power from the starter-generator and ignition when sufficient engine speed is reached.

C) keep current flow to the starter-generator under the circuit capacity maximum.

254. L03P AMP

(Refer to Powerplant figure 5.) The type of system depicted is capable of operating with

A) external power only.

B) either battery or external power.

C) battery power and external power simultaneously.

255. L03P AMP

When using an electric starter motor, current usage

A) is highest at the start of motor rotation.

B) remains relatively constant throughout the starting cycle.

C) is highest just before starter cutoff (at highest RPM).

256. L04P AMP

A safety feature usually employed in pneumatic starters that is used to prevent the starter from reaching burst speed if inlet air does not terminate on schedule is the

A) drive shaft shear point.

B) stator nozzle design that chokes airflow and stabilizes turbine wheel speed.

C) spring coupling release.

257. L04P AMP

Airflow to the pneumatic starter from a ground unit is normally prevented from causing starter overspeed during engine start by

A) stator nozzle design that chokes airflow and stabilizes turbine wheel speed.

B) activation of a flyweight cutout switch.

C) a preset timed cutoff of the airflow at the source.

258. L04P AMP

Inspection of pneumatic starters by maintenance technicians usually includes checking the

A) oil level and magnetic drain plug condition.

B) stator and rotor blades for FOD.

C) rotor alignment.

259. L04P AMP

A clicking sound heard at engine coast-down in a pneumatic starter incorporating a sprag clutch ratchet assembly is an indication of

A) gear tooth and/or pawl damage.

B) one or more broken pawl springs.

C) the pawls re-contacting and riding on the ratchet gear.

260. L01P AMP

The purpose of a safety gap in a magneto is to

A) prevent burning out the primary winding.

B) protect the high voltage winding from damage.

C) prevent burning of contact points.

261. L01P AMP

Capacitance afterfiring in most modern spark plugs is reduced by the use of

A) fine wire electrodes.

B) a built-in resistor in each plug.

C) aluminum oxide insulation.

262. L01P AMP

As an aircraft engine's speed is increased, the voltage induced in the primary coil of the magneto

A) remains constant.

B) increases.

C) varies with the setting of the voltage regulator.

263. L01P AMP

When will the voltage in the secondary winding of a magneto, installed on a normally operating engine, be at its highest value?

A) Just prior to spark plug firing.

B) Toward the latter part of the spark duration when the flame front reaches its maximum velocity.

C) Immediately after the breaker points close.

264. L01P AMP

What components make up the magnetic system of a magneto?

A) Pole shoes, the pole shoe extensions, and the primary coil.

B) Primary and secondary coils.

C) Rotating magnet, the pole shoes, the pole shoe extensions, and the coil core.

265. L01P AMP

What is the electrical location of the primary capacitor in a high-tension magneto?

A) In parallel with the breaker points.

B) In series with the breaker points.

C) In series with the primary and secondary winding.

266. L01P AMP

What is the radial location of the two north poles of a four pole rotating magnet in a high tension magneto?

A) 180° apart.

B) 270° apart.

C) 90° apart.

267. L01P AMP

What is the difference between a low tension and a high tension engine ignition system?

A) A low tension system produces relatively low voltage at the spark plug as compared to a high tension system.

B) A high tension system is designed for high altitude aircraft, while a low tension system is for low to medium altitude aircraft.

C) A low tension system uses a transformer coil near the spark plugs to boost voltage, while the high tension system voltage is constant from the magneto to the spark plugs.

268. L01P AMP

When using a timing light to time a magneto to an aircraft engine, the magneto switch should be placed in the

A) BOTH position.

B) OFF position.

C) LEFT or RIGHT position (either one).

269. L01P AMP

Failure of an engine to cease firing after turning the magneto switch off is an indication of

A) an open high tension lead.

B) an open P-lead to ground.

C) a grounded magneto switch.

270. L01P AMP

The purpose of staggered ignition is to compensate for

A) short ignition harness.

B) rich fuel/air mixture around exhaust valve.

C) diluted fuel/air mixture around exhaust valve.

271. L01P AMP

Shielding is used on spark plug and ignition wires to

A) protect the wires from short circuits as a result of chafing or rubbing.

B) prevent outside electromagnetic emissions from disrupting the operation of the ignition system.

C) prevent interference with radio reception.

272. L01P AMP

What is the purpose of a safety gap in some magnetos?

A) To discharge the secondary coil's voltage if an open occurs in the secondary circuit.

B) To ground the magneto when the ignition switch is off.

C) To prevent flashover in the distributor.

273. L01P AMP

A defective primary capacitor in a magneto is indicated by

A) a fine grained frosted appearance of the breaker points.

B) burned and pitted breaker points.

C) a weak spark.

274. L01P AMP

What will be the results of increasing the gap of the breaker points in a magneto?

A) Retard the spark and increase its intensity.

B) Advance the spark and decrease its intensity.

C) Retard the spark and decrease its intensity.

275. L01P AMP

How is the strength of a magneto magnet checked?

A) Hold the points open and check the output of the primary coil with an ac ammeter while operating the magneto at a specified speed.

B) Check the ac voltage reading at the breaker points.

C) Check the output of the secondary coil with an ac ammeter while operating the magneto at a specified speed.

276. M04P AMP

What are the positions of the pressurization valve and the dump valve in a jet engine fuel system when the engine is shut down?

A) Pressurization valve closed, dump valve open.

B) Pressurization valve open, dump valve open.

C) Pressurization valve closed, dump valve closed.

277. M04P AMP

The density of air is very important when mixing fuel and air to obtain a correct fuel to air ratio. Which of the following weighs the most?

A) 75 parts of dry air and 25 parts of water vapor.

B) 100 parts of dry air.

C) 50 parts of dry air and 50 parts of water vapor.

278. M04P AMP

The economizer system in a float type carburetor

A) keeps the fuel/air ratio constant.

B) functions only at cruise and idle speeds.

C) increases the fuel/air ratio at high power settings.

279. M04P AMP

In turbine engines that utilize a pressurization and dump valve, the dump portion of the valve

A) cuts off fuel flow to the engine fuel manifold and dumps the manifold fuel into the combustor to burn just before the engine shuts down.

B) drains the engine manifold lines to prevent fuel boiling and subsequent deposits in the lines as a result of residual engine heat (at engine shutdown).

C) dumps extra fuel into the engine in order to provide for quick engine acceleration during rapid throttle advancement.

280. M04P AMP

What effect does high atmospheric humidity have on the operation of a jet engine?

A) Decreases engine pressure ratio.

B) Decreases compressor and turbine RPM.

C) Has little or no effect.

281. M04P AMP

What could cause a lean mixture and high cylinder head temperature at sea level or low altitudes?

A) Mixture control valve fully closed.

B) Automatic mixture control stuck in the extended position.

C) Defective accelerating system.

282. M04P AMP

Detonation occurs when the fuel/air mixture

A) burns too fast.

B) ignites before the time of normal ignition.

C) is too rich.

283. M04P AMP

A major difference between the Teledyne-Continental and RSA (Precision Airmotive or Bendix) continuous flow fuel injection systems in fuel metering is that the

A) RSA system uses air pressure only as a metering force.

B) Continental system utilizes airflow as a metering force.

C) Continental system uses fuel pressure only as a metering force.

284. M04P AMP

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

A) provide for automatic mixture control.

B) lean out the mixture.

C) aid in proper fuel vaporization.

285. M04P AMP

(Refer to Powerplant figure 6.) Which curve most nearly represents an aircraft engine`s fuel/air ratio throughout its operating range?

A) 1.

B) 3.

C) 2.

286. M04P AMP

What method is ordinarily used to make idle speed adjustments on a float type carburetor?

A) An adjustable throttle stop or linkage.

B) An orifice and adjustable tapered needle.

C) An adjustable needle in the drilled passageway which connects the airspace of the float chamber and the carburetor venturi.

287. M04P AMP

Which type of fuel control is used on most of today's turbine engines?

A) Electromechanical.

B) Mechanical.

C) Hydromechanical or electronic.

288. M04P AMP

(1) The mixture used at rated power in air cooled reciprocating engines is richer than the mixture used through the normal cruising range.

(2) The mixture used at idle in air cooled reciprocating engines is richer than the mixture used at rated power.

Regarding the above statements,

A) only No. 1 is true.

B) only No. 2 is true.

C) both No. 1 and No. 2 are true.

289. M04P AMP

The use of less than normal throttle opening during starting will cause

A) a rich mixture.

B) a lean mixture.

C) backfire due to lean fuel/air ratio.

290. M04P AMP

The purpose of the back suction mixture control in a float type carburetor is to adjust the mixture by

A) regulating the pressure drop at the venturi.

B) regulating the pressure on the fuel in the float chamber.

C) regulating the suction on the mixture from behind the throttle valve.

291. M04P AMP

Under which of the following conditions will the trimming of a turbine engine be most accurate?

A) High wind and high moisture.

B) High moisture and low wind.

C) No wind and low moisture.

292. M02P AMP

The device that controls the ratio of the fuel/air mixture to the cylinders is called a

A) throttle valve.

B) mixture control.

C) metering jet.

293. M02P AMP

Select the correct statement concerning the idle system of a conventional float type carburetor.

A) The low pressure area created in the throat of the venturi pulls the fuel from the idle passage.

B) Climatic conditions have very little effect on idle mixture requirements.

C) The low pressure between the edges of the throttle valve and the throttle body pulls the fuel from the idle passage.

294. M02P AMP

How will the mixture of an engine be affected if the bellows of the automatic mixture control (AMC) in a pressure carburetor ruptures while the engine is operating at altitude?

A) It will become leaner.

B) No change will occur until the altitude changes.

C) It will become richer.

295. M02P AMP

The metered fuel pressure (chamber C) in an injection type carburetor

A) is held constant throughout the entire engine operating range.

B) varies according to the position of the poppet valve located between chamber D (unmetered fuel) and chamber E (engine driven fuel pump pressure).

C) will be approximately equal to the pressure in chamber A (impact pressure).

296. M02P AMP

What carburetor component measures the amount of air delivered to the engine?

A) Economizer valve.

B) Automatic mixture control.

C) Venturi.

297. M02P AMP

Fuel is discharged for idling speeds on a float type carburetor

A) from the idle discharge nozzle.

B) in the venturi.

C) through the idle discharge air bleed.

298. M02P AMP

An aircraft carburetor is equipped with a mixture control in order to prevent the mixture from becoming too

A) lean at high altitudes.

B) rich at high altitudes.

C) rich at high speeds.

299. M02P AMP

Idle cutoff is accomplished on a carburetor equipped with a back suction mixture control by

A) introducing low pressure (intake manifold) air into the float chamber.

B) turning the fuel selector valve to OFF.

C) the positive closing of a needle and seat.

300. M02P AMP

To determine the float level in a float type carburetor, a measurement is usually made from the top of the fuel in the float chamber to the

A) parting surface of the carburetor.

B) top of the float.

C) centerline of the main discharge nozzle.

301. M02P AMP

Why must a float type carburetor supply a rich mixture during idle?

A) Engine operation at idle results in higher than normal volumetric efficiency.

B) Because at idling speeds the engine may not have enough airflow around the cylinders to provide proper cooling.

C) Because of reduced mechanical efficiency during idle.

302. M02P AMP

Which of the following best describes the function of an altitude mixture control?

A) Regulates the richness of the fuel/air charge entering the engine.

B) Regulates the air pressure above the fuel in the float chamber.

C) Regulates the air pressure in the venturi.

303. M02P AMP

A reciprocating engine automatic mixture control responds to changes in air density caused by changes in

A) altitude or humidity.

B) altitude only.

C) altitude or temperature.

304. M02P AMP

If an engine is equipped with a float type carburetor and the engine runs excessively rich at full throttle, a possible cause of the trouble is a clogged

A) main air bleed.

B) back suction line.

C) atmospheric vent line.

305. M02P AMP

If an aircraft engine is equipped with a carburetor that is not compensated for altitude and temperature variations, the fuel/air mixture will become

A) leaner as either the altitude or temperature increases.

B) richer as the altitude increases and leaner as the temperature increases.

C) richer as either the altitude or temperature increases.

306. M02P AMP

If the main air bleed of a float-type carburetor becomes clogged, the engine will run

A) lean at rated power.

B) rich at rated power.

C) rich at idling.

307. M02P AMP

What is the possible cause of an engine running rich at full throttle if it is equipped with a float type carburetor?

A) Float level too low.

B) Clogged main air bleed.

C) Clogged atmospheric vent.

308. M02P AMP

Which method is commonly used to adjust the level of a float in a float type carburetor?

A) Lengthening or shortening the float shaft.

B) Add or remove shims under the needle valve seat.

C) Change the angle of the float arm pivot.

309. M03P AMP

Which statement is correct regarding a continuous flow fuel injection system used on many reciprocating engines?

A) Fuel is injected directly into each cylinder.

B) Fuel is injected at each cylinder intake port.

C) Two injector nozzles are used in the injector fuel system for various speeds.

310. M03P AMP

Which of the following causes a single diaphragm accelerator pump to discharge fuel?

A) An increase in venturi suction when the throttle valve is open.

B) An increase in manifold pressure that occurs when the throttle valve is opened.

C) A decrease in manifold pressure that occurs when the throttle valve is opened.

311. M03P AMP

What is the purpose of the carburetor accelerating system?

A) Supply and regulate the fuel required for engine speeds above idle.

B) Temporarily enrich the mixture when the throttle is suddenly opened.

C) Supply and regulate additional fuel required for engine speeds above cruising.

312. M03P AMP

On a carburetor without an automatic mixture control as you ascend to altitude, the mixture will

A) be enriched.

B) be leaned.

C) not be affected.

313. M03P AMP

What carburetor component actually limits the desired maximum airflow to the engine at full throttle?

A) Throttle valve.

B) Venturi.

C) Manifold intake.

314. M03P AMP

What is a function of the idling air bleed in a float type carburetor?

A) It provides a means for adjusting the mixture at idle speeds.

B) It vaporizes the fuel at idling speeds.

C) It aids in emulsifying/vaporizing the fuel at idle speeds.

315. M03P AMP

A nine cylinder radial engine, using a multiple point priming system with a central spider, will prime which cylinders?

A) One, two, three, eight, and nine.

B) All cylinders.

C) One, three, five, and seven.

316. M01P AMP

A supervisory 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.

317. M01P AMP

The active clearance control (ACC) portion of an EEC system aids turbine engine efficiency by

A) adjusting stator vane position according to operating conditions and power requirements.

B) ensuring turbine blade to engine case clearances are kept to a minimum by controlling case temperatures.

C) automatically adjusting engine speed to maintain a desired EPR.

318. M01P AMP

The generally acceptable way to obtain accurate on-site temperature prior to performing engine trimming is to

A) call the control tower to obtain field temperature.

B) observe the reading on the aircraft Outside Air Temperature (OAT) gauge.

C) hang a thermometer in the shade of the nose wheel-well until the temperature reading stabilizes.

319. M01P AMP

Generally, the practice when trimming an engine is to

A) turn all accessory bleed air off.

B) turn all accessory bleed air on.

C) make adjustments (as necessary) for all engines on the same aircraft with accessory bleed air settings the same--either on or off.

320. N02P AMP

Kerosene is used as turbine engine fuel because

A) kerosene has very high volatility which aids in ignition and lubrication.

B) kerosene has more heat energy per gallon and lubricates fuel system components.

C) kerosene does not contain any water.

321. N02P AMP

A pilot reports that the fuel pressure fluctuates and exceeds the upper limits whenever the throttle is advanced. The most likely cause of the trouble is

A) a ruptured fuel pump relief valve diaphragm.

B) a sticking fuel pump relief valve.

C) an air leak at the fuel pump relief valve body.

322. N02P AMP

What causes the fuel divider valve to open in a turbine engine duplex fuel nozzle?

A) Fuel pressure.

B) Bleed air after the engine reaches idle RPM.

C) An electrically operated solenoid.

323. N02P AMP

A fuel strainer or filter must be located between the

A) boost pump and tank outlet.

B) tank outlet and the fuel metering device.

C) boost pump and engine driven fuel pump.

324. N02P AMP

What are the principal advantages of the duplex fuel nozzle used in many turbine engines?

A) Restricts the amount of fuel flow to a level where more efficient and complete burning of the fuel is achieved.

B) Provides better atomization and uniform flow pattern.

C) Allows a wider range of fuels and filters to be used.

325. N02P AMP

What is the purpose of the flow divider in a turbine engine duplex fuel nozzle?

A) Allows an alternate flow of fuel if the primary flow clogs or is restricted.

B) Creates the primary and secondary fuel supplies.

C) Provides a flow path for bleed air which aids in the atomization of fuel.

326. N02P AMP

What precaution should be taken when putting thread lubricant on a tapered pipe plug in a carburetor float bowl?

A) Put the thread lubricant only on the first thread.

B) Do not use thread lubricant on any carburetor fitting.

C) Engage the first thread of the plug, then put a small amount of lubricant on the second thread and screw the plug in.

327. N02P AMP

Which statement is true regarding proper throttle rigging of an airplane?

A) The throttle stop on the carburetor must be contacted before the stop in the cockpit.

B) The stop in the cockpit must be contacted before the stop on the carburetor.

C) The throttle control is properly adjusted when neither stop makes contact.

328. N02P AMP

The fuel systems of aircraft certificated in the standard classification must include which of the following?

A) An engine driven fuel pump and at least one auxiliary pump per engine.

B) A positive means of shutting off the fuel to all engines.

C) A reserve supply of fuel, available to the engine only after selection by the flightcrew, sufficient to operate the engines at least 30 minutes at METO power.

329. N02P AMP

Where physical separation of the fuel lines from electrical wiring or conduit is impracticable, locate the fuel line

A) below the wiring and clamp the line securely to the airframe structure.

B) above the wiring and clamp the line securely to the airframe structure.

C) inboard of the wiring and clamp both securely to the airframe structure.

330. N02P AMP

What is a characteristic of a centrifugal type fuel boost pump?

A) It separates air and vapor from the fuel.

B) It has positive displacement.

C) It requires a relief valve.

331. N01P AMP

Where is the engine fuel shutoff valve usually located?

A) Aft of the firewall.

B) Adjacent to the fuel pump.

C) Downstream of the engine driven fuel pump.

332. N01P AMP

Which of the following statements concerning a centrifugal type fuel boost pump located in a fuel supply tank is NOT true?

A) Air and fuel vapors do not pass through a centrifugal type pump.

B) Fuel can be drawn through the impeller section of the pump when it is not in operation.

C) The centrifugal type pump is classified as a positive displacement pump.

333. N01P AMP

(Refer to Powerplant figure 7.) What is the purpose of the fuel transfer ejectors?

A) To supply fuel under pressure to the engine driven pump.

B) To assist in the transfer of fuel from the main tank to the boost pump sump.

C) To transfer fuel from the boost pump sump to the wing tank.

334. N01P AMP

When an electric primer is used, fuel pressure is built up by the

A) internal pump in the primer solenoid.

B) suction at the main discharge nozzle.

C) booster pump.

335. N01P AMP

The primary condition(s) that allow(s) microorganisms to grow in the fuel in aircraft fuel tanks is (are)

A) warm temperatures and frequent fueling.

B) the presence of water.

C) the presence of dirt or other particulate contaminants.

336. O03P AMP

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

A) Turn off the fuel switches to stop the fuel.

B) Continue cranking the engine.

C) Turn off all switches.

337. O03P AMP

In addition to causing accelerated wear, dust or sand ingested by a reciprocating engine may also cause

A) silicon fouling of spark plugs.

B) sludge formation.

C) acid formation.

338. O02P AMP

The purpose of a bellmouth compressor inlet is to

A) provide an increased ram air effect at low airspeeds.

B) maximize the aerodynamic efficiency of the inlet.

C) provide an increased pressure drop in the inlet.

339. O02P AMP

The purpose of a sonic venturi on a turbocharged engine is to

A) limit the amount of air that can flow from the turbocharger into the cabin for pressurization.

B) increase the amount of air that can flow from the turbocharger into the cabin for pressurization.

C) increase the velocity of the fuel/air charge.

340. O02P AMP

What is the purpose of a turbocharger system for a small reciprocating aircraft engine?

A) Compresses the air to hold the cabin pressure constant after the aircraft has reached its critical altitude.

B) Maintains constant air velocity in the intake manifold.

C) Compresses air to maintain manifold pressure constant from sea level to the critical altitude of the engine.

341. O02P AMP

What is the purpose of the rate of change controller in a turbocharger system?

A) Limits the maximum manifold pressure that can be produced by the turbocharger at full throttle conditions.

B) Controls the rate at which the turbocharger discharge pressure will increase.

C) Controls the position of the waste gate after the aircraft has reached its critical altitude.

342. O02P AMP

Boost manifold pressure is generally considered to be any manifold pressure above

A) 14.7 inches Hg.

B) 50 inches Hg.

C) 30 inches Hg.

343. O02P AMP

What method(s) is/are used to provide clean air to the engines of helicopters and turboprop airplanes that have particle (sand and ice) separators installed?

A) Positive and negative charged areas to attract and/or repel particulates out of the airflow.

B) Air/moisture separators, and 'washing' the air clean utilizing water droplets.

C) Sharp airflow directional change to take advantage of inertia and/or centrifugal force, and filters or engine inlet screens.

344. O02P AMP

What are the three basic regulating components of a sea level boosted turbocharger system?

1. Exhaust bypass assembly.

2. Compressor assembly.

3. Pump and bearing casing.

4. Density controller.

5. Differential pressure controller.

A) 2, 3, 4.

B) 1, 4, 5.

C) 1, 2, 3.

345. O02P AMP

Which of the following would be a factor in the failure of an engine to develop full power at takeoff?

A) Improper adjustment of carburetor heat valve control linkage.

B) Excessively rich setting on the idle mixture adjustment.

C) Failure of the economizer valve to remain closed at takeoff throttle setting.

346. O02P AMP

The vortex dissipators installed on some turbine-powered aircraft to prevent engine FOD utilize

A) variable inlet guide vanes (IGV) and/or variable first stage fan blades.

B) variable geometry inlet ducts.

C) a stream of engine bleed air blown toward the ground ahead of the engine.

347. O02P AMP

Vortex dissipator systems are generally activated by

A) a landing gear switch.

B) a fuel pressure switch anytime an engine is operating.

C) an engine inlet airflow sensor.

348. O01P AMP

What part of an aircraft in flight will begin to accumulate ice before any other?

A) Wing leading edge.

B) Propeller spinner or dome.

C) Carburetor.

349. O01P AMP

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 venturi and throttle valve.

350. P02P AMP

Increased engine heat will cause volumetric efficiency to

A) remain the same.

B) decrease.

C) increase.

351. P02P AMP

What is the position of the cowl flaps during engine starting and warmup operations under normal conditions?

A) Full open at all times.

B) Full closed at all times.

C) Open for starting, closed for warmup.

352. P02P AMP

Which of the following results in a decrease in volumetric efficiency?

A) Cylinder head temperature too low.

B) Part throttle operation.

C) Short intake pipes of large diameter.

353. P02P AMP

What is the function of a blast tube as found on aircraft engines?

A) A means of cooling the engine by utilizing the propeller backwash.

B) A tube used to load a cartridge starter.

C) A device to cool an engine accessory.

354. P02P AMP
Prolonged idling of an engine will usually result in
A) excessive cylinder head temperatures.
B) increased oil consumption.
C) foreign material buildup on spark plugs.

355. P02P AMP
During ground operation of an engine, the cowl flaps should be in what position?
A) Fully closed.
B) Fully open.
C) Opened according to ambient conditions.

356. P02P AMP
A broken cooling fin on a cylinder head
A) is cause for rejection of the head.
B) may be filed to smooth contours if damage and/or repair limits are not exceeded.
C) should be left alone.

357. P02P AMP
Reciprocating engines used in helicopters are cooled by
A) the downdraft from the main rotor.
B) a fan mounted on the engine.
C) blast tubes on either side of the engine mount.

358. P02P AMP
Which of the following defects would likely cause a hot spot on a reciprocating engine cylinder?
A) Too much cooling fin area broken off.
B) A cracked cylinder baffle.
C) Cowling air seal leakage.

359. P02P AMP
High cylinder head temperatures are likely to result from
A) a very lean mixture at high power settings.
B) fouled spark plugs.
C) a very rich mixture at high power settings.

360. P01P AMP

How do cowl flaps aid in cooling a horizontally opposed aircraft engine?

A) Recirculates air through the engine cylinders.

B) Directs air through the engine cylinders.

C) Controls the amount of air flowing around the cylinders.

361. P01P AMP

Which of the following should a mechanic consult to determine the maximum amount of cylinder cooling fin that could be removed when cracks are found?

A) AC 43.13-1A.

B) Engine manufacturer's service or overhaul manual.

C) Engine structure repair manual.

362. P01P AMP

Generally, a small crack just started in a cylinder baffle

A) requires repair by reinforcing, such as installation of a doubler over the area.

B) requires no action unless it grows or is branched into two cracks.

C) may be stop drilled.

363. P01P AMP

The primary purpose of baffles and deflectors installed around cylinders of air-cooled aircraft engines is to

A) create a low pressure area aft of the cylinders.

B) force cooling air into close contact with all parts of the cylinders.

C) increase the volume of air used to cool the engine.

364. Q02P AMP

What could be a result of undetected exhaust system leaks in a reciprocating engine powered airplane?

A) Pilot/passenger incapacitation caused by carbon monoxide entering the cabin.

B) A rough-running engine with increased fuel consumption.

C) Too low exhaust back pressure resulting in the desired power settings not being attained.

365. Q02P AMP

Compared to normally aspirated engines, turbocharged engine exhaust systems operate at

A) similar temperatures and higher pressures.

B) higher temperatures and higher pressures.

C) similar temperatures and pressures.

366. Q02P AMP

How are combustion liner walls cooled in a gas turbine engine?

A) By secondary air flowing through the combustion chamber.

B) By the pattern of holes and louvers cut in the diffuser section.

C) By bleed air vented from the engine air inlet.

367. Q02P AMP

Dislodged internal muffler baffles on a small reciprocating engine may

A) obstruct the muffler outlet and cause excessive exhaust back pressure.

B) cause the engine to run excessively cool.

C) cause high fuel and oil consumption.

368. Q02P AMP

On an aircraft that utilizes an exhaust heat exchanger as a source of cabin heat, how should the exhaust system be inspected?

A) X rayed to detect any cracks.

B) Hydrostatically tested.

C) With the heater air shroud removed.

369. Q02P AMP

Power recovery turbines used on some reciprocating engines are driven by the

A) exhaust gas pressure.

B) crankshaft.

C) velocity of the exhaust gases.

370. Q02P AMP

Select a characteristic of a good weld on exhaust stacks.

A) The weld should be built up 1/8 inch.

B) Porousness or projecting globules should show in the weld.

C) The weld should taper off smoothly into the base metal.

371. Q01P AMP

Why is high nickel chromium steel used in many exhaust systems?

A) High heat conductivity and flexibility.

B) Corrosion resistance and low expansion coefficient.

C) Corrosion resistance and high heat conductivity.

372. Q01P AMP

Reciprocating engine exhaust system designs commonly used to provide for ease of installation and/or allow for expansion and contraction, may include the use of

1. spring loaded ball/flexible joints.
2. slip joints.
3. bellows.
4. flexible metal tubing.

A) 1, 2, 3, and/or 4.

B) 1, 2, and/or 4.

C) 1, 2, and/or 3.

373. Q01P AMP

The hot section of a turbine engine is particularly susceptible to which of the following kind of damage?

A) Galling.

B) Pitting.

C) Cracking.

374. Q01P AMP

What type of nuts are used to hold an exhaust system to the cylinders?

A) Brass or heat-resistant nuts.

B) High-temperature fiber self-locking nuts.

C) High-temperature aluminum self-locking nuts.

375. Q01P AMP

Sodium filled valves are advantageous to an aviation engine because they

A) are lighter.

B) dampen valve impact shocks.

C) dissipate heat well.

376. Q03P AMP

Thrust reversers utilizing a pneumatic actuating system usually receive operating pressure from

A) the engine bleed air system.

B) an on board hydraulic or electrical powered compressor.

C) high pressure air reservoirs.

377. Q03P AMP

Which statement is generally true regarding thrust reverser systems?

A) It is possible to move some aircraft backward on the ground using reverse thrust.

B) Engine thrust reversers on the same aircraft usually will not operate independently of each other (must all be simultaneously).

C) Mechanical blockage system design permits a deployment position aft of the exhaust nozzle only.

378. R03P AMP

What type of imbalance will cause a two blade propeller to have a persistent tendency to come to rest in a horizontal position (with the blades parallel to the ground) while being checked on a propeller balancing beam?

A) Vertical.

B) Horizontal.

C) Harmonic.

379. R03P AMP

Apparent engine roughness is often a result of propeller unbalance. The effect of an unbalanced propeller will usually be

A) approximately the same at all speeds.

B) greater at low RPM.

C) greater at high RPM.

380. R03P AMP

Propeller aerodynamic (thrust) imbalance can be largely eliminated by

A) correct blade contouring and angle setting.

B) static balancing.

C) keeping the propeller blades within the same plane of rotation.

381. R02P AMP

Grease used in aircraft propellers reduces the frictional resistance of moving parts and is easily molded into any form under pressure. This statement defines

A) antifriction and plasticity characteristics of grease.

B) antifriction and chemical stability of grease.

C) viscosity and melting point of grease.

382. R05P AMP

Longitudinal (fore and aft) clearance of constant speed propeller blades or cuffs must be at least 1/2 inch (12.7 mm) between propeller parts and stationary parts of the aircraft. This clearance is with the propeller blades

A) at takeoff pitch (maximum thrust) angle.

B) feathered or in the most critical pitch configuration.

C) at the lowest pitch angle.

383. R05P AMP

The thrust produced by a rotating propeller is a result of

A) an area of low pressure behind the propeller blades.

B) an area of decreased pressure immediately in front of the propeller blades.

C) the angle of relative wind and rotational velocity of the propeller.

384. R05P AMP

What is the result of moving the throttle on a reciprocating engine when the propeller is in the constant speed range with the engine developing cruise power?

A) Opening the throttle will cause an increase in blade angle.

B) The RPM will vary directly with any movement of the throttle.

C) Movement of the throttle will not affect the blade angle.

385. R05P AMP

The actual distance a propeller moves forward through the air during one revolution is known as the

A) effective pitch.

B) geometric pitch.

C) relative pitch.

386. R05P AMP

The propeller blade angle is defined as the acute angle between the airfoil section chord line (at the blade reference station) and which of the following?

A) The plane of rotation.

B) The relative wind.

C) The axis of blade rotation during pitch change.

387. R05P AMP

How can a steel propeller hub be tested for cracks?

A) By anodizing.

B) By magnetic particle inspection.

C) By etching.

388. R05P AMP

Which of the following best describes the blade movement of a propeller that is in the high RPM position when reversing action is begun?

A) Low pitch directly to reverse pitch.

B) Low pitch through high pitch to reverse pitch.

C) Low pitch through feather position to reverse pitch.

389. R05P AMP

Counterweights on constant-speed propellers are generally used to aid in

A) increasing blade angle.

B) decreasing blade angle.

C) unfeathering the propellers.

390. R05P AMP

During operational check of an aircraft using hydromatic full feathering propellers, the following observations are made:

The feather button, after being pushed, remains depressed until the feather cycle is complete, then opens.

When unfeathering, it is necessary to manually hold the button down until unfeathering is accomplished.

A) Both feather cycle and unfeather cycle are functioning properly.

B) Both feather and unfeather cycles indicate malfunctions.

C) The feather cycle is correct. The unfeather cycle indicates a malfunction.

391. R05P AMP

Which of the following best describes the blade movement of a feathering propeller that is in the HIGH RPM position when the feathering action is begun?

A) High pitch through low pitch to feather position.

B) Low pitch through reverse pitch to feather position.

C) Low pitch through high pitch to feather position.

392. R05P AMP

Which of the following forces or combination of forces operates to move the blades of a constant speed counterweight type propeller to the HIGH PITCH position?

A) Engine oil pressure acting on the propeller piston cylinder arrangement and centrifugal force acting on the counterweights.

B) Centrifugal force acting on the counterweights.

C) Prop governor oil pressure acting on the propeller piston cylinder arrangement.

393. R05P AMP

Which of the following is identified as the cambered or curved side of a propeller blade, corresponding to the upper surface of a wing airfoil section?

A) Blade back.

B) Blade chord.

C) Blade face.

394. R05P AMP

What controls the constant speed range of a constant speed propeller?

A) Engine RPM.

B) Angle of climb and descent with accompanying changes in airspeed.

C) The mechanical limits in the propeller pitch range.

395. R05P AMP

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

A) Solder missing from screw heads securing metal tipping.

B) An oversize hub or bolthole, or elongated boltholes.

C) No protective coating on propeller.

396. R05P AMP

The primary purpose of a cuff on a propeller is to

A) distribute anti icing fluid.

B) strengthen the propeller.

C) increase the flow of cooling air to the engine nacelle.

397. R05P AMP

A constant speed propeller provides maximum efficiency by

A) increasing blade pitch as the aircraft speed decreases.

B) adjusting blade angle for most conditions encountered in flight.

C) increasing the lift coefficient of the blade.

398. R05P AMP

Propeller blade angle is the angle between the

A) chord of the blade and the relative wind.

B) relative wind and the rotational plane of the propeller.

C) chord of the blade and the rotational plane of the propeller.

399. R05P AMP

Geometric pitch of a propeller is defined as the

A) effective pitch minus slippage.

B) effective pitch plus slippage.

C) angle between the blade chord and the plane of rotation.

400. R05P AMP

What operational force tends to bend the propeller blades forward at the tip?

A) Torque bending force.

B) Centrifugal twisting force.

C) Thrust bending force.

401. R05P AMP

(1) A mechanic certificate with a powerplant rating authorizes the holder to repair deep scars, nicks, and dents on aluminum propeller blades.

(2) A mechanic certificate with a powerplant rating authorizes the holder to perform minor straightening of steel propeller blades.

Regarding the above statements,

A) only No. 1 is true.

B) both No. 1 and No. 2 are true.

C) neither No. 1 nor No. 2 is true.

402. R05P AMP

The primary purpose of a feathering propeller is to

A) prevent further engine damage when an engine fails in flight.

B) prevent propeller damage when an engine fails in flight.

C) eliminate the drag created by a windmilling propeller when an engine fails in flight.

403. R01P AMP

Proper operation of electric deicing boots on individual propeller blades may best be determined by

A) feeling the boots to see if they are heating.

B) observing the ammeter or loadmeter for current flow.

C) feeling the sequence of boot heating and have an assistant observe the loadmeter indications.

404. R01P AMP

What is a function of the automatic propeller synchronizing system on multiengine aircraft?

A) To control the tip speed of all propellers.

B) To control engine RPM and reduce vibration.

C) To control the power output of all engines.

405. R01P AMP

On most reciprocating multiengine aircraft, automatic propeller synchronization is accomplished through the actuation of the

A) throttle levers.

B) propeller governors.

C) propeller control levers.

406. R01P AMP

How is aircraft electrical power for propeller deicer systems transferred from the engine to the propeller hub assembly?

A) By slip rings and segment plates.

B) By slip rings and brushes.

C) By flexible electrical connectors.

407. R06P AMP

If a flanged propeller shaft has dowel pins

A) install the propeller so that the blades are positioned for hand propping.

B) the propeller can be installed in only one position.

C) check carefully for front cone bottoming against the pins.

408. R06P AMP

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

A) If a separate metal hub is used, final track should be accomplished prior to installing the hub in the propeller.

B) NAS close tolerance bolts should be used to install the propeller.

C) Inspect the bolts for tightness after the first flight and again after the first 25 hours of flying.

409. R06P AMP

Oil leakage around the rear cone of a hydromatic propeller usually indicates a defective

A) piston gasket.

B) spider shaft oil seal.

C) dome barrel oil seal.

410. R06P AMP

Maximum taper contact between crankshaft and propeller hub is determined by using

A) bearing blue color transfer.

B) a micrometer.

C) a surface gauge.

411. R06P AMP

Propeller blade tracking is the process of determining

A) the plane of rotation of the propeller with respect to the aircraft longitudinal axis.

B) that the blade angles are within the specified tolerance of each other.

C) the positions of the tips of the propeller blades relative to each other.

412. R06P AMP

A fixed pitch wooden propeller that has been properly installed and the attachment bolts properly torqued exceeds the out of track allowance by 1/16 inch. The excessive out of track condition may be corrected by

A) slightly overtightening the attachment bolts adjacent to the most forward blade.

B) discarding the propeller since out of track conditions cannot be corrected.

C) placing shims between the inner flange and the propeller.

413. R06P AMP

Manually feathering a hydromechanical propeller means to

A) block governor oil pressure to the cylinder of the propeller.

B) port governor oil pressure to the cylinder of the propeller.

C) port governor oil pressure from the cylinder of the propeller.

414. R06P AMP

How is the oil pressure delivery on a hydromatic propeller normally stopped after the blades have reached their full feathered position?

A) Pulling out the feathering push button.

B) Electric cutout pressure switch.

C) Stop lugs in the teeth of the rotating cam.

415. R06P AMP

When running up an engine and testing a newly installed hydromatic propeller, it is necessary to exercise the propeller by moving the governor control through its entire travel several times to

A) seat the blades fully against the low pitch stop.

B) free the dome of any entrapped air.

C) test the maximum RPM setting of the governor.

416. R07P AMP

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

A) Any repairs that would require shortening and re-contouring of blades.

B) Any slag inclusions or cold shuts.

C) Transverse cracks of any size.

417. R07P AMP

One of the advantages of inspecting an aluminum propeller utilizing dye-penetrant inspection procedure is that

A) defects just below the surface are indicated.

B) it shows whether visible lines and other marks are actually cracks rather than scratches.

C) it indicates overspeed condition.

418. R07P AMP

Minor surface damage located in a repairable area, but not on the leading or trailing edges of aluminum blades, may be repaired by first

A) filing with a riffle file.

B) filing with a half round or flat file.

C) rough sanding and applying a proper filler.

419. R07P AMP

It is important that nicks in aluminum alloy propeller blades be repaired as soon as possible in order to

A) maintain equal aerodynamic characteristics between the blades.

B) eliminate stress concentration points.

C) equalize the centrifugal loads between the blades.

420. R07P AMP

Repairs of aluminum alloy adjustable pitch propellers are not permitted to be made on which of the following propeller blade areas?

A) Shank.

B) Face.

C) Back.

421. R07P AMP

Cold straightening a bent aluminum propeller blade may be accomplished by

A) the holder of a mechanic certificate with a powerplant rating.

B) an appropriately rated repair station or the manufacturer.

C) a person working under the supervision of the holder of a mechanic certificate with both airframe and powerplant ratings.

422. R04P AMP

The propeller governor controls the

A) oil to and from the pitch changing mechanism.

B) spring tension on the boost pump speeder spring.

C) linkage and counterweights from moving in and out.

423. R04P AMP

When the centrifugal force acting on the propeller governor flyweights overcomes the tension on the speeder spring, a propeller is in what speed condition?

A) On speed.

B) Underspeed.

C) Overspeed.

424. R04P AMP

During the on-speed condition of a propeller, the

A) centrifugal force acting on the governor flyweights is greater than the tension of the speeder spring.

B) tension on the speeder spring is less than the centrifugal force acting on the governor flyweights.

C) centrifugal force of the governor flyweights is equal to the speeder spring force.

425. R04P AMP

During engine operation at speeds lower than those for which the constant speed propeller control can govern in the INCREASE RPM position, the propeller will

A) remain in the full HIGH PITCH position.

B) maintain engine RPM in the normal manner until the HIGH PITCH stop is reached.

C) remain in the full LOW PITCH position.

426. R04P AMP

A powerplant using a hydraulically controlled constant speed propeller is operating within the propeller's constant speed range at a fixed throttle setting. If the tension of the propeller governor control spring (speeder spring) is reduced by movement of the cockpit propeller control, the propeller blade angle will

A) increase, engine manifold pressure will increase, and engine RPM will decrease.

B) decrease, engine manifold pressure will increase, and engine RPM will decrease.

C) decrease, engine manifold pressure will decrease, and engine RPM will increase.

427. T01P AMP

Fuel is normally supplied to an APU from

A) its own independent fuel supply.

B) the airplane's reserve fuel supply.

C) the airplane's main fuel supply.

428. T01P AMP

Fuel scheduling during APU start and under varying pneumatic bleed and electrical loads is maintained

A) manually through power control lever position.

B) automatically by the APU fuel control system.

C) automatically by an aircraft main engine fuel control unit.

429. T01P AMP

Usually, most of the load placed on an APU occurs when

A) an electrical load is placed on the generator(s).

B) the bleed air valve is opened.

C) the bleed air valve is closed.

430. T01P AMP

When in operation, the speed of an APU

A) is controlled by a cockpit power lever.

B) remains at idle and automatically accelerates to rated speed when placed under load.

C) remains at or near rated speed regardless of the load condition.