Question block created by wizard

1. What are electrical heaters used for?

- o (a) Not used on helicopters
- • (b) Demisting the windscreens
- o (c) Heating up the cabin ventilation air

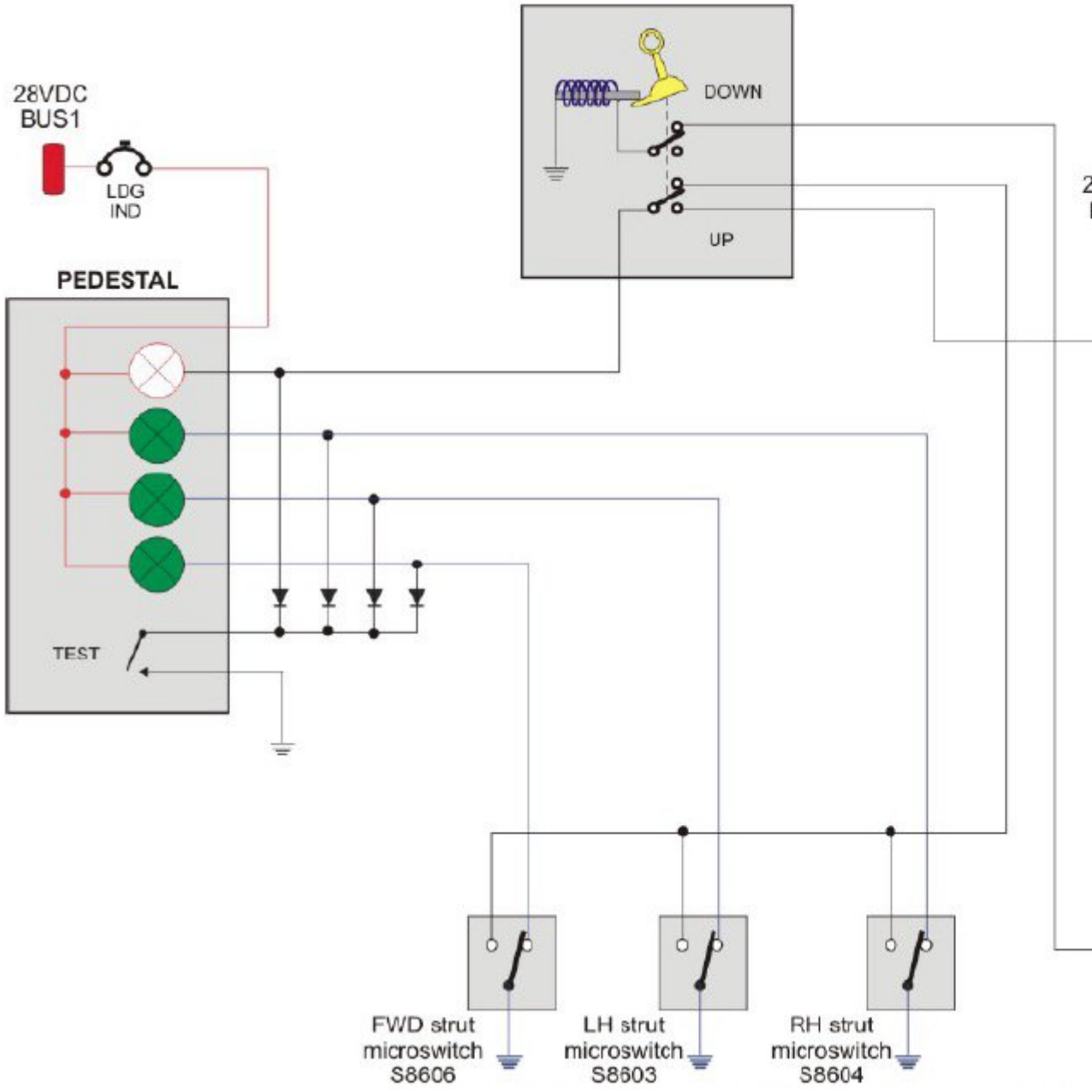
If choice b is selected set score to 1.

2. What is the function of an Airborn Computer Network

- o (a) A network that allows the transfer of data to and from the aircraft management computer to an external computer.
- o (b) A network that connects the aircraft management computer to all analoge computing units on board the aircraft.
- • (c) A network that connects all relevant onboard computing units to each other.

If choice c is selected set score to 1.

3. What is the function of the highlighted switch S8605 in the figure?



- (a) It is a switch that will de-energize a lock solenoid in the gear selector and prevent the movement of the gear selector when the aircraft is on the ground

o (b) It is a switch that will allow the movement of the gear selector when the gear is down and the aircraft is on the ground
o (c) It is a switch that will energize a lock solenoid in the gear selector and prevent the movement of the gear selector when the aircraft is on the ground

If choice a is selected set score to 1.

4. The Isolated Data Network (IDN) is displayed with red arrows. Which component belongs to this system?

- o (a) PES (Passenger Entertainment System).
- • (b) IMA (Integrated Modular Avionics).
- o (c) TWLU (Terminal Wireless Local area network Unit).

If choice b is selected set score to 1.

5. What is the correct sequence for data loading?

- • (a) Check for virusses - check for correct partnumber of software - data loading - entry in aircraft techical log
- o (b) Data loading - Entry in aircraft technical log - check for correct partnumber of software
- o (c) Entry in aircraft technical log - Check for correct partnumber of software - data loading - check for virusses

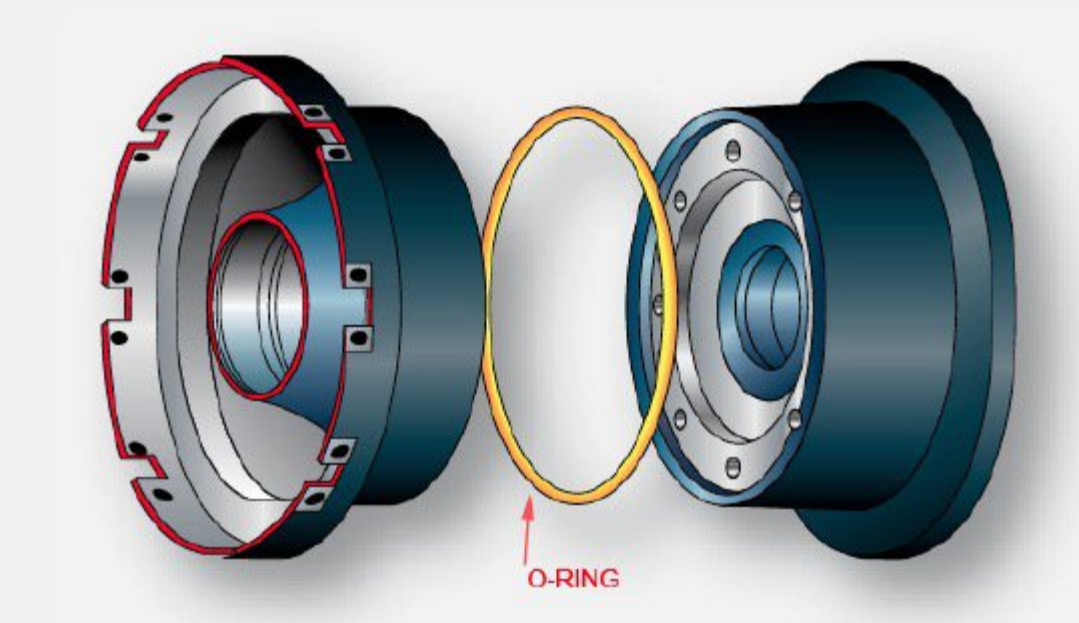
If choice a is selected set score to 1.

6. When is the maintenance mode functional in the central maintenance system?

- • (a) Only on the ground
- o (b) Always when the system is powered
- o (c) In flight

If choice a is selected set score to 1.

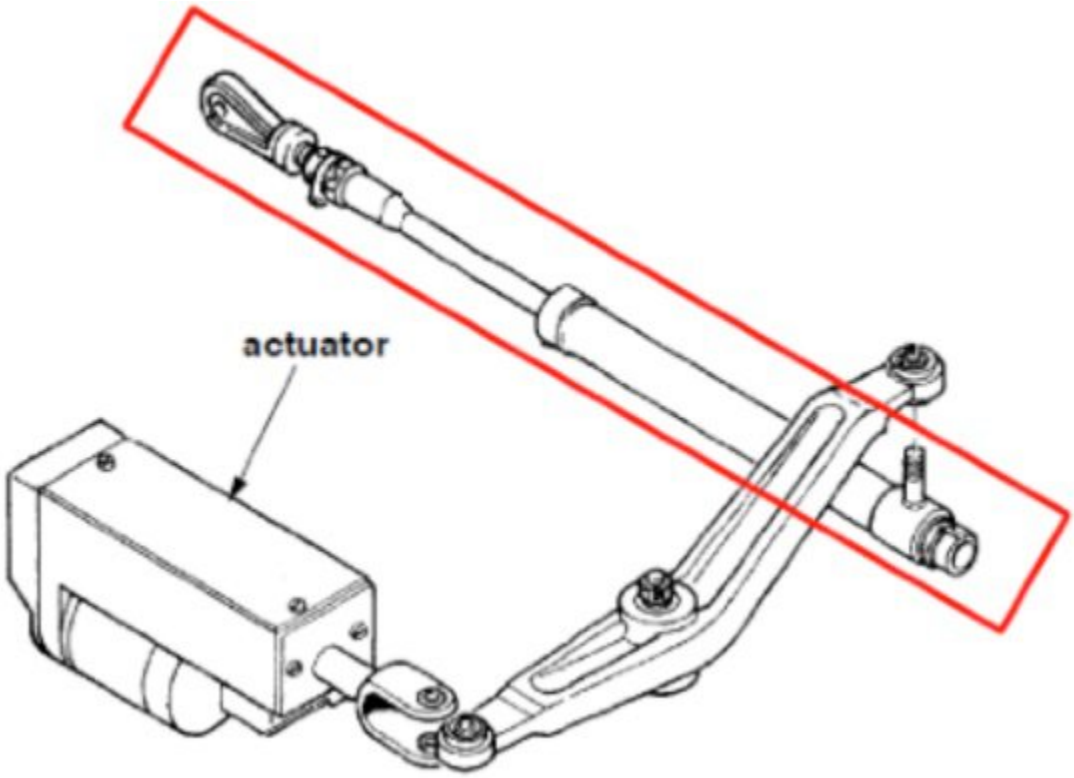
7. What type of wheel is shown in the figure?



- o (a) Detatchable flange wheel
- o (b) Well based wheel
- • (c) Split wheel

If choice c is selected set score to 1.

8. What is indicated in the figure?



- (a) Spring rod

o (b) Control rod
o (c) Alternate hydraulic actuator

If choice a is selected set score to 1.

9. Which of the following statements concerning the fuel system is NOT true?

o (a) All helicopters can be gravity refueled
o (b) Helicopters can be refueled via pressure refueling and gravity refueling

- (c) Helicopters with a single point refueling system cannot be suction defueled

If choice c is selected set score to 1.

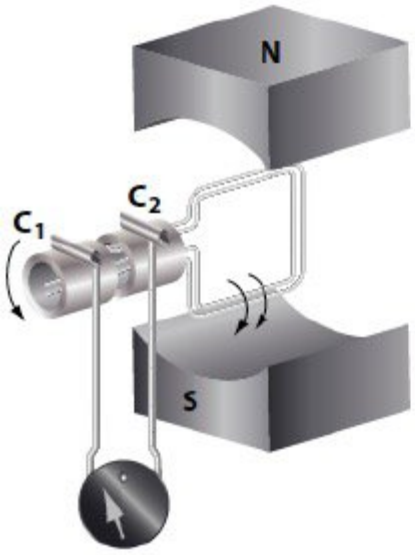
10. What type of landing gear is shown in the figure?

- o (a) Semi-levered suspension
- o (b) Direct acting suspension

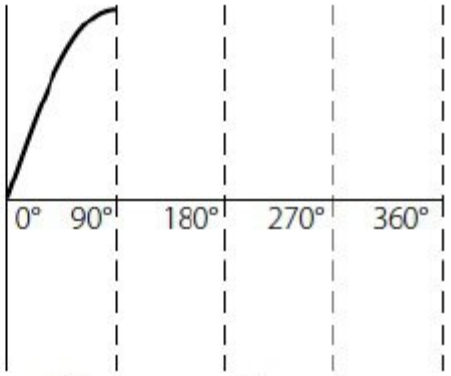
- (c) Levered suspension

If choice c is selected set score to 1.

11. What would the correct diagram be for an single loop alternator in the position it is shown in the figure?

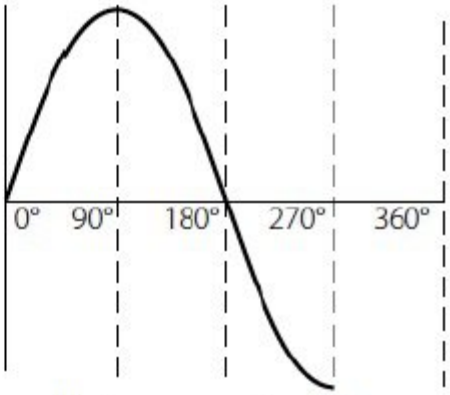


A



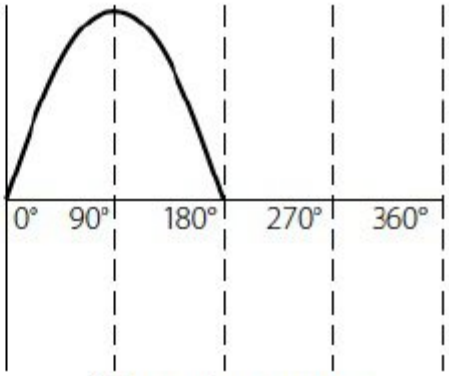
Maximum positive voltage

B



Maximum negative voltage

C



Voltage drops to zero

- o (a) A
- • (b) B
- o (c) C

If choice b is selected set score to 1.

12. What triggers the ice detection warning on a serrated rotor ice detector?

- o (a) A decrease in temperature of the rotor caused by the ice buildup, triggering a temperature sensitive switch which activates the ice warning
- • (b) An increase in torque to drive the rotor when it is covered with ice while the knife-edge shaves the ice off the surface. This torque increase triggers the ice warning.
- o (c) An imbalance in the rotor, causing it the wobble slightly while rotating, triggering a switch, that then activates the ice warning

If choice b is selected set score to 1.

13. Why is it that a helicopter doesn't need a constant speed drive to run an AC alternator?

- • (a) AC generators on a helicopter are driven by the main gear box which runs at a constant speed
- o (b) Helicopter engines run at a fairly contant speed so a constand speed drive is not required
- o (c) Helicopters use a special design AC alternator which produces a constant output no matter what speed it is driven by.

If choice a is selected set score to 1.

14. What is the purpose of the parallel motion device on a wiper system?

- o (a) Ensures the blade maintains contact with the screen.
- o (b) Ensures the blade moves in arc.
- • (c) Ensures the blade remains parallel with the screen.

If choice c is selected set score to 1.

15. What is used on a tail rotor to compensate for dissymetry of lift?

- o (a) Nothing. Tail rotors are not effected by it.
- o (b) Dampers
- • (c) Offset pitch links

If choice c is selected set score to 1.

16. What is the benefit of a forward mounted horizontal stabilizer over a aft mounted stabilizer?

- o (a) More effective so has a smaller surface area
- • (b) Does not suffer from sudden changes of lift because it remains in the main rotor down wash.
- o (c) More effective due to its bigger moment arm

If choice b is selected set score to 1.

17. A helicopter suffers from a 1 per rev vibration, what could be the cause?

- o (a) Tail rotor blade out of track.
- o (b) Main rotor blade out of balance.
- • (c) Main rotor blade out of track.

If choice c is selected set score to 1.

18. What is the effect of the collective movement in the up direction on the main rotor blades?

- o (a) All blades decrease pitch
- • (b) All blades increase pitch
- o (c) The advancing blades increase pitch, the retreating blades decrease pitch

If choice b is selected set score to 1.

19. What is "rotor brake"?

- • (a) A brake system used to stop the rotor blades from spinning on ground when the engine is ahut down.
- o (b) A brake used to control the rotor speed in flight and prevent the rotor from overspeeding.
- o (c) A manoeuvre used to slow down the helicopter in a descent using the rotor as an air brake.

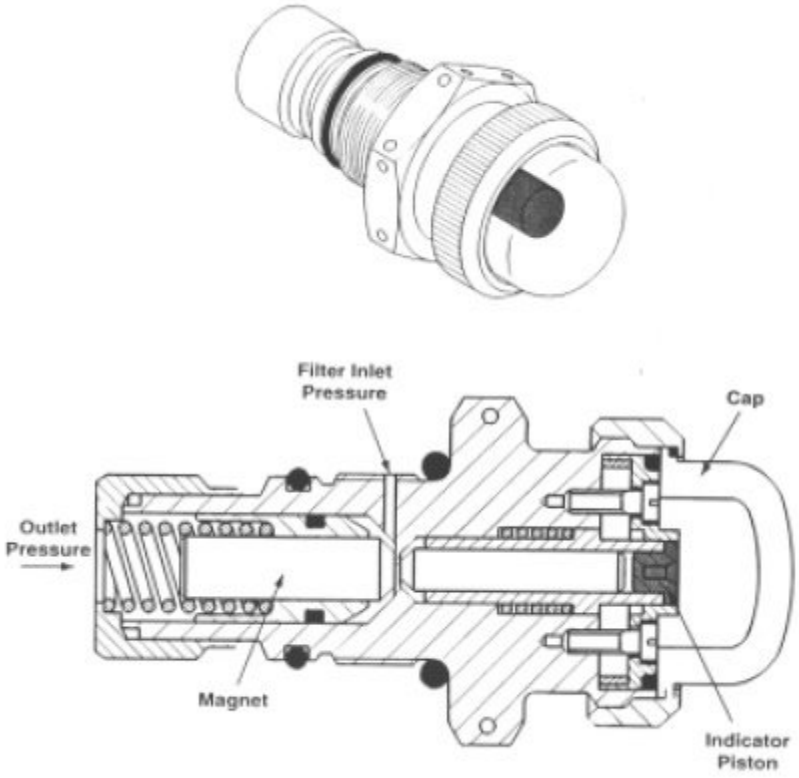
If choice a is selected set score to 1.

20. On a helicopter with skids, where would the flotation bags be located?

- • (a) On the skids
- o (b) On the fuselage
- o (c) On the skid crossbars

If choice a is selected set score to 1.

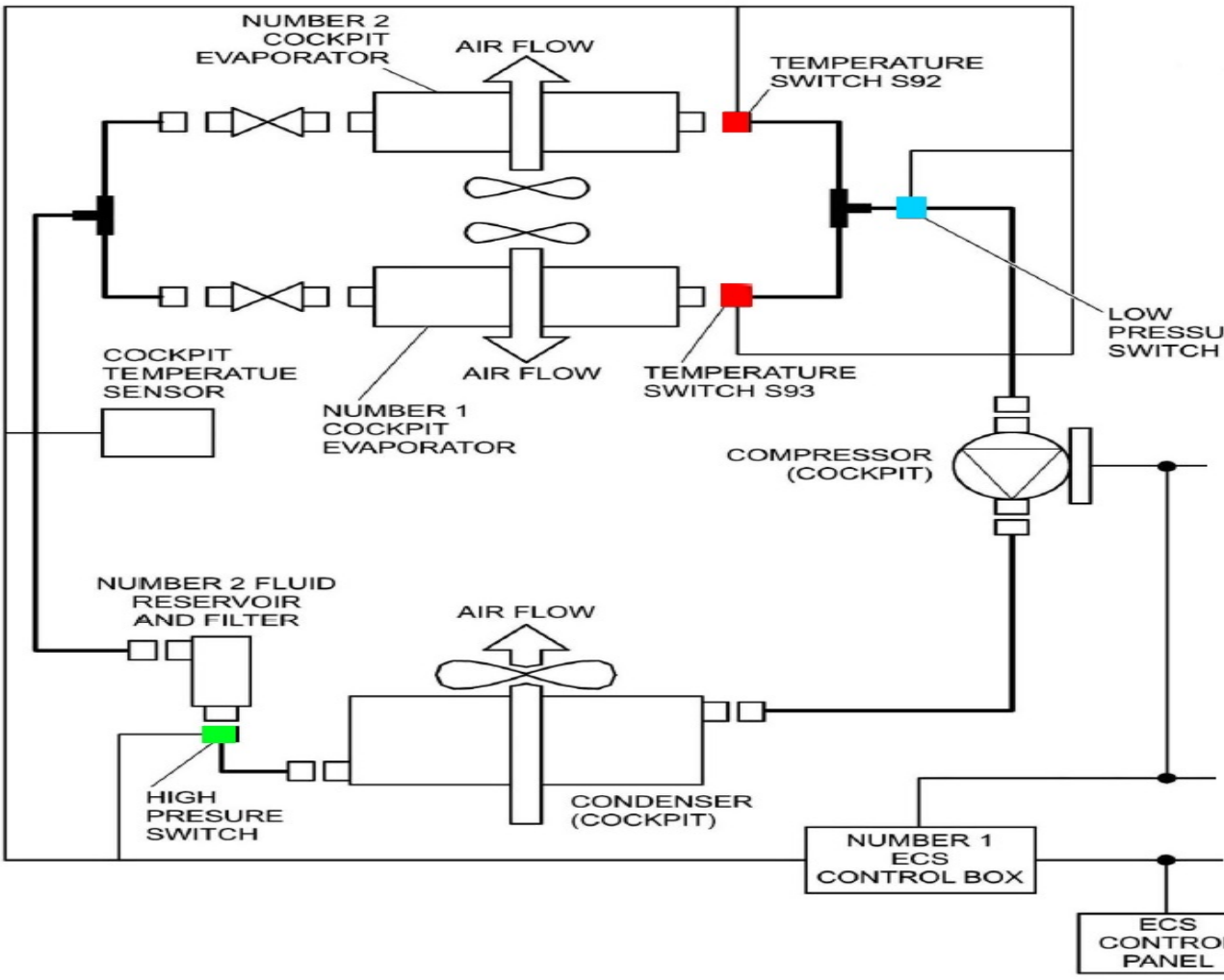
21. What would cause the devce shown in the figure to activate?



- (a) A blocked filter would cause the outlet pressure to increase until the magnet is pushed back and breaks contact with the indicator allowing it to be pushed out by a spring.
- (b) A blocked filter would cause the inlet pressure to increase until the magnet is pushed back and breaks contact with the indicator allowing it to be pushed out by a spring.
- (c) A blocked filter would cause the outlet pressure to increase until the magnet is pushed outwards, pushing the indicator out.

If choice b is selected set score to 1.

22. The vapor cycle system shown in the figure has a temperature switch S93. When will this switch cause a shut-down of the system?

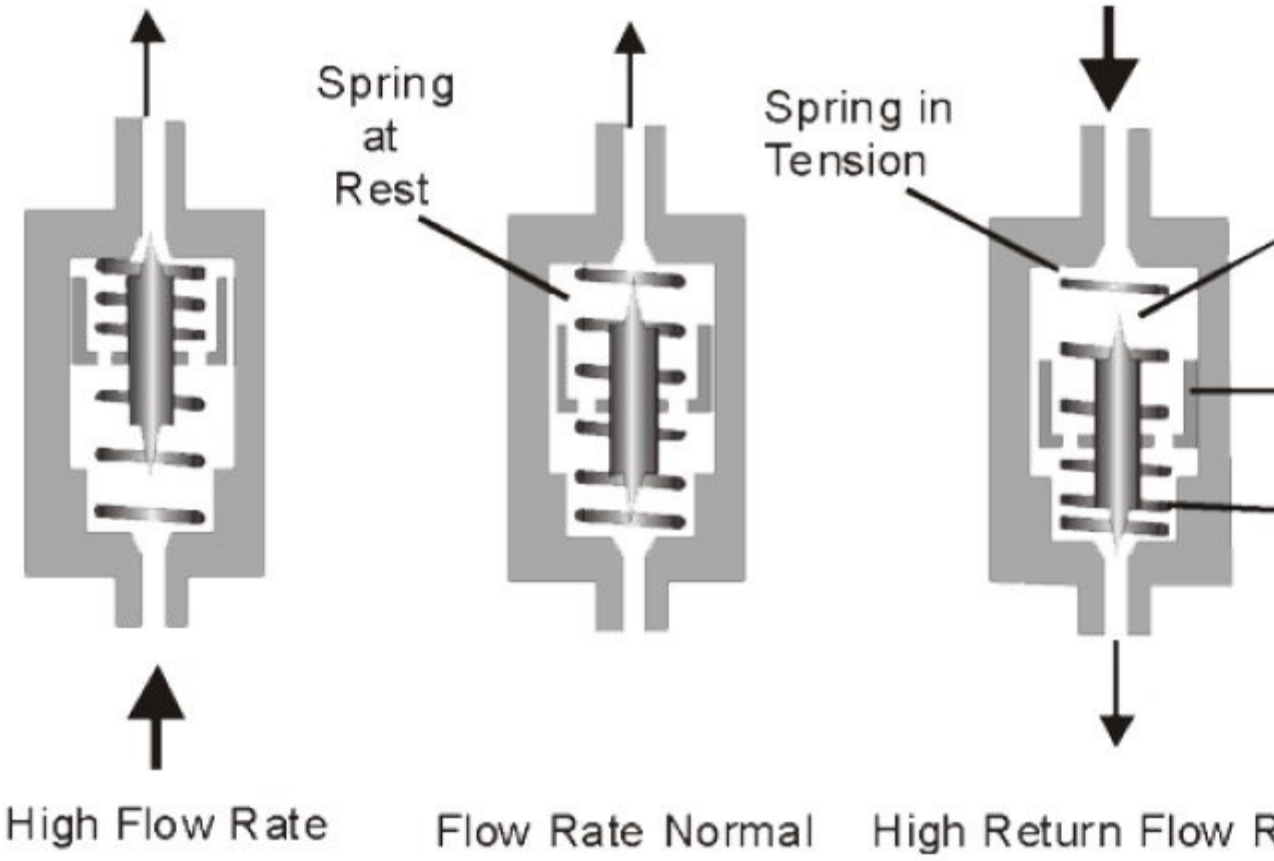


- (a) When the cockpit evaporator number 1 freezes

o (b) When the cockpit evaporator number 1 gets too hot
o (c) When the fluid coming out of the evaporator is too hot

If choice a is selected set score to 1.

23. The valve shown in the figure is a throttling valve. Which other type of valve has basically the same function?



- o (a) Check valve
- o (b) Pressure relief valve
- • (c) Restrictor

If choice c is selected set score to 1.

24. Flapping and lead-lag drag are all terms associated with:

- • (a) Movement of the blades
- o (b) Movement of the flight controls
- o (c) Movement of the helicopter

If choice a is selected set score to 1.

25. What effect will the movement of the collective control stick have?

- o (a) Change the tail rotor blades pitch angle
- • (b) change the pitch angle of all the main rotor blades simultaniously

- (c) Increase the pitch angle of the advancing main rotor blade and decrease the pitch angle of the retreating main rotor blade

If choice b is selected set score to 1.

26. What is the cause of the translating tendancy of a single main roto helicopter?

- (a) The flapping of the main rotor blades.
- (b) The trust produced by the tail rotor.
- (c) The gyroscopic effect.

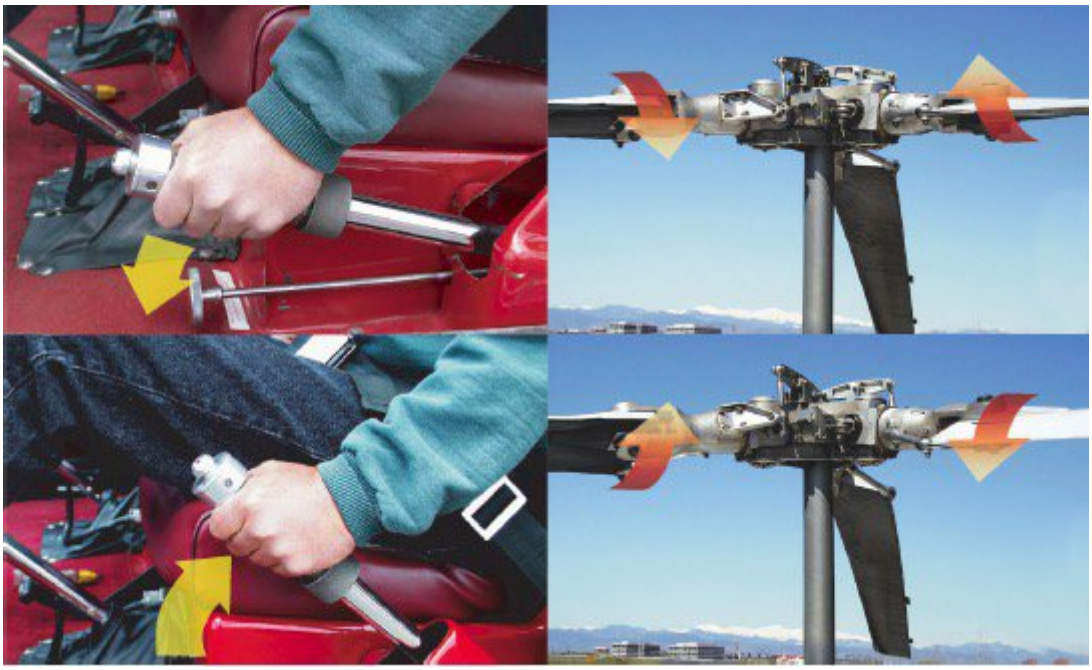
If choice b is selected set score to 1.

27. What determines the amount of torque reaction on a helicopter?

- (a) The size of the tail rotor
- (b) The amount of engine power used to turn the rotor
- (c) The size of the main rotor

If choice b is selected set score to 1.

28. Which flight control system is illustrated in the figure?



- (a) Cyclic
- (b) Yaw
- (c) Collective

If choice c is selected set score to 1.

29. What is the purpose of the white paint mark on the tyre and rim as can be seen in the figure?

- (a) serves as an indicator to show if the tyre has slipped on the rim

o (b) Serves as an overheat indicaton. The paint is heat sensitive and changes color if it gets too hot.
o (c) serves as an alignment mark to ensure the tyre is fitted in the same position when the wheel is re-assembled

If choice a is selected set score to 1.

30. Which type of main rotor does not have horizontal or vertical hinge pins and is able to teeter?

o (a) fully articulated rotor

- (b) semi-rigid rotor

o (c) hingeless rotor

If choice b is selected set score to 1.

31. When will the generator control unit (GCU) of an AC generation system allow the generator breaker to close?

o (a) When current and frequency output of the alternator are correct

- o (b) When voltage and current output of the alternator are correct

- • (c) When voltage and frequency output of the alternator are correct

If choice c is selected set score to 1.

32. The Open Data Network (ODN) is displayed with dark blue arrows. Which component belongs to this system?

- • (a) PES (Passenger Entertainment System).

- o (b) EFBEU (Electronic Flight Bag Electronic Unit).
- o (c) IMA (Integrated Modular Avionics).

If choice a is selected set score to 1.

33. Integrated modular avionics (IMA) software is:

- • (a) Specific to type and model of helicopter

- o (b) Universal to all helicopters fitted with the same type of IMA
- o (c) Always specific to each individual helicopter

If choice a is selected set score to 1.

34. What is the main difference between an overheat detector and a fire detector?

- • (a) An overheat detector is the same as a fire detector except it reacts at a lower temperature.

- o (b) Overheat detectors responds to heat with a change in resistance, while a fire detector responds to heat with an increase in internal gas pressure
- o (c) The overheat detector is a spot type detector, the fire detector is a continuous loop type detector.

If choice a is selected set score to 1.

35. At the end of an autorotation just before landing, how is the forward speed reduced?

- o (a) By applying collective pitch.

- • (b) By moving the cyclic stick aft.

- o (c) By moving the cyclic stick forward.

If choice b is selected set score to 1.

36. What happens to the refrigerant in a vapor cycle system when it goes through the expansion valve?

- o (a) It changes from a vapor to a liquid, which causes a temperature drop

- (b) It undergoes an abrupt reduction in pressure which causes its temperature to drop.

o (c) The mixing with air with a high humidity causes its pressure to drop

If choice b is selected set score to 1.

37. In which system would you generally find a flux valve?

o (a) Direct reading magnetic compass
o (b) Horizontal situation indicator

- (c) Remote reading magnetic compass

If choice c is selected set score to 1.

38. "Which techniques may be used to attach a stringer to the skin? 1= Rivetting 2= Bonding 3= Welding 4= Nuts and bolts"

o (a) 1,2 and 4
o (b) 1 and 2

- (c) 1,2 and 3

If choice c is selected set score to 1.

39. What makes up a power transfer unit (PTU)?

o (a) An electric motor and a hydraulic pump

- (b) A hydraulic motor and a hydraulic pump

o (c) A hydraulic motor and a electric pump

If choice b is selected set score to 1.

40. What type of seals are normally used for bleed ducts?

o (a) Teflon gaskets
o (b) Rubber O-rings

- (c) Crush type seals

If choice c is selected set score to 1.

41. Why is the air intake for the ventilation system usually on or near the nose of the helicopter?

- (a) So that the airflow around the engine inlet is not disturbed.

o (b) It prevents exhaust gases getting into the ventilation system.
o (c) It is the best location to ensure foreign objects are not sucked into the air intake.

If choice a is selected set score to 1.

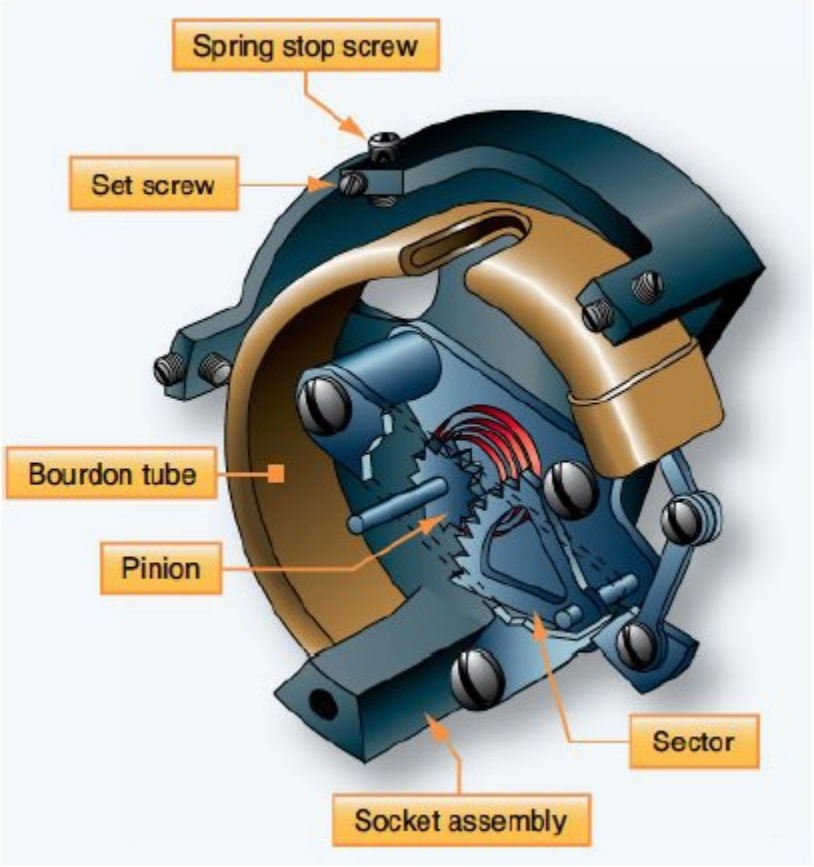
42. In addition to keeping the windshield ice and fog free, what other purpose does heating of the windshield have?

- (a) Increases the flexibility of the windshield

o (b) Helps warm up the cockpit
o (c) Increases the strength of the windshield

If choice a is selected set score to 1.

43. What type of instrument would be constructed this way?



o (a) Temperature gauge.

- (b) Pressure gauge.

o (c) Tachometer.

If choice b is selected set score to 1.

44. Integrated modular avionics provides for lower cost and lower weight. What else does IMA provide?

- o (a) Lower power consumption
- • (b) Improved reliability
- o (c) Improved maintainability

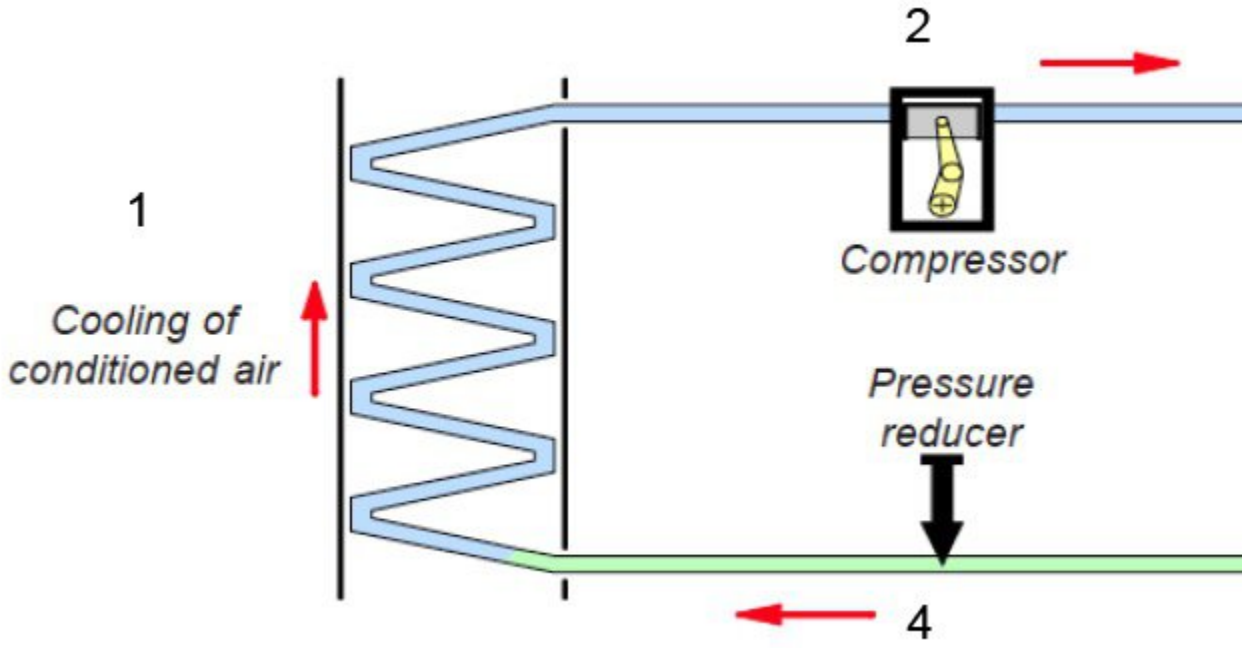
If choice b is selected set score to 1.

45. Which of the following air conditioning systems is considered to be the most simple system?

- o (a) Engine bleed air
- o (b) Compressor
- • (c) RAM air

If choice c is selected set score to 1.

46. In the figure, the operating principle of a vapor cycle system is shown. Complete the schematic by linking the numbers to the correct terms.



- o (a) (1) Condensor, (2) Vapor, (3) Evaporator, (4) Liquid
- o (b) (1) Vapor, (2) Evaporator, (3) Liquid, (4) Condensor
- • (c) (1) Evaporator, (2) Vapor, (3) Condensor, (4) Liquid

If choice c is selected set score to 1.

47. What is NOT a function of a hydraulic accumulator?

- o (a) Dampen out pressure fluctuations
- • (b) Store a reserve amount of hydraulic fluid
- o (c) Allow a limited amount of system operation when the hydraulic pump is not working

If choice b is selected set score to 1.

48. On a dual gas turbine powered helicopter, what happens to the environmental control system if an engine fails?

- • (a) The bleed system is shut down on the remaining operable engine
- o (b) The bleed system is closed off on the failed engine, preventing reverse flow from the operable engine.
- o (c) The bleed from the operable engine is reduced to preserve engine power.

If choice a is selected set score to 1.

49. An air bottle pressure has dropped to less than 50 psi and must be recharged. What precautions must be taken?

- o (a) The bottle should be recharged very slowly.
- • (b) The bottle should be replaced and serviced in a dedicated shop.
- o (c) The bottle should be recharged in stages and let it cool down to prevent it getting too hot.

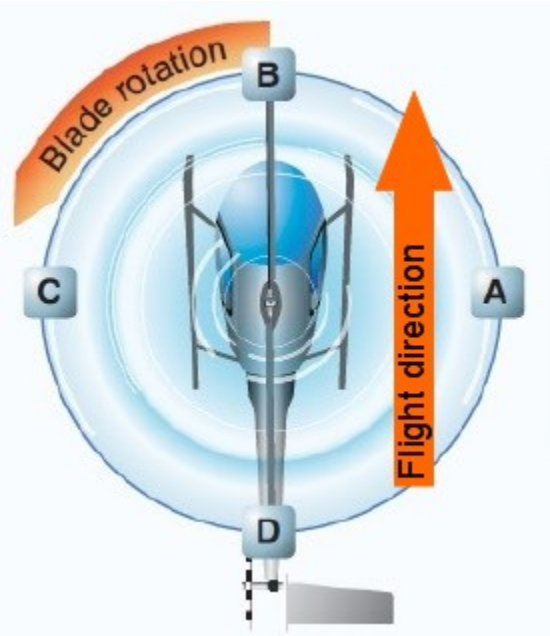
If choice b is selected set score to 1.

50. What type of nose wheel steering system is used on most wheeled helicopters?

- o (a) Cable operated steering
- o (b) Hydraulically powered steering
- • (c) Free castering nose wheel

If choice c is selected set score to 1.

51. In the figure, in which positions will the rotor blade have the largest angle of attack due to dissymetry of lift?



- o (a) Position B and D
- o (b) Position A
- • (c) Position C

If choice c is selected set score to 1.

52. Cyclic control allows the helicopter to be manoeuvered around which of the following axis?

- o (a) yaw, traverse and longitudinal axis
- • (b) traverse and longitudinal axis
- o (c) yaw and longitudinal axis

If choice b is selected set score to 1.

53. Why are helicopters generally not fitted with a pneumatic bleed air system like fixed wing aircraft?

- o (a) Helicopters are not pressurized so they don't need bleed air
- o (b) Bleed air systems add too much weight to the helicopter
- • (c) Bleed air takes away too much power from the engine

If choice c is selected set score to 1.

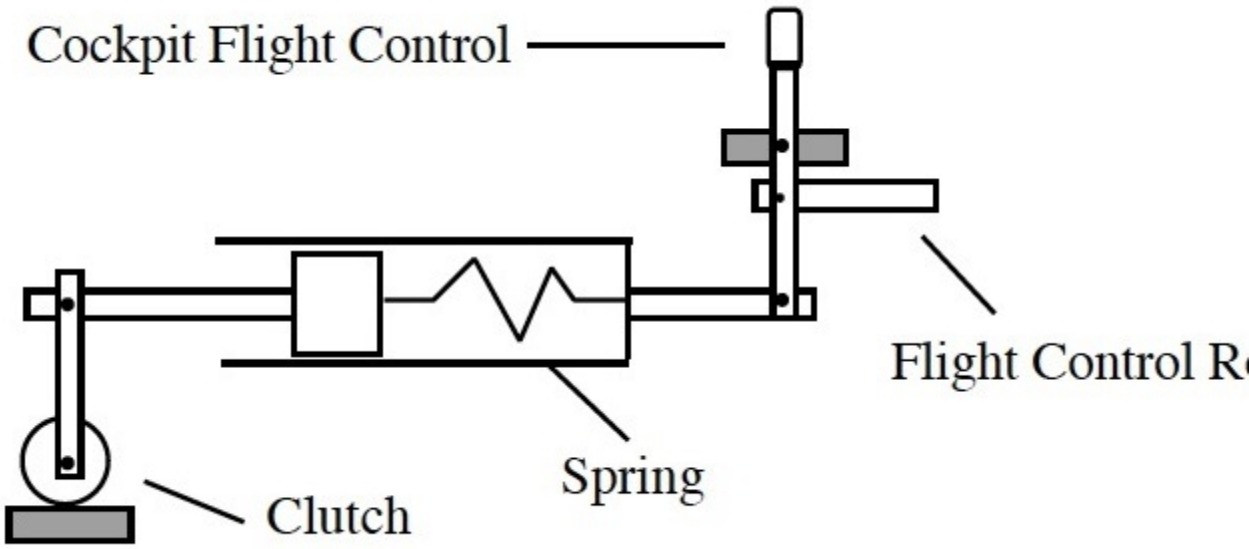
54. A gain in lift when hovering near the ground is known as:

- o (a) Corriolis effect
- o (b) Translational lift
- (c) Ground effect

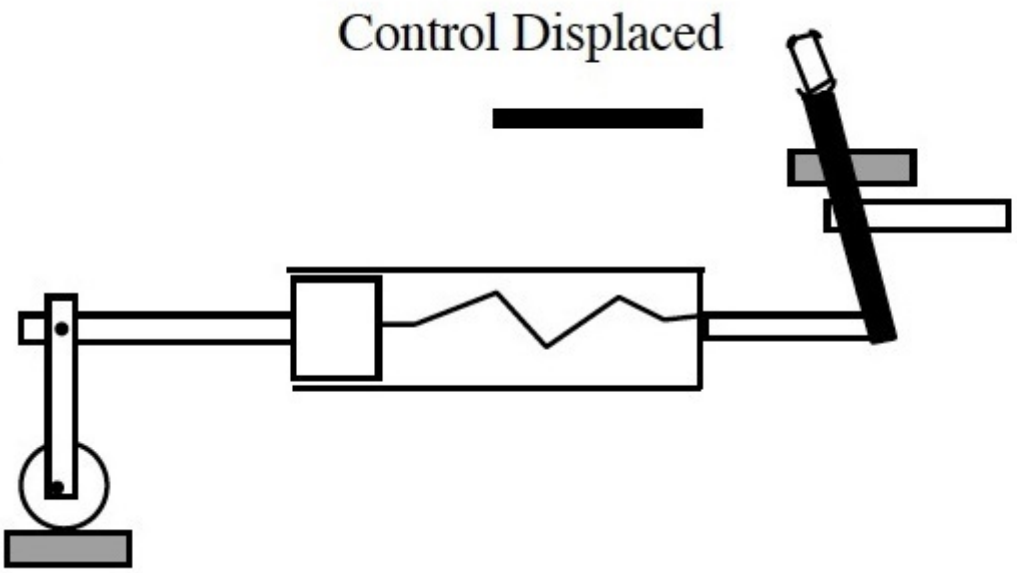
If choice c is selected set score to 1.

55. Which of the 3 illustrations shows the condition where the trim force release switch is activated, clutch disengaged and there is no force in the cockpit control?

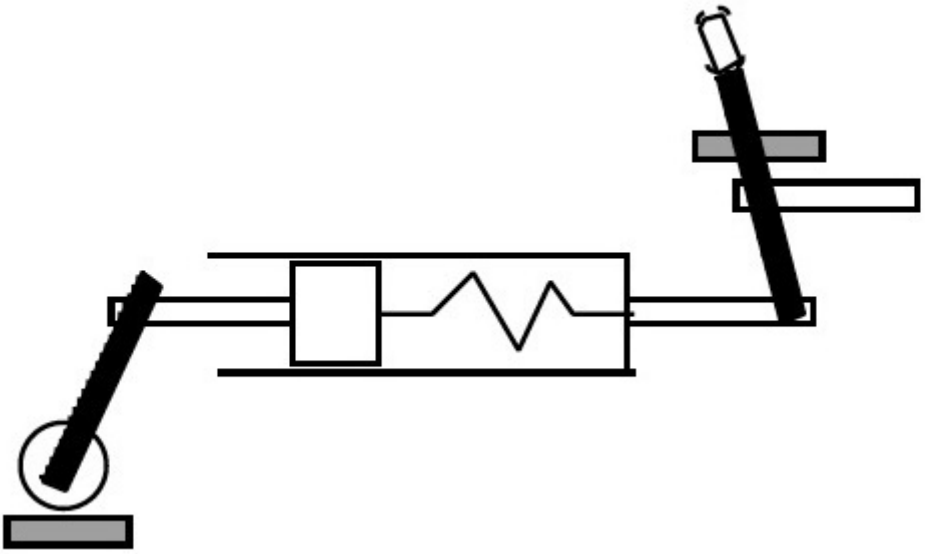
o (a)



o (b)



- (c)



If choice c is selected set score to 1.

56. How does the main rotor blade react to the corriolis effect when it flaps up?

- (a) The blade speeds up.

o (b) It increases its pitch angle.
o (c) The blade slows down.

If choice a is selected set score to 1.

57. What is the function of the Static dischargers?

o (a) They will protect the communication systems against a lightning strike.
o (b) They function as a communication antenna.

- (c) In case of a static charge they lead the electrical energy off the aircraft.

If choice c is selected set score to 1.

58. What type of source is used for high pressure pneumatics?

o (a) Centrifugal pump.
o (b) Butterfly pump.

- (c) Reciprocating pump.

If choice c is selected set score to 1.

59. The number of emergency exits in a helicopter depend on:

- (a) The number of passengers it can carry

o (b) The size of the helicopter
o (c) The operation it was designed for (over water or land or both)

If choice a is selected set score to 1.

60. Is it permissable to de-grease a landing gear with a steam cleaner?

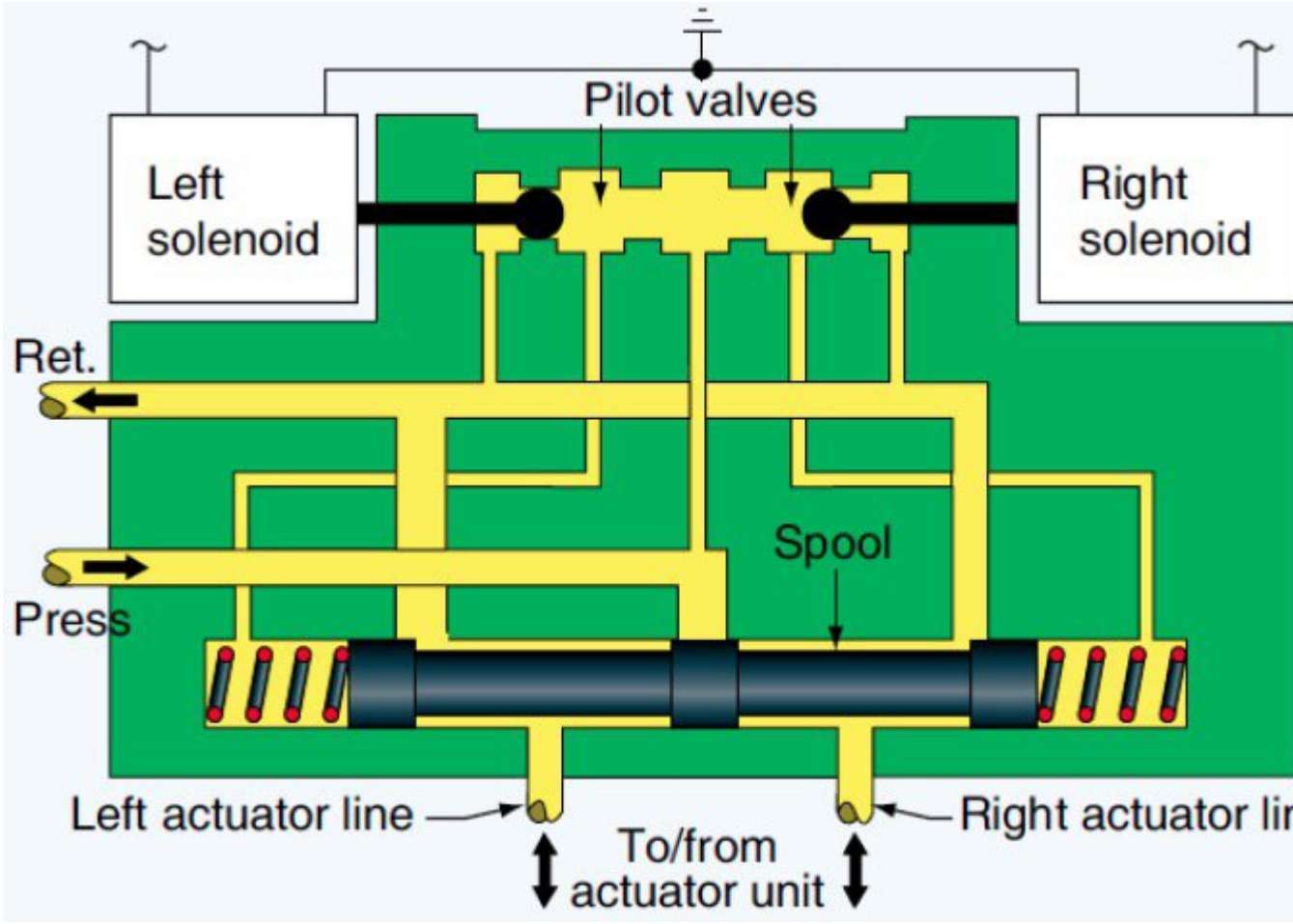
o (a) No, damage to the bearing and seals may occure.

- (b) Yes, but all the components must be re-lubricated.

o (c) Yes

If choice b is selected set score to 1.

61. In the figure, if the right solenoid is energized, what happens to the spool?



o (a) Moves to the left
o (b) Does not move

- (c) Moves to the right

If choice c is selected set score to 1.

62. Why must a compass swing be carried out on a direct reading magnetic compass?

- o (a) To correct the dipping error
- o (b) To correct for variation
- (c) To correct for deviation

If choice c is selected set score to 1.

63. What is NOT part of the electronic flight bag (EFB)?

- (a) Fault isolation manual
- o (b) Navigational charts and airport diagrams
- o (c) Minimum equipment list

If choice a is selected set score to 1.

64. How many G is the typical cabin floor designed to withstand?

- o (a) 1G
- o (b) 100G
- (c) 20G

If choice c is selected set score to 1.

65. What powers the HEEL lights?

- o (a) Main battery
- (b) Independent battery
- o (c) Main aircraft power

If choice b is selected set score to 1.

66. What is the difference between seat tracks and seat mounts with regards to their use?

- o (a) Seat tracks are used for larger, multiple seat installations
- o (b) Seat tracks can only be used for seats while seat mounts also can be used for cargo securing.
- (c) Seat tracks allow different seating positions, while seat mounts only allow 1 position

If choice c is selected set score to 1.

67. What pressure is monitored by the fuel pressure switch?

- o (a) Input fuel pressure of the booster pump
- • (b) Output fuel pressure of the fuel pump
- o (c) Fuel pressure of the fuel going to the engine

If choice b is selected set score to 1.

68. Helicopters have their engine compartment separated from the rest of the fuselage. What material should not be used, between the two compartments?

- • (a) Aluminium
- o (b) Titanium
- o (c) Stainless steel

If choice a is selected set score to 1.

69. What is the life limit of safe life of a component

- o (a) The time a component will last on the helicopter before it fails
- • (b) The time a manufacturer allows a component to be installed on a helicopter to ensure it doesn't fail due to age.
- o (c) Components which the manufacturer has categorized as fail safe for the life of the helicopter and do not need replacement due to age.

If choice b is selected set score to 1.

70. Which part of the drive system will have a freewheel unit fitted?

- o (a) Oil cooler.
- • (b) Engine drive shaft.
- o (c) Tail rotor drive shaft.

If choice b is selected set score to 1.

71. Which type of engine does NOT need a clutch?

- o (a) Fixed power turbine engine
- o (b) Piston engine
- • (c) Free power turbine engine

If choice c is selected set score to 1.

72. When a collective input is made, which of the following is correct?

- o (a) the helicopter will bank
- • (b) more engine power is required
- o (c) the rotor will speed up

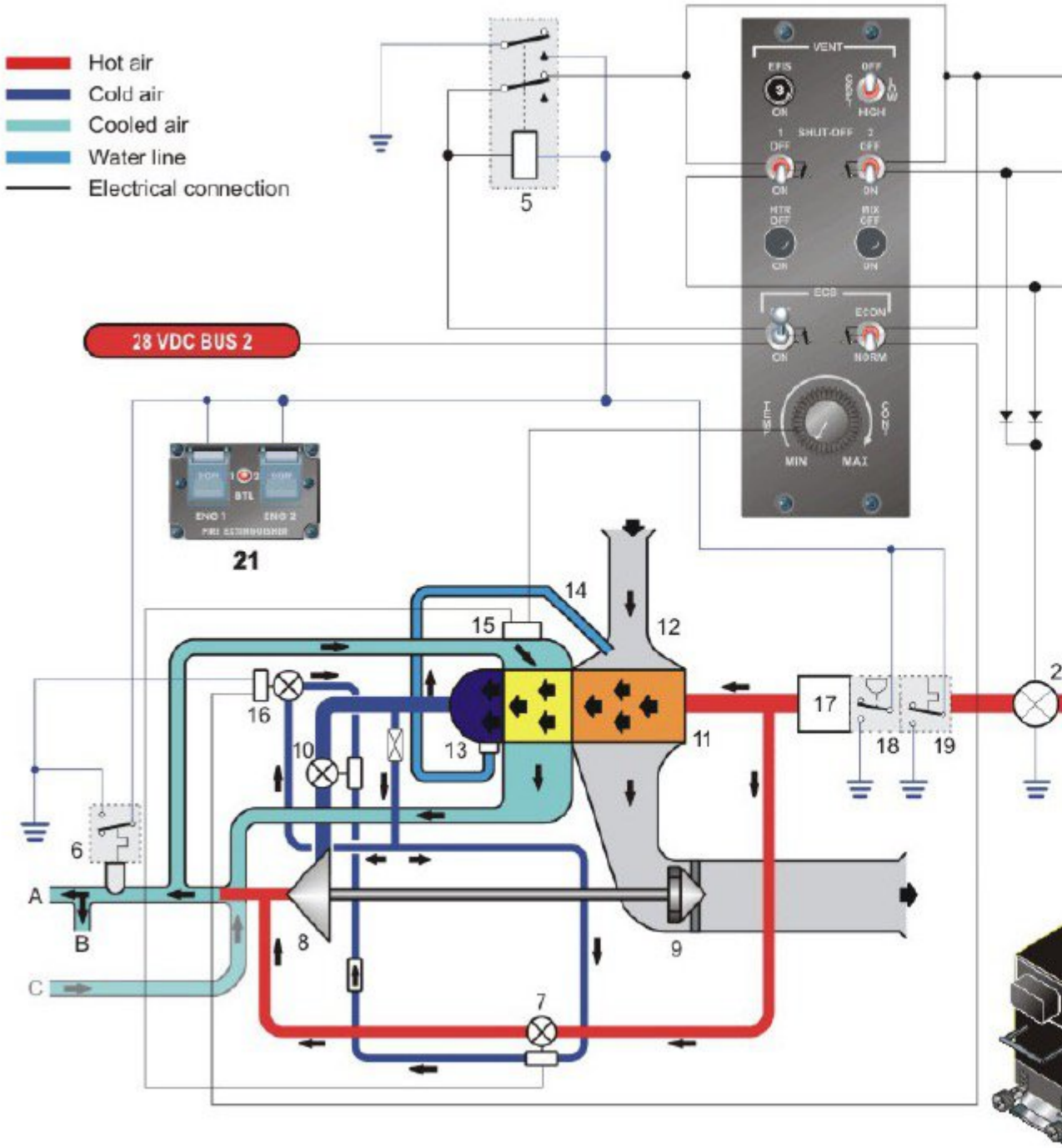
If choice b is selected set score to 1.

73. Operation of the rescue hoist is normally performed by....

- o (a) the pilot using the control pendant.
- o (b) the hoist operator using the control switch in the cabin.
- • (c) the hoist operator using the control pendant.

If choice c is selected set score to 1.

74. In the figure, what is the purpose of the turbine (item 8)?



- (a) Decrease the temperature and pressure of the air going into the cabin.

o (b) Increase the pressure and reduce the temperature of the air coming out of the cabin.
o (c) Increase the temperature and pressure of the air going into the cabin.

If choice a is selected set score to 1.

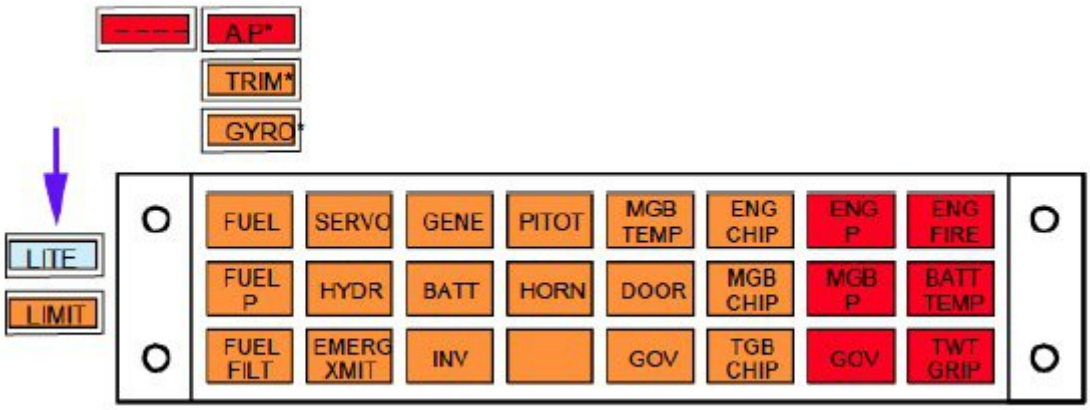
75. Which instruments are combined in an integrated standby instrument system?

- (a) Electronic attitude director indicator (EADI), Electronic horizontal situation indicator (EHSI) and Altimeter.

o (b) Electronic attitude director indicator (EADI) and Electronic horizontal situation indicator (EHSI).
o (c) Electronic attitude director indicator (EADI), Electronic horizontal situation indicator (EHSI) and Vertical speed indicator (VSI)

If choice a is selected set score to 1.

76. Some helicopters have a "LITE" annunciator in the cockpit. What is the purpose of this annunciator (See the figure).

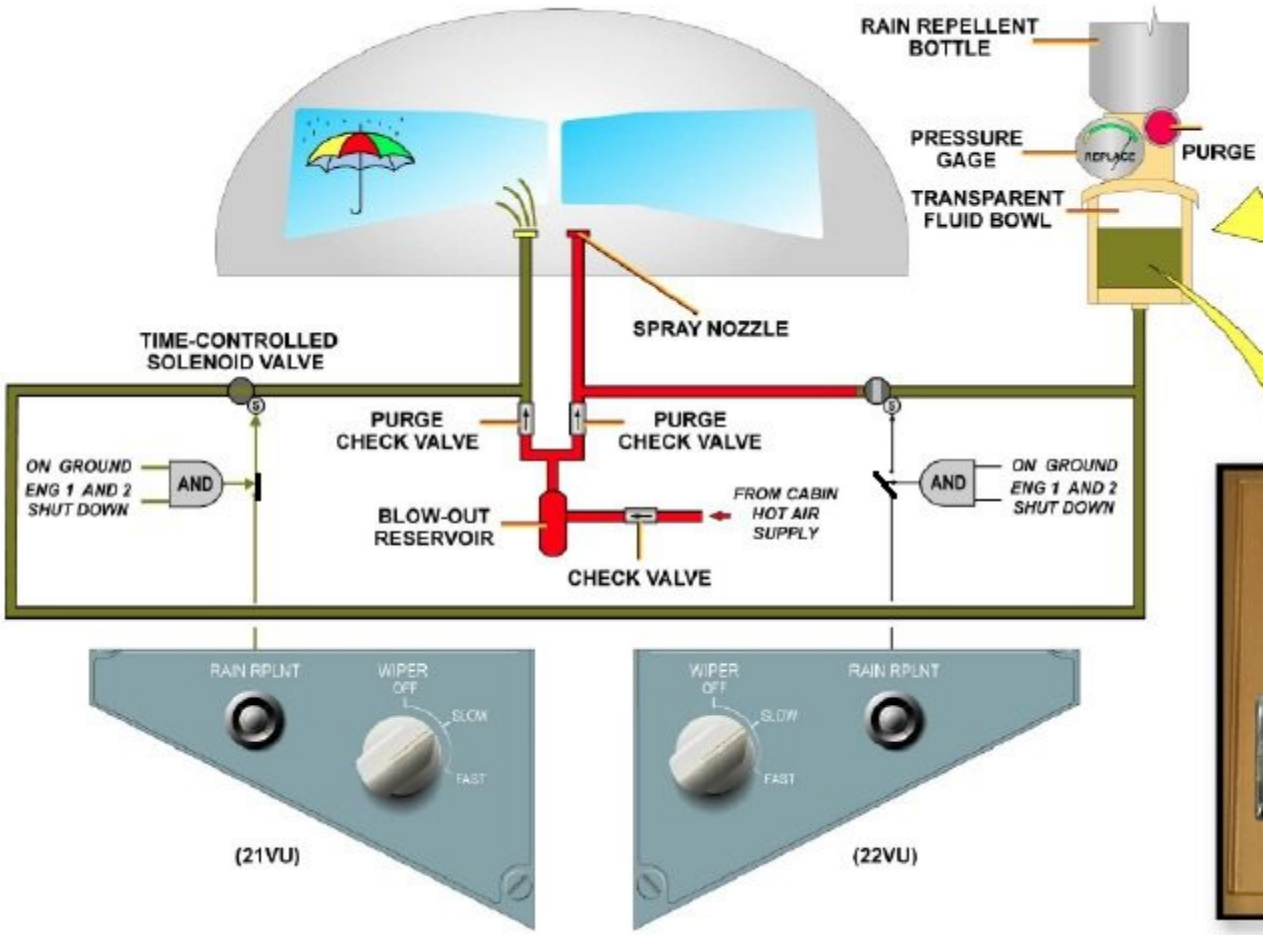


- (a) It warns the pilot that the landing light is switched on

o (b) It warns the pilot that the landing light has failed
o (c) It warns the pilot that the landing light is extended

If choice a is selected set score to 1.

77. Using the figure, which conditions must be fullfilled to make it possible to operate the rain repellant system?



- o (a) Both engines running or aircraft in flight
- • (b) Both engines running and aircraft in flight
- o (c) Both engines off and aircraft on the ground

If choice b is selected set score to 1.

78. For what reason are fuel tank compartments vented?

- o (a) To drain away any fuel that might collect due to a fuel leak.
- o (b) To ensure that there is no build up of moisture.
- • (c) To prevent the build up of fuel fumes.

If choice c is selected set score to 1.

79. The three critical measurements for the air data computer are:

- o (a) Altitude, groundspeed and coordinates.
- o (b) Airspeed, radio altitude and temperature.
- • (c) Airspeed, Altitude and temperature.

If choice c is selected set score to 1.

80. What is the advantage of the type of tyre shown in the figure?

- • (a) Prevents shimmy
- o (b) Provides better water dispersion and prevents aquaplaning
- o (c) Allows for operations on unhardened runways

If choice a is selected set score to 1.

81. Which type of surface produces the best ground effect?

- • (a) A flat and smooth surface.
- o (b) Rough terrain.
- o (c) Water.

If choice a is selected set score to 1.

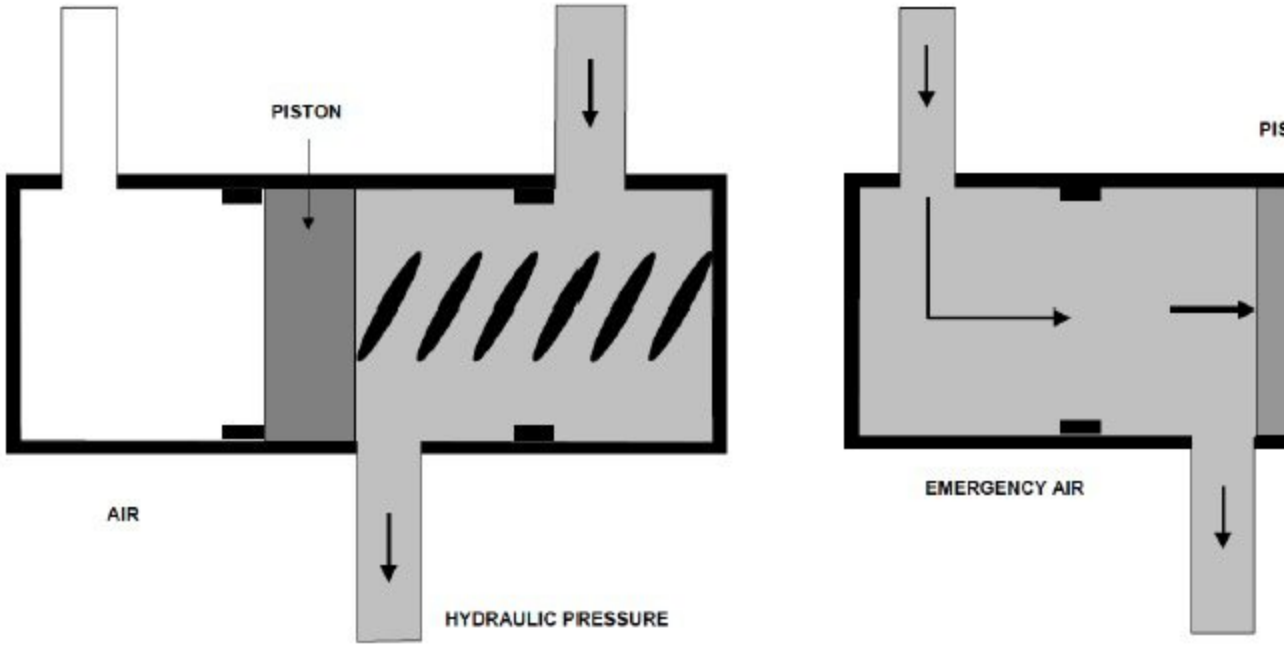
82. The temperature of a fluid at which it gives off vapours at sufficient quantities that it will ignite momentarily if a flame is applied, is called:

o (a) Fire point
o (b) Boiling point

• (c) Flash point

If choice c is selected set score to 1.

83. In what system would the device in the figure be used?



o (a) In an air driven hydraulic pump system

• (b) In a backup high pressure pneumatic system

o (c) In a reservoir pressurization system

If choice b is selected set score to 1.

84. The equipment onboard a helicopter depends on:

• (a) The mission and purpose

o (b) The size of the helicopter
o (c) The number of passengers

If choice a is selected set score to 1.

85. Which of the following statements is true about the flexible couplings?

o (a) The flexible couplings are maintenance free.

• (b) The flexible couplings can only take small misalignments.

o (c) The flexible couplings remove the need to align the drive shafts.

If choice b is selected set score to 1.

86. What is the most important surface protection for aluminium?

o (a) Electro-plating.

• (b) Anodizing.

o (c) Tinning.

If choice b is selected set score to 1.

87. Where would you typically find a high pressure filter in a hydraulic circuit?

o (a) Between the reservoir and the pump in the pump supply line
o (b) In the reservoir return line

• (c) Behind the pump in the pressure line

If choice c is selected set score to 1.

88. Photo-electric smoke detectors can only detect:

o (a) Invisible smoke
o (b) Carbon monoxide

• (c) Visible smoke

If choice c is selected set score to 1.

89. Medium frequency vibrations can be caused by:

o (a) Drive shafts.
o (b) Main rotor.

• (c) Under carriage.

If choice c is selected set score to 1.

90. Which type of landing gear would use saddle clamps for attachment to the fuselage?

o (a) Skis

- o (b) Retractable landing gear

- (c) Fixed landing gear

If choice c is selected set score to 1.

91. Helicopters operating over water must have at least:

- (a) One emergency exit on either side of the cabin

- o (b) One emergency exit
- o (c) One emergency exit either side of the cockpit and one either side of the cabin

If choice a is selected set score to 1.

92. Some helicopters were retrofitted with turbine engines. What unit was used to couple 2 or more turbine engines and change the angle of drive?

- (a) Engine reduction gearbox

- o (b) intermediate gearbox
- o (c) angle gearbox

If choice a is selected set score to 1.

93. What type of bearings are used for wheel installations?

- o (a) Plain roller bearings
- o (b) Conical ball bearings

- (c) Conical roller bearings

If choice c is selected set score to 1.

94. What is the purpose of the electric fan in the ventilation distribution system?

- o (a) The extract the air from the cabin.

- (b) The provide a flow of air into the system when the aircraft is stationary.

- o (c) The provide an increased airflow to the windscreen de-misters.

If choice b is selected set score to 1.

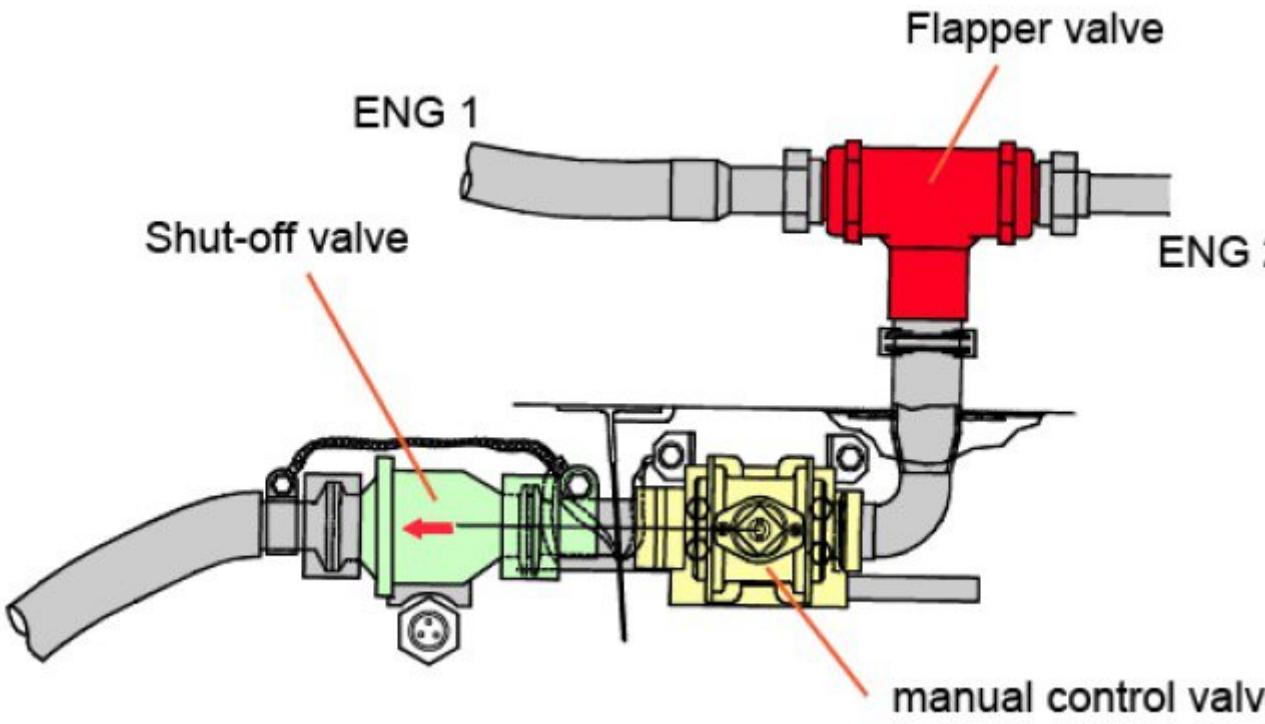
95. Main rotor blade misalignment would cause:

- (a) Lateral vibrations

- o (b) Vertical vibrations
- o (c) High frequency vibrations

If choice a is selected set score to 1.

96. What is the function of the flapper valve in the bleed air supply system as shown in the figure?



- o (a) To allow the crew to select which engine supplies the bleed air
- o (b) To prevent air from the distribution system going into the engines
- • (c) To prevent the bleed air going from one engine to the other

If choice c is selected set score to 1.

97. In a Voltage transformer if the Primary voltage (V1) = 20V, Primary windings N1 = 10 and secondary windings N2 = 50 what is the Secondary voltage (V2)?

- o (a) 4V
- • (b) 100 V
- o (c) 10V

If choice b is selected set score to 1.

98. Which flight control system requires the least maintenance time?

- o (a) control rods
- o (b) hydraulic
- • (c) fly-by-wire

If choice c is selected set score to 1.

99. A main rotor blade with trapped water inside the blade would cause:

- (a) A change in angular momentum.

o (b) A blade out of track.
o (c) Vertical vibrations.

If choice a is selected set score to 1.

100. What is pitot pressure?

o (a) It is the outside air pressure at the instant of measuring.

- (b) It is the dynamic pressure of the air due to the forward motion of the aircraft.

o (c) It is the total pressure inside the aircraft.

If choice b is selected set score to 1.

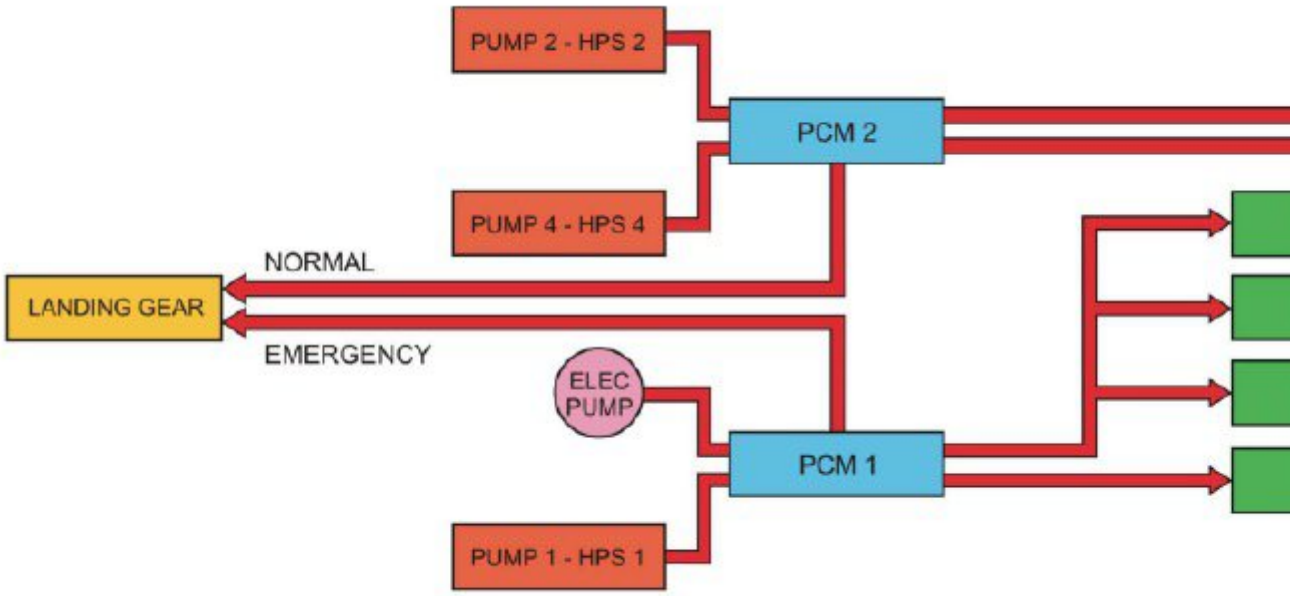
101. What type of printer is generally used for the on board maintenance system?

o (a) Matrix printer
o (b) Ink jet printer

- (c) Thermal printer

If choice c is selected set score to 1.

102. In the figure, what systems does the electrical pump (ELEC PUMP) power when switched on with the aircraft on the ground?



- (a) Landing gear, main and tail rotor controls

o (b) Main and tail rotor controls
o (c) Landing gear

If choice a is selected set score to 1.

103. VHF communication is used for:

o (a) Satelite communication
o (b) Long range communication

- (c) Short range communication

If choice c is selected set score to 1.

104. What is the purpose of recirculation air in the ventilation system?

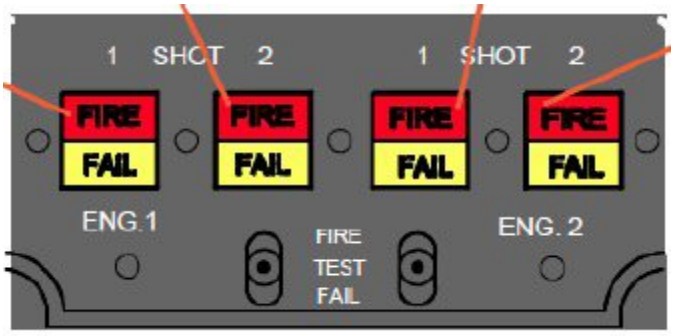
o (a) To increase the volume of air going into the cabin.

- (b) To reduce the amount of bleed air taken from the engines to warm up the air gong into the cabin.

o (c) To control the humidity of the air going into the cabin.

If choice b is selected set score to 1.

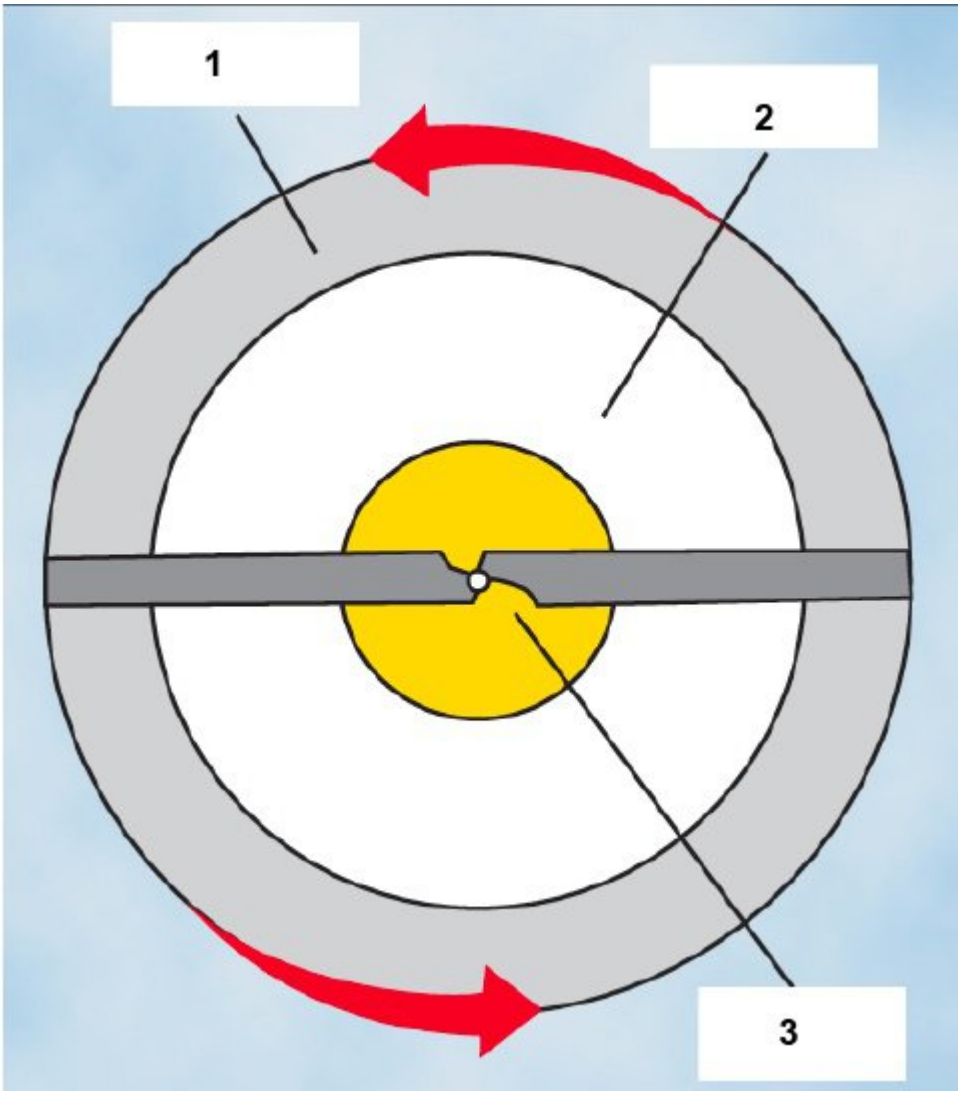
105. In a Two Shot fire extinguishing system, which statement is correct? Use the figure.



- o (a) Selecting SHOT 2 on the left engine, fires the second squib in the left engine fire bottle
- • (b) Selecting SHOT 2 on the left engine, fires the first squib in the right engine fire bottle
- o (c) Selecting SHOT 1 on the left engine, fires the first squib in the right engine fire bottle

If choice b is selected set score to 1.

106. Identify the regions for a main rotor in autorotation in still air with no foward airspeed.



o (a) (1) driving region, (2) driven region, (3) neutral region.

• (b) (1) driven region, (2) driving region, (3) stall region.

o (c) (1) stall region, (2) driven region, (3) driving region.

If choice b is selected set score to 1.

107. Which of the following is NOT a cause of blade tip stall?

o (a) Heavy disk loading

• (b) Too high rotor speed

o (c) Too high angle of attack

If choice b is selected set score to 1.

108. Because of high usage, what do the rod-end bearings need to be inspected for?

- o (a) Corrosion
- o (b) Axial play
- • (c) Radial movement

If choice c is selected set score to 1.

109. What is the danger with a helicopter with a belt drive clutch?

- o (a) Danger of overheating the clutch during engagement.
- • (b) Danger of overspeeding the engine when disengaging the clutch.
- o (c) Danger of overspeeding the engine during clutch engagement

If choice b is selected set score to 1.

110. On a fully articulated main rotor, what are dampers used for?

- o (a) To reduce vibrations
- o (b) To reduce the flapping of the blades
- • (c) To reduce the blad dragging

If choice c is selected set score to 1.

111. What is the main difference between an normal ELT and a crash position indicator (CPI)?

- • (a) The CPI is jettisonable
- o (b) The CPI is more powerful
- o (c) The CPI is built into the aircraft

If choice a is selected set score to 1.

112. What does increase the range on an emergency locator transmitter?

- o (a) Put it on the ground.
- o (b) Connecting it to the helicopters external antenna.
- • (c) Placing it on a flat piece of metal.

If choice c is selected set score to 1.

113. How are filters rated?

- o (a) By there physical size

- (b) By the size of the particles it can remove

o (c) By the pressure they can operate at

If choice b is selected set score to 1.

114. If a fire bottle has no pressure indicator, what must be done to determine if the pressure inside is still good?

o (a) The bottle must be submerged in water to see if there are any leaks. If not, the bottle is serviceable.

- (b) The bottle must be weighed and compared to a chart in the maintenance manual.

o (c) This can only be done by the repair shop so the bottle must be replaced

If choice b is selected set score to 1.

115. In which phase of flight would blade vortex interaction be minimal?

o (a) Low speed transition.
o (b) High speed flight.

- (c) Medium speed flight.

If choice c is selected set score to 1.

116. How are seats secured?

- (a) To the floor and/or ceiling

o (b) To the sidewalls
o (c) To the floor only

If choice a is selected set score to 1.

117. When switching on the engine anti-ice, the FAULT light comes on for a few seconds and then goes off. What does this indicate?

- (a) The anti-ice valve has moved to the commanded position. This is the normal condition

o (b) The anti-ice valve has had a intermittend fault, but has eventually moved to the commanded position. This is an abnormal condition.
o (c) The anti-ice valve has failed to move to the commanded position. This is an abnormal condition

If choice a is selected set score to 1.

118. Which of the following statements about the fuel pumps is NOT correct?

o (a) Fuel pumps on helicopters are AC or DC powered

- (b) The engine cannot operate when the fuel pumps are not running.

o (c) Fuel pumps are installed in such a way that they can supply fuel to the engines under any flight condition

If choice b is selected set score to 1.

119. Where is HUMS data stored?

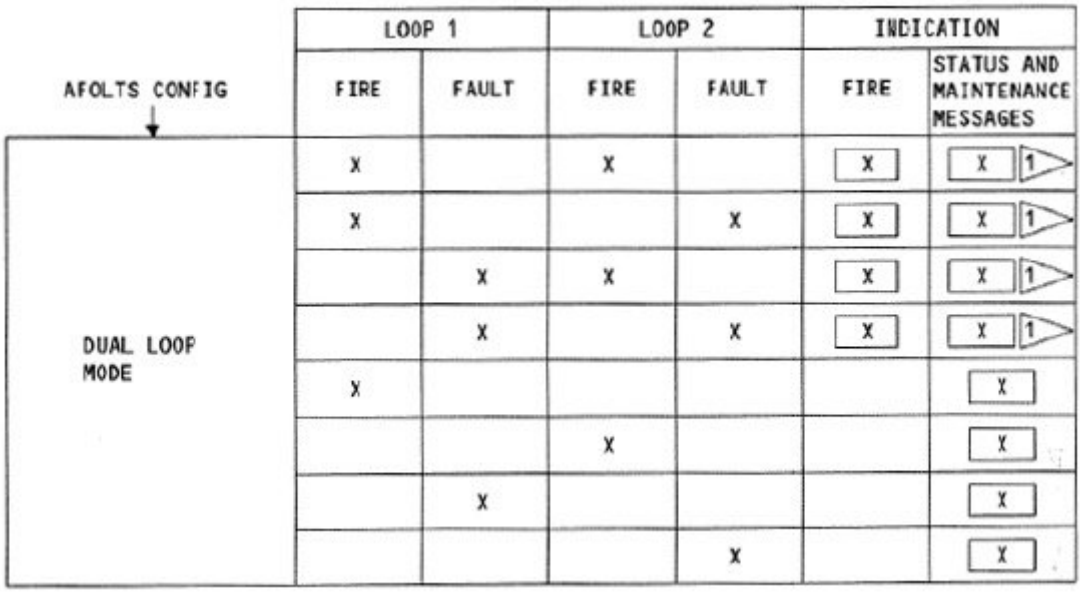
- (a) In the Data transfer device (DTD)

o (b) In the central maintenance computer
o (c) In the digital acquisition unit

If choice a is selected set score to 1.

120. In a dual loop configuration, LOOP 1 indicates a fire but LOOP 2 does not. The crew initiate a loop test with the following result: FIRE warning + LOOP 2 warning.

What component is faulty? Use the figure if necessary.



AFOLTS CONFIG	LOOP 1		LOOP 2		INDICATION	
	FIRE	FAULT	FIRE	FAULT	FIRE	STATUS AND MAINTENANCE MESSAGES
DUAL LOOP MODE	X		X		X	X 1
	X			X	X	X 1
		X	X		X	X 1
		X		X	X	X 1
	X					X
			X			X
		X				X
				X		X

- (a) LOOP 1 is faulty

o (b) LOOP 2 is faulty.
o (c) The fire test system is faulty

If choice a is selected set score to 1.

121. The airspeed indicator in the figure has an indicated line at 105 knots, shown by the arrow. What is this indicated line?

- (a) the maximum airspeed. Higher than this speed may cause blade stall.

o (b) the maximum airspeed. Higher than this speed may cause structural damage.
o (c) the maximum ground speed for landing.

If choice a is selected set score to 1.

122. On a fully articulated rotor, what is the indication of a failed damper?

- (a) vibration is felt at a frequency of x per revolution, where x = number of main blades

o (b) vibration is felt at a frequency of 1 per revolution
o (c) vibrations in the cyclic stick

If choice a is selected set score to 1.

123. At what altitude is ground effect most effective?

o (a) An altitude being 2 * the rotor diameter.

- (b) An altitude being 1/2 * the rotor diameter.

o (c) 25 feet.

If choice b is selected set score to 1.

124. What makes a pneumatic system more light weight compared to a hydraulic system

o (a) The components are made of lighter material

- (b) No need for return lines

o (c) The tubes are thinner and therefor lighter

If choice b is selected set score to 1.

125. What is NOT used as a shock absorber on a ski landing gear?

o (a) Air/oil cylinder
o (b) Flexing of the crossbeams

- (c) Coil spring cylinder

If choice c is selected set score to 1.

126. The Isolated Data Network (IDN) is displayed with red arrows. Which component belongs to this system?

o (a) PES (Passenger Entertainment System).

- (b) File Server Module (FSM).

o (c) SATCOM communication system.

If choice b is selected set score to 1.

127. Modern aircraft weather antennas are?

- (a) Flat plate antennas

o (b) Parabolic antennas
o (c) Blade antennas

If choice a is selected set score to 1.

128. What would the blade passage frequency be on a 5 bladed main rotor running at 300 RPM?

- (a) 1500.

o (b) 60.
o (c) 300.

If choice a is selected set score to 1.

129. The unit inside an aircraft management computer which does all the calculations is called:

o (a) Digital processing unit (DPU) module

- (b) Central processing unit (CPU) module

o (c) Main calculation unit (MCU) module

If choice b is selected set score to 1.

130. How are software uploads to the aircraft management computer (AMC) performed?

- o (a) Via an optic fiber port in the AMC and a laptop
- o (b) Directly into the computer via a card reader slot
- • (c) Via a data transfer device (DTD) to both AMCs

If choice c is selected set score to 1.

131. What type of ice protection system is used for Main and tail rotor blades?

- o (a) Chemical ice protection
- • (b) Electrical ice protection
- o (c) Hot air ice protection

If choice b is selected set score to 1.

132. What is shown in the figure?

- o (a) A weight on wheel microswitch
- o (b) A squat switch
- • (c) A proximity sensor

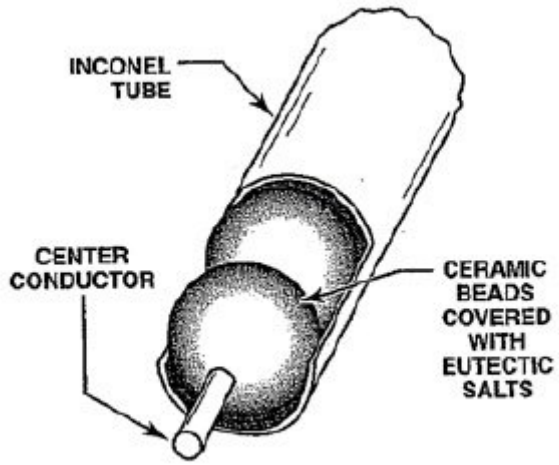
If choice c is selected set score to 1.

133. What is a Cartridge Activated Device (CAD) used for?

- o (a) To retract the rescue hoist cable in case of a failure of the normal system
- • (b) To cut the rescue hoist cable in case of emergency
- o (c) To cut the cargo sling cable in case of emergency

If choice b is selected set score to 1.

134. Which sensing system is shown in the figure?



- o (a) Systron donner
- o (b) Lindberg
- • (c) Fenwall

If choice c is selected set score to 1.

135. How are carbon fibre parts protected from lightning strikes?

- o (a) Steel bonding jumpers between the carbon fibre part and the structure.
- o (b) Carbon fibre parts do not need lightning strike protection because of its good electrical conductivity properties.
- • (c) Aluminium lightning strike protection built into the carbon fibre parts.

If choice c is selected set score to 1.

136. Which factors are the primary reason why many helicopters are not fitted an air conditioning system?

o (a) Limitations of the main gear box and engines
o (b) Size of the helicopter and weight of the helicopter

• (c) Power from the engines and weight of the helicopters

If choice c is selected set score to 1.

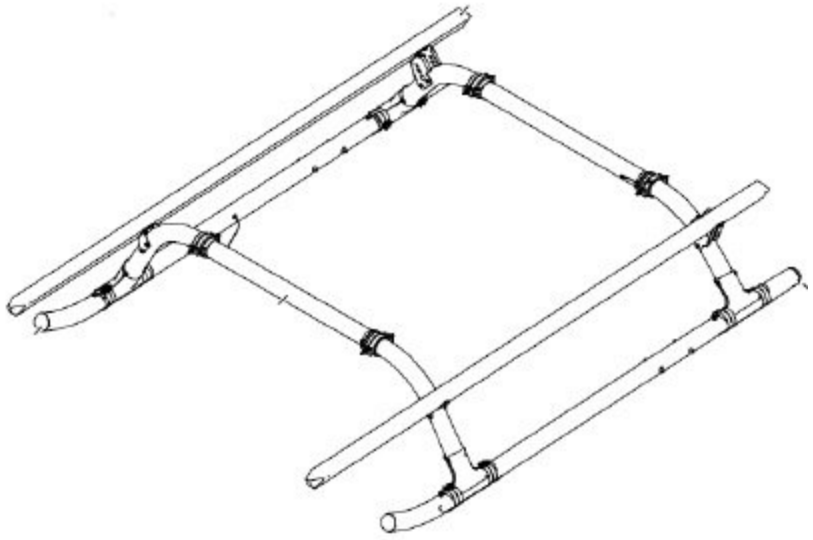
137. Which of the following would NOT be part of cabin layout?

• (a) Sun visors

o (b) Personal service units
o (c) Fire extinguisher

If choice a is selected set score to 1.

138. In the figure, what absorbes the landing forces?

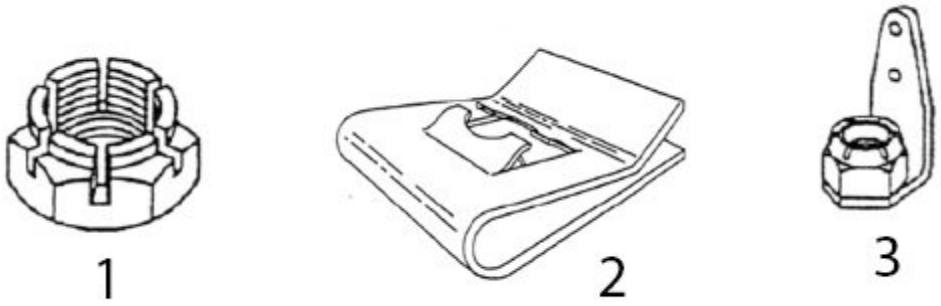


• (a) Bending of the crosstubes

o (b) The rubber bushings in the saddleclamps
o (c) Flexing of the skis

If choice a is selected set score to 1.

139. Which of the three illustrated nuts is a tinnerman nut?



- o (a) 1
- • (b) 2
- o (c) 3

If choice b is selected set score to 1.

140. What is the distance between the far right main wheel and the far left main wheel called?

- o (a) Wheel base
- • (b) Wheel track
- o (c) Wheel offset

If choice b is selected set score to 1.

141. In a fuel tank system with a feeder tank, what is the purpose of the jet pump.

- o (a) Supply fuel to the engine from the feeder tank
- • (b) Pump fuel from the other fuel cells to the feeder tank
- o (c) Pump fuel out of the feeder tank to the fuel cells

If choice b is selected set score to 1.

142. What type of piston is generally used to lower and raise the landing gear?

- o (a) single acting actuator
- o (b) double acting balanced actuator
- • (c) double acting unbalanced actuator

If choice c is selected set score to 1.

143. What type of hydraulic fluid is used with synthetic rubber seals?

- o (a) Vegetable based oil
- • (b) Mineral based oil
- o (c) Synthetic ester based oil

If choice b is selected set score to 1.

144. Which type of vibration would be associated with tail rotor?

- o (a) Low frequency vibration.
- o (b) Harmonic vibration.
- • (c) High frequency vibration.

If choice c is selected set score to 1.

145. In the transmission system, tail rotor drive shaft, what is the purpose of a damper?

- o (a) To dampen out vibrations from the engine drive shafts.
- o (b) To dampen out vibrations in the gearboxes.
- • (c) To dampen out momentary out-of-balance of the drive shaft.

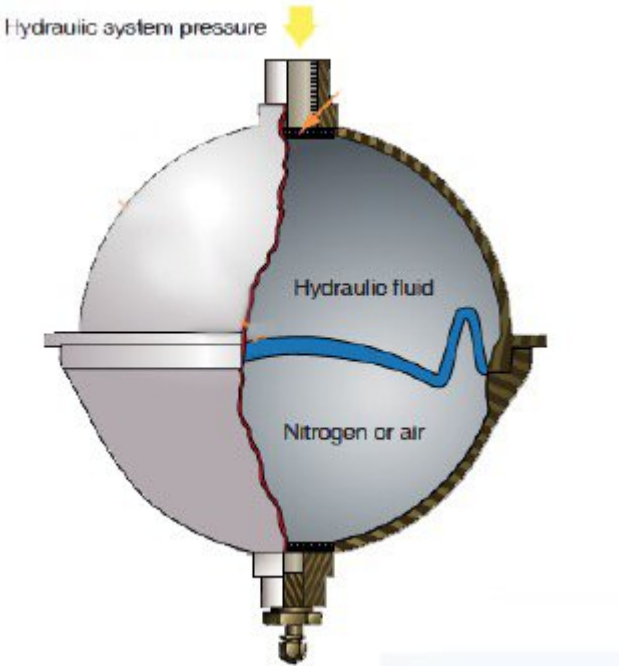
If choice c is selected set score to 1.

146. What is one of the biggest drawback of windshields compared to windscreens?

- o (a) Windshields are not as impact resistant (bird strike) as windscreens.
- o (b) Windshields are only useful when operating in cold climates because of the increased greenhouse effect heating up to cockpit too much in hot climates.
- • (c) Windshields are heavy

If choice c is selected set score to 1.

147. What type of accumulator is shown in the figure?



- o (a) Hydraulic type
- o (b) Piston type
- • (c) Diaphram type

If choice c is selected set score to 1.

148. Which type of rivet can replace a solid shank rivet?

- o (a) Chobert rivets.
- o (b) Pop rivets.
- • (c) Cherry max rivets.

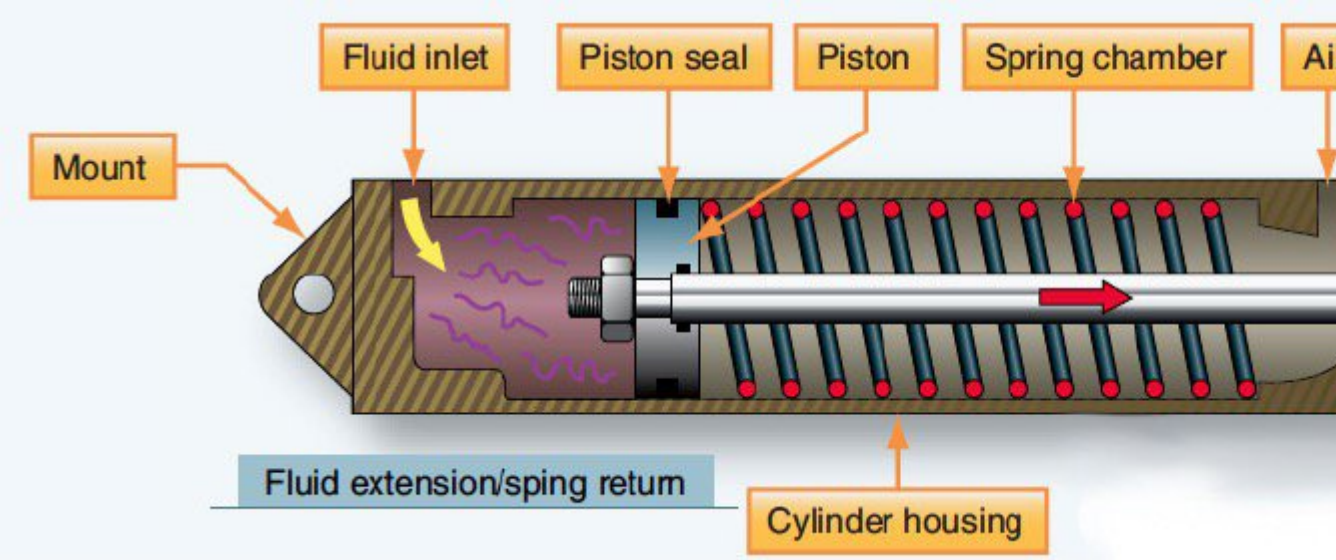
If choice c is selected set score to 1.

149. Which of the following main gear box indications is generally not displayed in the cockpit?

- o (a) Oil temperature
- • (b) Oil level
- o (c) Oil pressure

If choice b is selected set score to 1.

150. Which type of actuator is shown in the figure?



- o (a) double acting balanced actuator
- • (b) single acting actuator
- o (c) double acting unbalanced actuator

If choice b is selected set score to 1.

151. Which of the following is NOT a dipping error?

- o (a) Acceleration error
- • (b) Deviation error
- o (c) Turning error

If choice b is selected set score to 1.

152. In a helicopter, what is bleed air mostly used for?

- • (a) Cabin heating
- o (b) Windscreen anti-icing
- o (c) Engine starting

If choice a is selected set score to 1.

153. What are the objectives of HUMS?

- o (a) Improved safety, performance and maintenance.
- o (b) Improved safety, performance and operation.

- (c) Improved safety, operation, and maintenance.

If choice c is selected set score to 1.

154. Why is "trickle charging" a NiCd battery not recommended?

o (a) The battery life will be shortened

- (b) The battery cells may run dry due to the consumption of water

o (c) The battery may go into thermal runaway

If choice b is selected set score to 1.

155. Some extension/retraction systems have restricters fitted. Why is this?

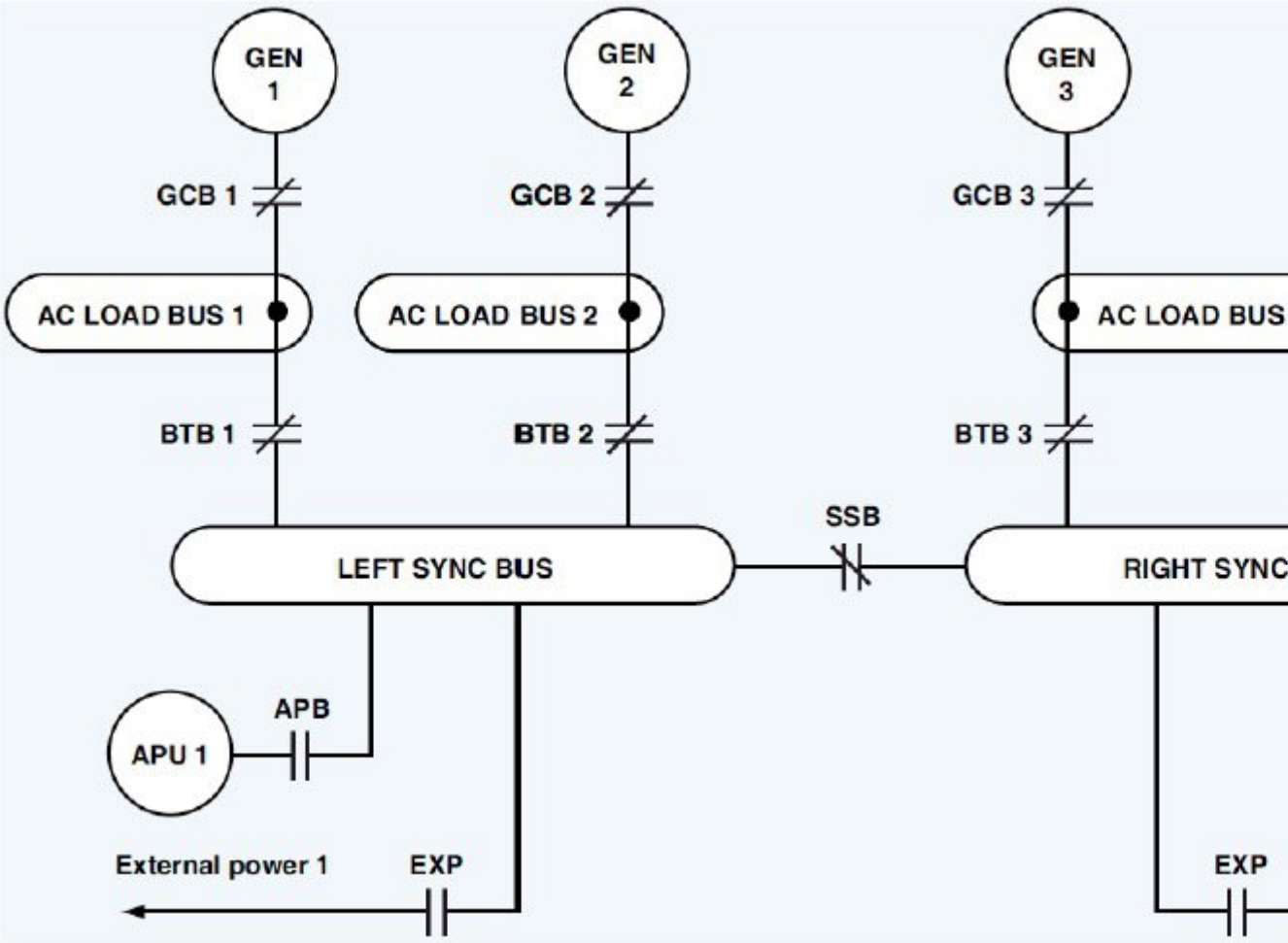
o (a) To prevent the airflow pushing the gear down faster during extension

- (b) To reduce the speed at which the gear retracts

o (c) To prevent the gear locking up or down to violently.

If choice b is selected set score to 1.

156. What type of distribution system is shown in the figure.



- (a) split-parallel bus system

o (b) parallel bus system
o (c) Split bus system

If choice a is selected set score to 1.

157. Which communication system is used for long range communication?

o (a) SELCAL

- (b) HF

o (c) VHF

If choice b is selected set score to 1.

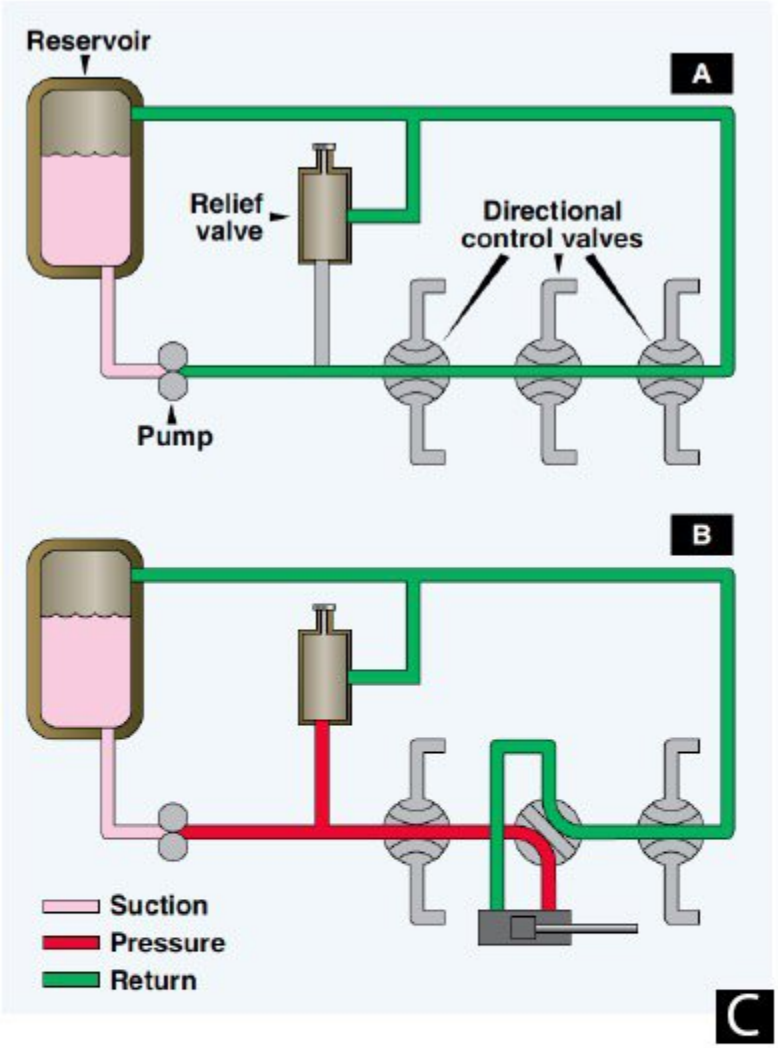
158. What does a transformer rectifier unit (TRU) do?

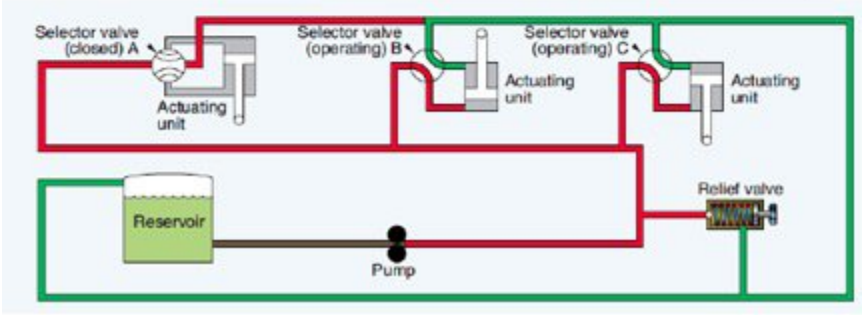
- (a) Convert AC into DC

- o (b) Convert DC into AC
- o (c) Convert 3 phase AC into single phase AC

If choice a is selected set score to 1.

159. In the figure, which diagram shows a closed center hydraulic system?





- o (a) A
- o (b) B

- (c) C

If choice c is selected set score to 1.

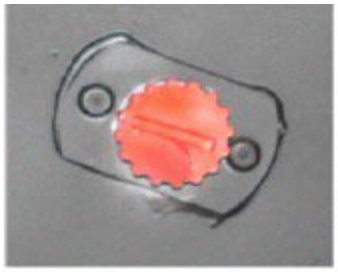
160. How are computers connected with eachother on a ARINC 664 network identified?

- (a) Each computer has its own IP address

o (b) Each unit has an equipment ID number
o (c) Each unit has a data lable identifier

If choice a is selected set score to 1.

161. What is the purpose of the drain plug shown in the figure?



Drain plug

o (a) To allow the compartment to be inspected internally without removing the fuel tank.

- (b) To drain out any water which has collected in the compartment where the fuel tank is located.

o (c) To drain out any fuel which has collected the compartment where the fuel tank is located.

If choice b is selected set score to 1.

162. In what pressure range do constant displacement pumps operate?

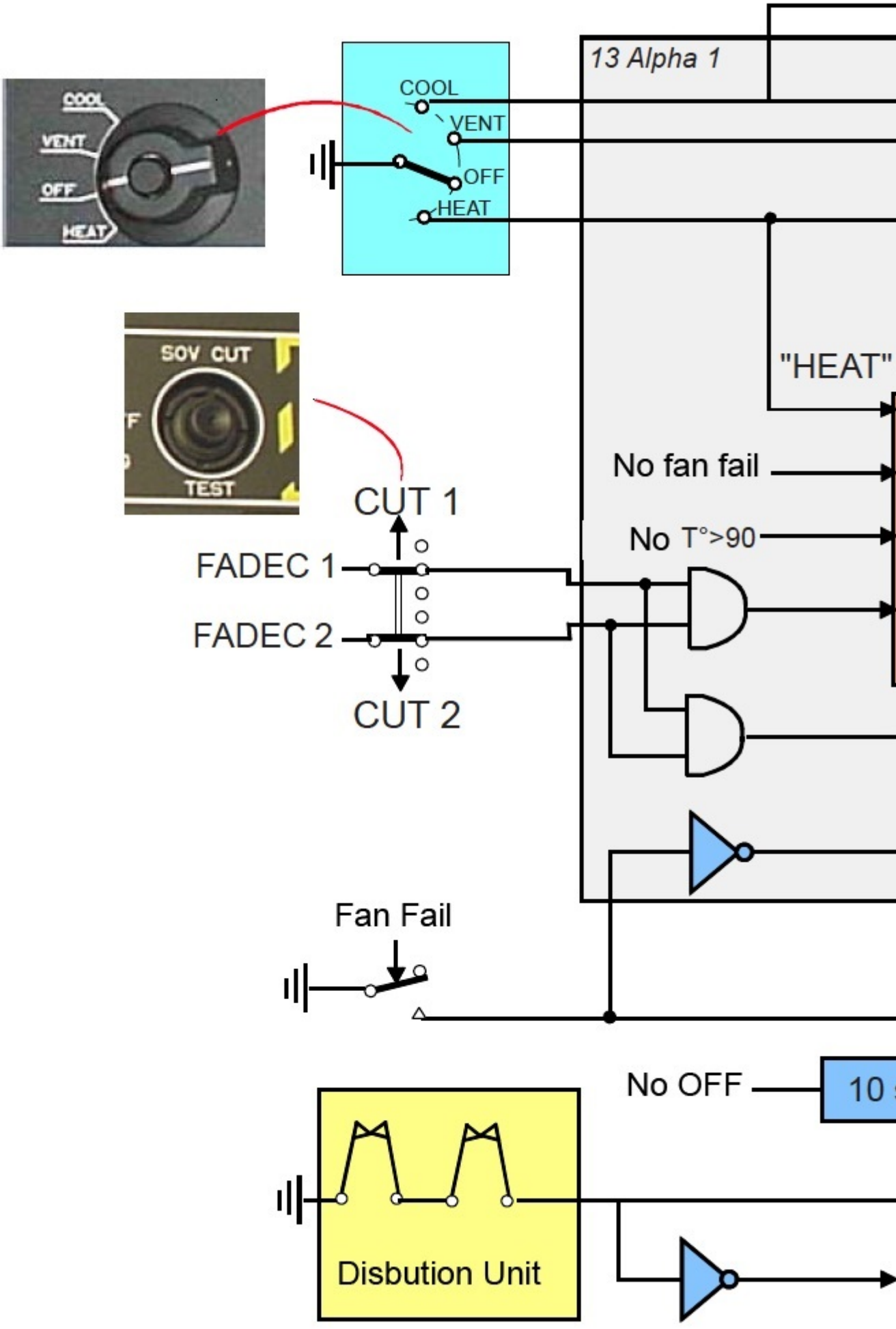
o (a) low pressure

- (b) medium pressure

o (c) high pressure

If choice b is selected set score to 1.

163. Using the schematic in the figure, the P3 electro valve will be commanded open when both engines are running, HEAT is selected ON and:


COOL
VENT
OFF
HEAT
COOL
VENT
OFF
HEAT
13 Alpha 1
"HEAT"
SOV CUT
TEST
No fan fail
No T°>90
CUT 1
FADEC 1
FADEC 2
CUT 2
Fan Fail
No OFF
Disbution Unit

- (a) The fan is running and the temperature in the duct is more than 90 degrees
- (b) The fan is not running and the temperature in the duct is more than 90 degrees

- (c) The fan is running and the temperature in the duct is less than 90 degrees

If choice c is selected set score to 1.

164. The device that starts emitting its location in the event of a crash is called:

- (a) an ELT

- (b) a GPWS
- (c) a Selcal

If choice a is selected set score to 1.

165. The operating mechanisms for emergency exits are:

- (a) Standardized on large civilian helicopters only
- (b) Standardized and the same for all helicopters

- (c) Not standardized and different on most helicopters

If choice c is selected set score to 1.

166. What precaution must be made when de-icing or anti-icing a helicopter?

- (a) The fluid must not stay on the surface of the fuselage too long to prevent corrosion

- (b) The correct fluid must be used to prevent adversely effecting the paint and windows

- (c) The main and tail rotor blades must not come into contact with the fluid

If choice b is selected set score to 1.

167. Which of the following rotor systems is not susceptible to ground resonance?

- (a) Fully articulated rotor with at least 4 main rotor blades.

- (b) Semi-rigid rotor with 2 main rotor blades.

- (c) Hybrid rotor systems.

If choice b is selected set score to 1.

168. What happens to a Ni-Cd battery when the cathode is overcharged?

- (a) Hydrogen gas is produced
- (b) The electrolyte is converted to water

- (c) Oxygen gas is produced

If choice c is selected set score to 1.

169. How does a pneumatic rain removal system work?

o (a) By using bleed air to operate pneumatic actuators to move the wiper blades.

- (b) By blowing high pressure bleed air over the windscreen.

o (c) By heating the windscreen with hot bleed air.

If choice b is selected set score to 1.

170. The the crash position indicator (CPI) system, which part stored the aircraft data.

o (a) The Beacon Release unit

- (b) The signal interface unit (SIU)

o (c) The Beacon Airfoil Unit (BAU)

If choice b is selected set score to 1.

171. Which of the following statements about HUMS is true?

o (a) HUMS is a on-demand system. It must be activated before it starts recording.

- (b) HUMS is constantly recording and monitoring.

o (c) HUMS is constantly monitoring and records when there is an abnormal situation.

If choice b is selected set score to 1.

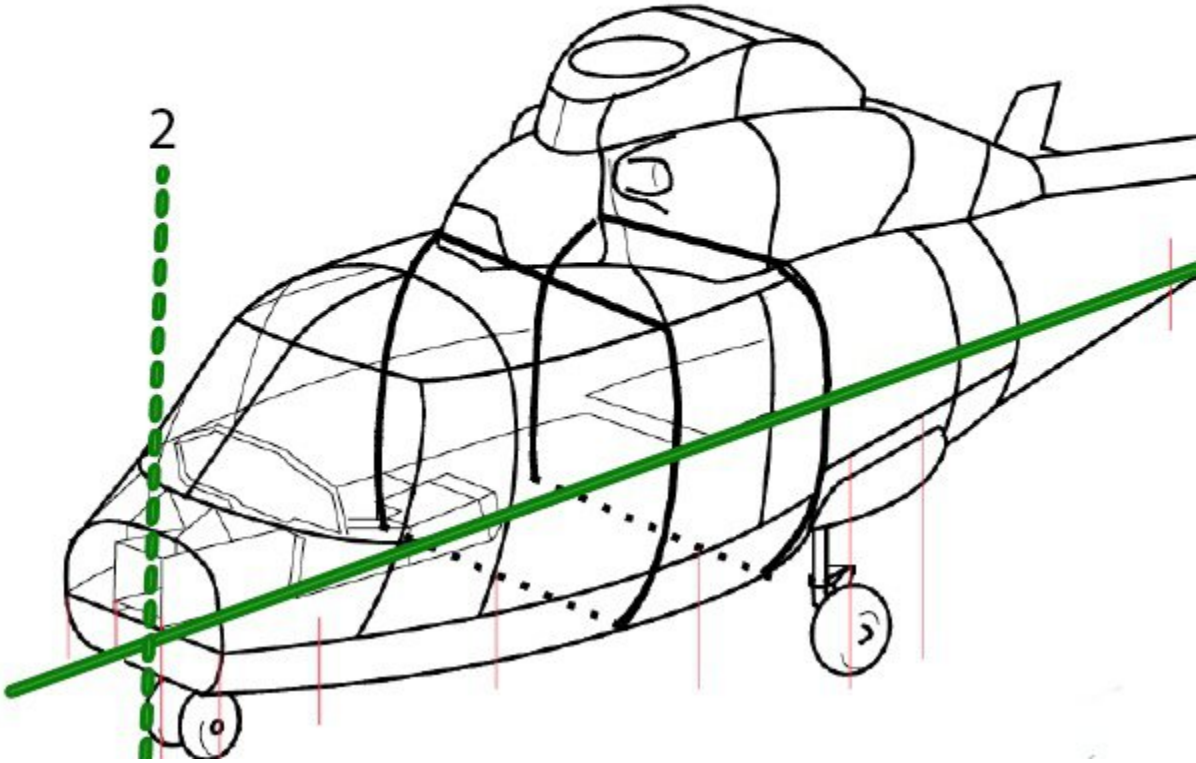
172. What type of light filament is used in flash tube anti collision lights?

- (a) Xenon flash tube

o (b) LED flash tube
o (c) Halogen flash tube

If choice a is selected set score to 1.

173. Identify lines 1 and 2 in the figure.

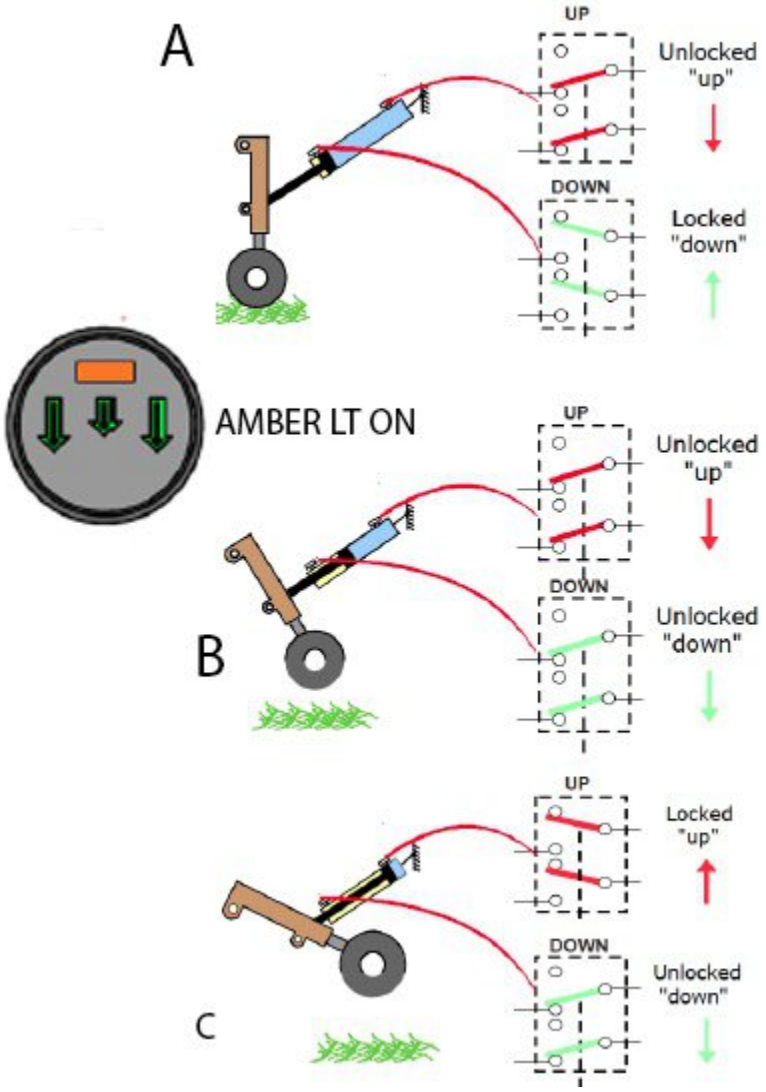


o (a) 1 buttock lines; 2 waterlines
o (b) 1 body stations; 2 buttock lines

• (c) 1 waterlines; 2 body stations.

If choice c is selected set score to 1.

174. In the figure, which diagram corresponds with the indication shown in the figure (Amber light ON).



- o (a) A
- • (b) B
- o (c) C

If choice b is selected set score to 1.

175. What is special about the bearings used in swashplates?

- o (a) There are 2 or more sets of bearings used in conjunction together.
- o (b) Do not change.
- • (c) They are 2 bearings in 2 housings.

If choice c is selected set score to 1.

176. What type of restrain system is shown in the figure?

- o (a) A standard seat belt
- • (b) A 4 point seat harness
- o (c) A 5 point seat harness

If choice b is selected set score to 1.

177. What precautions must be made before jacking up an aircraft with regards to drain mast heating?

- o (a) The drain masts must not be used
- • (b) The heating circuit breakers must be pulled
- o (c) The heating must be switched off

If choice b is selected set score to 1.

178. Which of the follwing statements is correct concerning fire bottle squibs?

- o (a) The serviceability of a squib can be checked with any Ohm meter

- (b) A squib has a limited life. As long as it passes the continuity test it may be left in service.

- (c) The filaments in the squib test circuit are a special kind and must not be interchanged with other types.

If choice c is selected set score to 1.

179. What is the purpose of HEEL lights?

- (a) To illuminate the passenger cabin in case the main lighting system fails
- (b) To illuminte the way to the emgergency exits

- (c) To illuminate the crew and passenger exits in case of an emergency

If choice c is selected set score to 1.

180. What is a Q-feel system?

- (a) An artificial feel system which varies the feel according to the measured dynamic pressure

- (b) An artificial feel system made up of a spring box in the control run
- (c) An artificial feel system which provides a constant feel at all airspeeds

If choice a is selected set score to 1.

181. What engages the landing gear lever lock, preventing the lever to be moved?

- (a) When the aircraft is on the ground

- (b) When there is no hydraulic pressure
- (c) When the nose gear is not centered

If choice a is selected set score to 1.

182. What system is used to transmit or receive automatically or manually generated reports or messages to or from a ground station?

- (a) The Aircraft Communication Addressing and Reporting System (ACARS).

- (b) The Multichannel Aviation Satellite Communication System (MCS SATCOM).
- (c) The SELCAL (Selective Calling) system.

If choice a is selected set score to 1.

183. Which of the following statements is true concerning ARINC 429?

- (a) A single wire pair ARINC 429 does not acknowledge the receipt of data

- (b) ARINC 429 allows 2 way communication between connected LRUs
- (c) ARINC 429 is obsolete and not used on modern aircraft

If choice a is selected set score to 1.

184. Some helicopters can dump their fuel. Which of the following is NOT a reason for dumping fuel?

o (a) To reduce the landing weight in case of an emergency

• (b) To reduce the risk of fire in case of a crash landing

o (c) To reduce the aircraft weight if one engine fails

If choice b is selected set score to 1.

185. What is the purpose of a "Bear paw" (See the figure)?

o (a) Serves as a mounting base for maneuvering wheels
o (b) Stabilizes the helicopter in flight

• (c) Prevents the skis from sinking in soft ground

If choice c is selected set score to 1.

186. What type of instrument lighting is shown in the figure?

- o (a) Integral lighting
- o (b) Pillar lighting
- • (c) Wedge lighting

If choice c is selected set score to 1.

187. In a hydraulic system with a vented reservoir, what is done to ensure positive head of pressure?

- o (a) The reservoir is pressurized
- o (b) A small priming pump provides the head of pressure for the main pump
- • (c) The reservoir is placed at a higher level than the pump

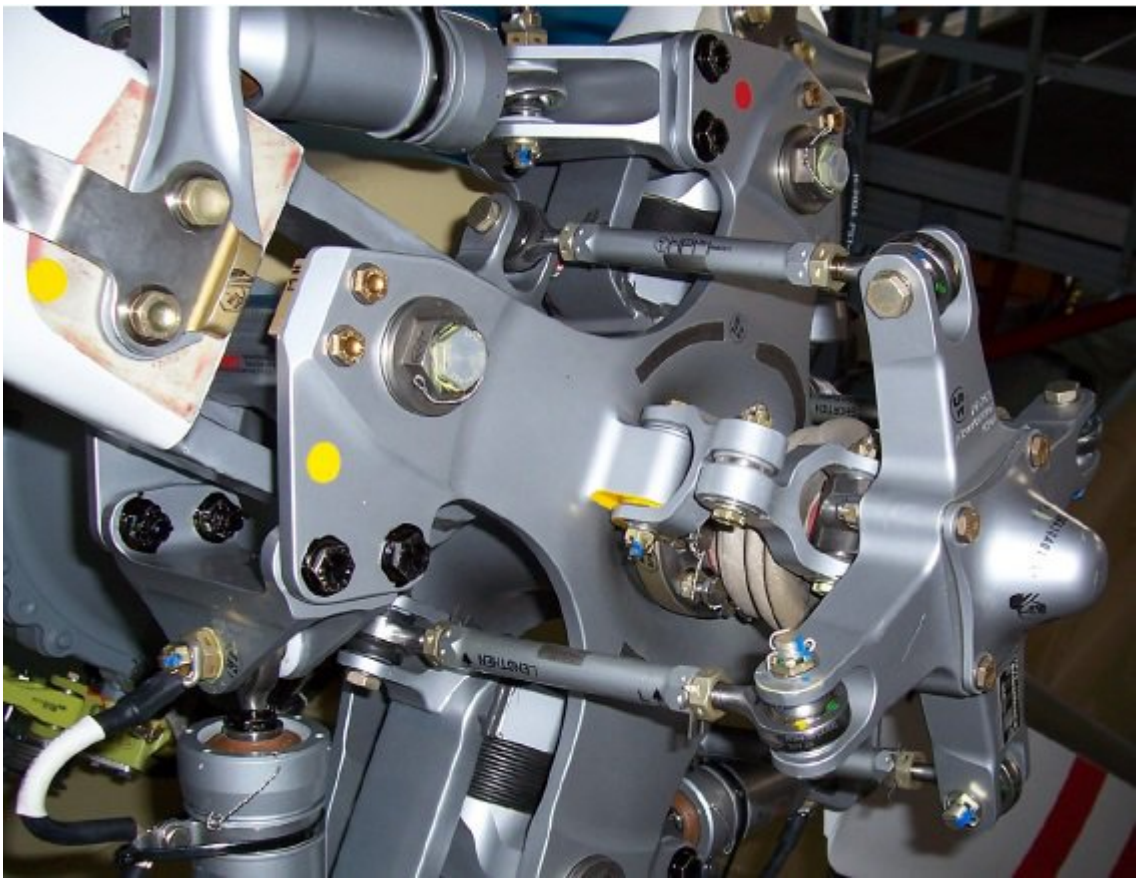
If choice c is selected set score to 1.

188. Which of the following statements in NOT true?

- • (a) The CPI is a replacement for the Emergency locator transmitter (ELT)
- o (b) The CPI is mandatory for helicopters operating in the oil and gas industry
- o (c) The Crash Position Indicator (CPI) system has a deployable beacon that floats

If choice a is selected set score to 1.

189. What type of tail rotor is shown?

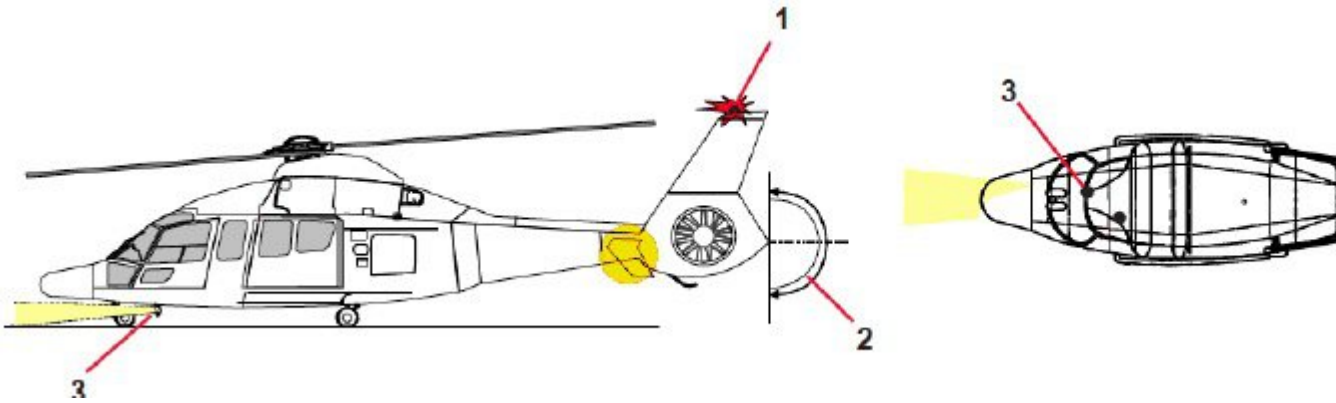


- o (a) Fenestron
- o (b) Flexbeam

- (c) Fully articulated

If choice c is selected set score to 1.

190. Identify the lights marked in the figure.



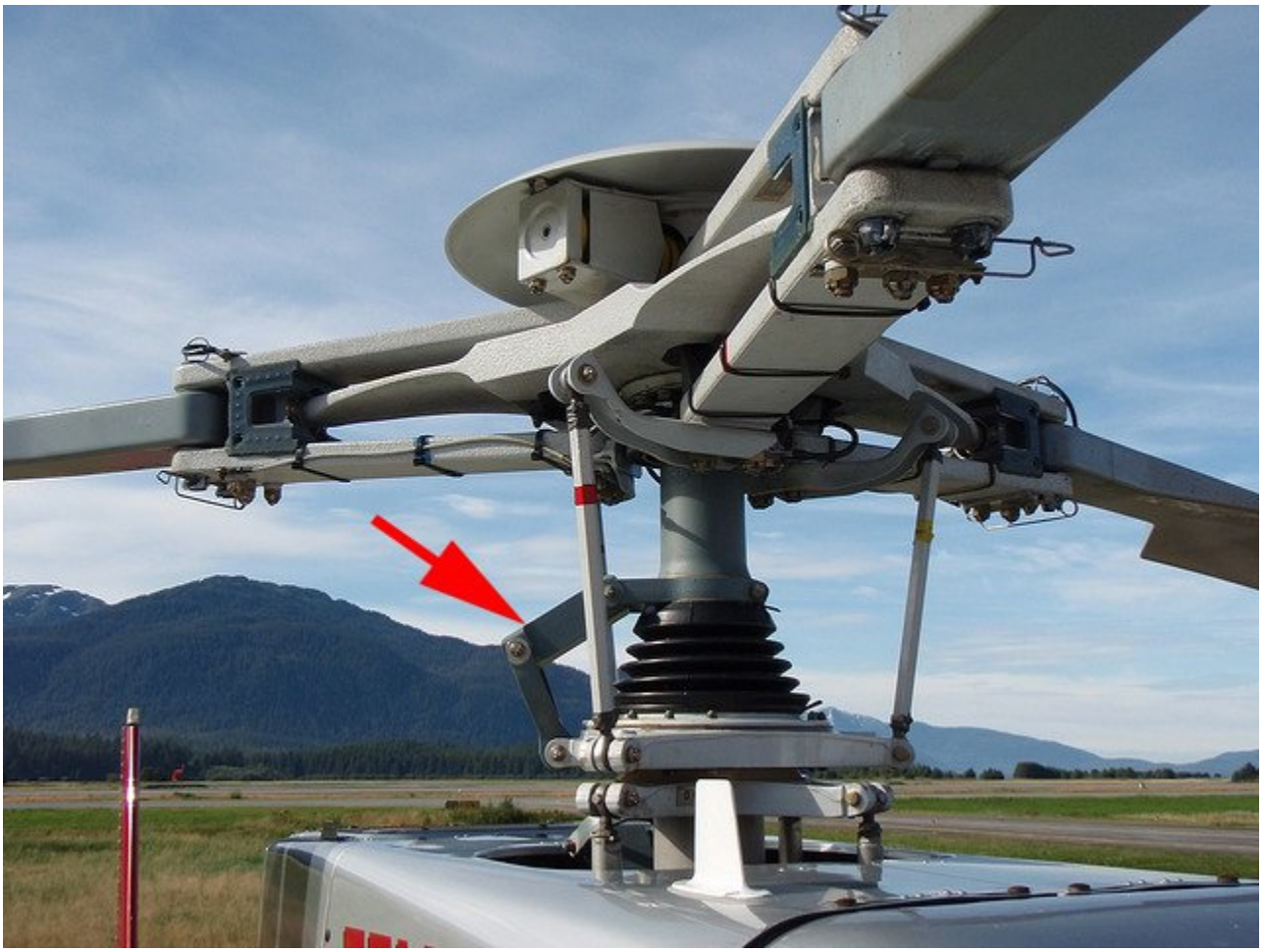
- o (a) Landing light = 1 , Anti-collision light = 2 , Red position light= 3 , Green position light=4 , White position light= 5

o (b) Landing light = 1 , Anti-collision light = 3 , Red position light= 4 , Green position light= 5 , White position light= 2

- (c) Landing light = 3 , Anti-collision light = 1 , Red position light= 5 , Green position light= 4 , White position light= 2

If choice c is selected set score to 1.

191. What is the purpose of the indicated component?



- (a) Guide the swashplate up and down the swashplate guide.

o (b) Prevent the stationary swashplate from turning with the rotor.
o (c) Drive the rotating swashplate with the main rotor.

If choice a is selected set score to 1.

192. How is the tailboom attached to the main fuselage on most civilian helicopters?

o (a) Rivetted

- (b) Bolted

- (c) Hinged

If choice b is selected set score to 1.

193. The Vacuum system pump is a....

- (a) centrifugal type.
- (b) rotor vane type.
- (c) piston type.

If choice b is selected set score to 1.

194. A hydraulic fluid with a high viscosity will have a resistance to heat which is:

- (a) greater than a fluid with a low viscosity
- (b) lower that a fluid with a low viscosity
- (c) equal to that of a fluid with a low viscosity

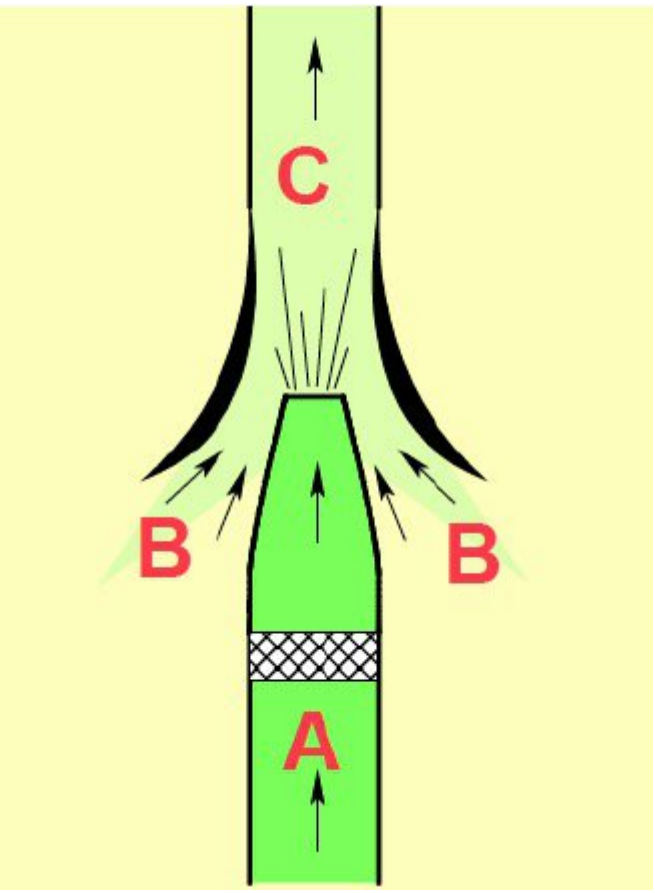
If choice a is selected set score to 1.

195. What is important about the air entering a piston air pump?

- (a) It must be filtered.
- (b) It must be pressure controlled.
- (c) It must be temperature controlled.

If choice a is selected set score to 1.

196. Complete the figure.



- (a) "A = Motive flow B = suction flow C = Mixed flow"

o (b) "A = Suction flow B = Mixed flow C = Motive flow"
o (c) "A = Mixed flow B = suction flow C = Motive flow"

If choice a is selected set score to 1.

197. In a semi-monocoque construction, what are the main support members?

- (a) Frames, longerons, stringers and bulkheads

o (b) Frames, formers, bulkheads and skin
o (c) Frames, doublers, formers and stringers

If choice a is selected set score to 1.

198. What causes ice to form on an aircraft in flight?

o (a) Flying through clouds with outside air temperature below freezing

- (b) Flying in supercooled percipitation

o (c) Flying in percipitation with outside air temperature below freezing

If choice b is selected set score to 1.

199. What effect does gyroscopic precession have on a helicopter?

- o (a) The helicopter tends to turn in the direction of the spinning rotor when in level flight
- • (b) The helicopter rotor blades reach maximum deflection approximately 90° later in the plane of rotation.
- o (c) The helicopter tends to spin around its vertical axis

If choice b is selected set score to 1.

200. What is the purpose of the DC interlock?

- • (a) Ensures that the connector is fully seated in the socket before allowing the electrical system to be energized by the external power.
- o (b) Ensures the correct voltage is supplied before allowing it to enter the aircrafts electrical system.
- o (c) Prevents reverse polarity from being applied.

If choice a is selected set score to 1.

201. The canopy on must helicopters is categorized as?

- o (a) Auxiliary structure
- o (b) Primary structure
- • (c) Secondary structure

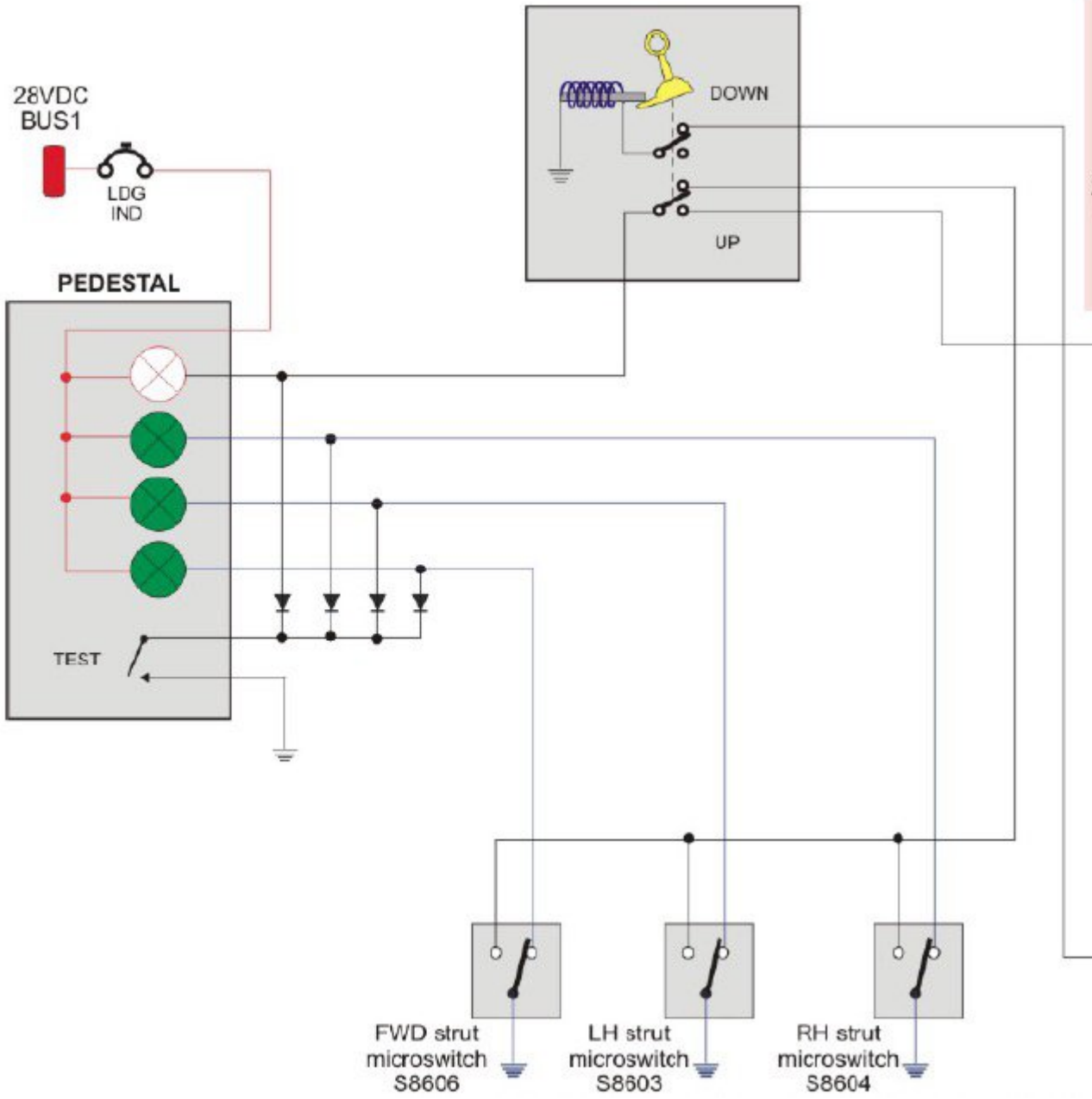
If choice c is selected set score to 1.

202. Which is the most commonly used emergency power generation system used on helicopters?

- o (a) Hydraulic motor generator
- • (b) Emergency battery power
- o (c) Ram air turbine

If choice b is selected set score to 1.

203. What is the function of switch K1901 in the figure?



- o (a) If landing gear is still extended above 200 feet a warning will sound
- o (b) If the aircraft decends below 200 feet the landing gear will be automatically extended.

- (c) If the aircraft goes below 200 feet and the gear is retracted, a warning will be triggered.

If choice c is selected set score to 1.

204. Which component in the fuel system is usually fitted in a canister?

- (a) Fuel pump

- o (b) Fuel pressure switch
- o (c) Fuel shut-off valve

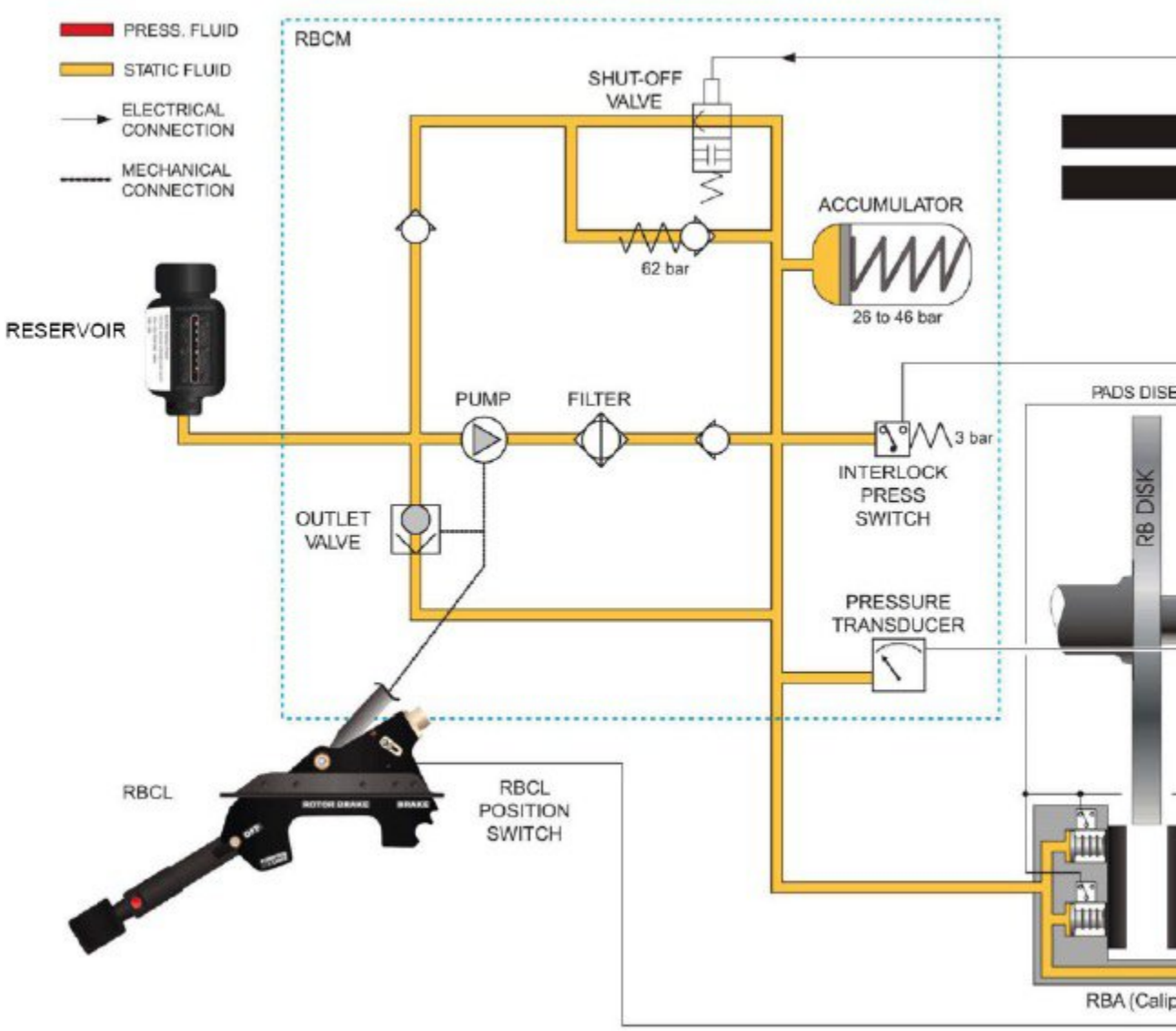
If choice a is selected set score to 1.

205. What is the standard requirement for exit markings on helicopters?

- o (a) Black letters on a white background
- • (b) Red letters on a white background
- o (c) Black letters on a yellow background

If choice b is selected set score to 1.

206. In which condition would the helicopter be in to have the rotor brake system as shown in the figure.



- o (a) Aircraft on the ground - rotor brake OFF
- o (b) Aircraft on the ground - rotor brake ON
- • (c) Aircraft in flight

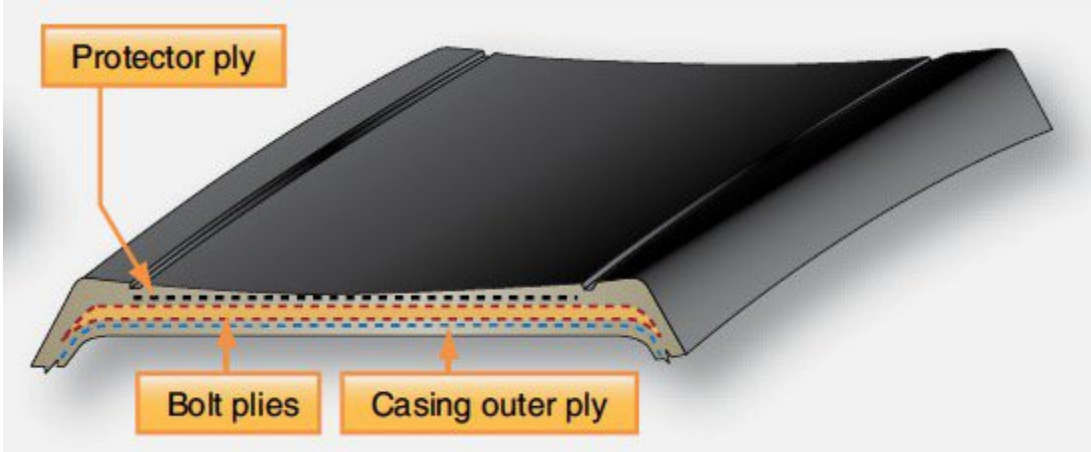
If choice c is selected set score to 1.

207. In the HUMS system, when is an event recorded?

- o (a) Every time the pilot selects "event record"
- • (b) Every time an exceedance occurs
- o (c) Every change in flight condition (ground to hover, hover to climb,...)

If choice b is selected set score to 1.

208. What is the cause of the wear on a tyre as can be seen in the figure?



- o (a) This is normal wear
- o (b) Under inflation
- • (c) Over inflation

If choice c is selected set score to 1.

209. A full strut servicing must be performed on a gas/oil oleo. Must the aircraft be placed on jacks.?

- o (a) No, the servicing can be done with the aircaft resting on its wheels
- • (b) Yes, with the wheels clear off the ground
- o (c) Yes, with the wheels touching the ground

If choice b is selected set score to 1.

210. Why is ground resonance most likely to occur on an articulated rotor system?

- • (a) Due to the lead-lag hinges.
- o (b) Due to the flapping hinges.
- o (c) Due to the damping devices.

If choice a is selected set score to 1.

211. What type of light beam does a rotating reflector beacon emit?

- o (a) 2 narrow high intensity beams
- o (b) 2 spread light beams
- • (c) A narrow beam on one side and a spread beam on the other

If choice c is selected set score to 1.

212. Identify the two items?

- (a) (1) Photo-optical pick-up, (2) Accelerometer

o (b) (1) Accelerometer, (2) Magnetic pick-up.
o (c) (1) Photo-optical pick-up, (2) IR-sensor.

If choice a is selected set score to 1.

213. The DME Distance Measurement gives information about:

o (a) the attitude of the aircraft.
o (b) the ground distance from the aircraft to the selected ground station.

- (c) the slant range to the selected ground station.

If choice c is selected set score to 1.

214. Which anti-torque system used the coanda effect?

- (a) NOTAR

o (b) Delta 3 hinge
o (c) Fenestron

If choice a is selected set score to 1.

215. What is the purpose of the venturi duct (jet pump) in the heating system?

- (a) Mix ambient air with hot bleed air from the engine

o (b) Mix cold cabin air with hot bleed air from the engine
o (c) Extract cold air from the cabin

If choice a is selected set score to 1.

216. What is the pilots first reaction when the engine fails?

o (a) Increase the collective pitch to increase the rotor RPM.
o (b) Pitch the aircraft forward to maintain airspeed.

- (c) Decrease the collective pitch to maintain rotor RPM.

If choice c is selected set score to 1.

217. In the fuel tank system, where would you find flame arrestors?

o (a) In the refueling line
o (b) In the engine feed line

- (c) In the fuel tank venting lines

If choice c is selected set score to 1.

218. How can the blade track be adjusted?

- (a) adding tracking weights to the blade tip

o (b) adding tracking weights to the blade pitch links
o (c) adjusting the mass chordwise balance weight

If choice a is selected set score to 1.

219. In a basic DC external power system, how is applying reverse polarity to the aircraft electrical system prevented?

- (a) By using a reverse polarity diode

o (b) By using an irreversable external power connector

o (c) By using different size pins in the external power connector

If choice a is selected set score to 1.

220. Cable tension regulators are fitted to cable control systems. Which of the following statements is correct?

o (a) On a warm aircraft the cable tensioner compensates for the decrease in cable tension due to the heat

• (b) On a cold aircraft, the cable tensioner compensates for the decrease in cable tension due to the cold

o (c) The cable tensioner must be adjusted manually if the aircraft is operated in a different environment

If choice b is selected set score to 1.

221. When data loading is performed to the FMS, what happens to the software that was uploaded?

o (a) Is transferred to the applicable unit, updates it and is stored in the unit as a backup

• (b) Is transferred to the applicable unit, updates it and the old data are stored as back-up.

o (c) Updates the applicable unit

If choice b is selected set score to 1.

222. When an air ground cart is used to supply pneumatics to the aircraft, what controls the temperature and the pressure?

o (a) The aircraft systems

• (b) The ground cart

o (c) There is not control

If choice b is selected set score to 1.

223. What is the optimum bend radius for fire loops?

o (a) 90 degrees
o (b) 6 inches

• (c) 3 inches

If choice c is selected set score to 1.

224. What prevents the swashplate from turning with the main rotor

- o (a) Uniball bearing
- o (b) The control servos
- • (c) Scissor assembly

If choice c is selected set score to 1.

225. What is the general name for tensile, compressive and shear strenght?

- o (a) Dynamic strength
- • (b) Static strength
- o (c) Fatigue strength

If choice b is selected set score to 1.

226. If a pitot probe becomes blocked, which air data instrument(s) will be effected

- • (a) Air speed indicator only
- o (b) altimeter only
- o (c) air speed indicator and vertical speed indicator

If choice a is selected set score to 1.

227. A Class 3 electronic flight bag is:

- o (a) Integrated into the aircrafts avionics systems using the main multifunction displays
- • (b) Fitted to the aircraft with independent displays
- o (c) Portable unit

If choice b is selected set score to 1.

228. What is one of the primary precautions when using water displacement fluids?

- o (a) They should not be used on control cables.
- o (b) They should not be used on bare, unprotected aluminium.
- • (c) They should not come into contact with perspex.

If choice c is selected set score to 1.

229. In a Fail Passive System;

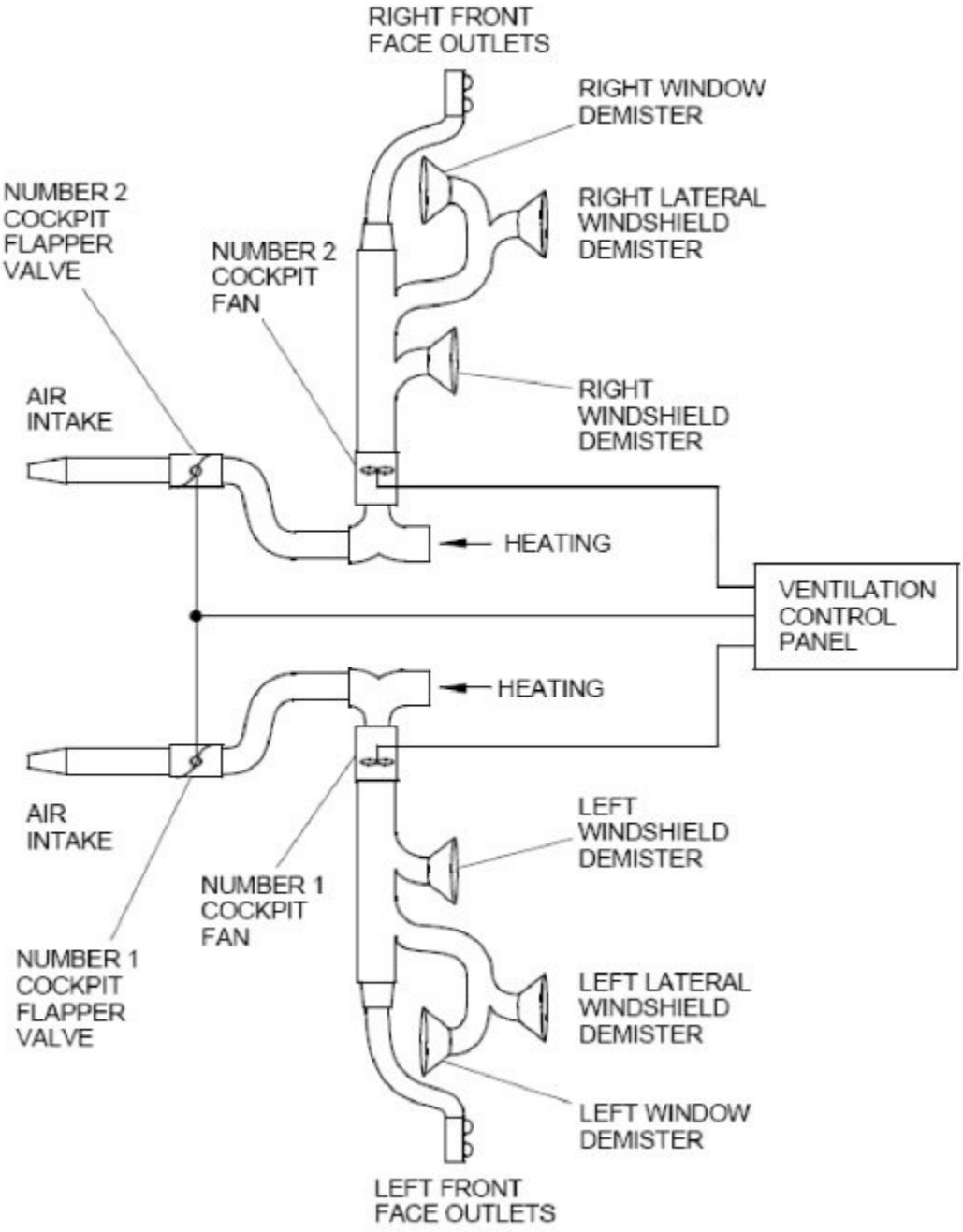
- o (a) The crew will disconnect a system before a dangerous situation occurs.

- (b) The system monitor will disconnect a system before a dangerous situation occurs.

o (c) The crew is part of the monitoring when only one sensor of one kind is available.

If choice b is selected set score to 1.

230. In a basic environmental control system like the figure, what is (are) the primary source(s) of air?



o (a) Engine bleed air
o (b) RAM air

- (c) RAM air and engine bleed air

If choice c is selected set score to 1.

231. Why are CRT displays not used in Helicopter Electronic Instrument Systems (EIS)?

o (a) They are too heavy.
o (b) They produce too much heat.

- (c) The cannot handle the vibrations.

If choice c is selected set score to 1.

232. Which system use VHF radio signals to work?

o (a) ILS and TCAS
o (b) ADF and DME

- (c) VOR and ILS

If choice c is selected set score to 1.

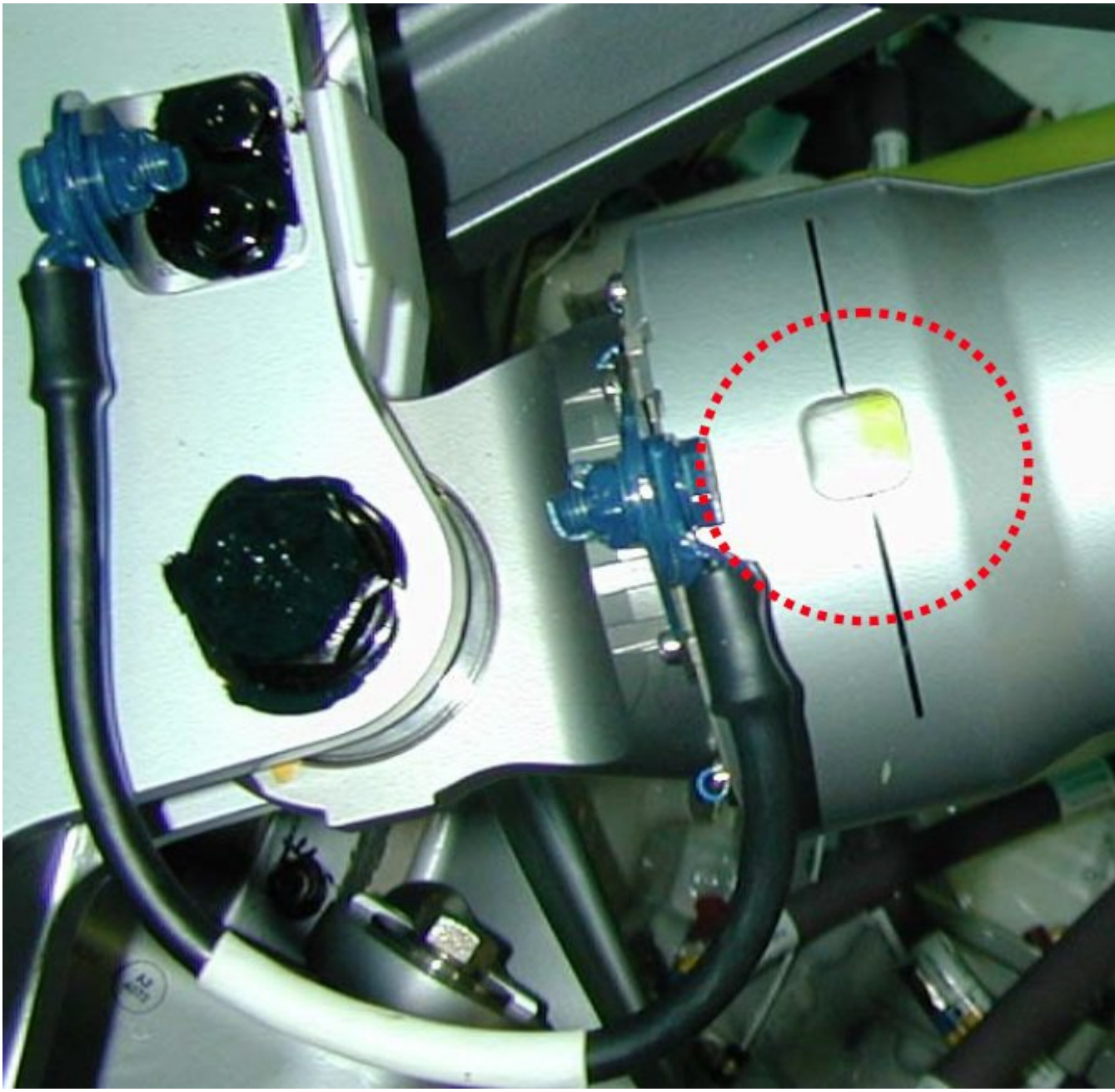
233. Cyclic control inputs are sent to the main rotor:

- (a) 90 degrees before the desired reaction

o (b) 90 degrees after the desired reaction
o (c) at the point of the desired reaction

If choice a is selected set score to 1.

234. What is the function of the indicated item?



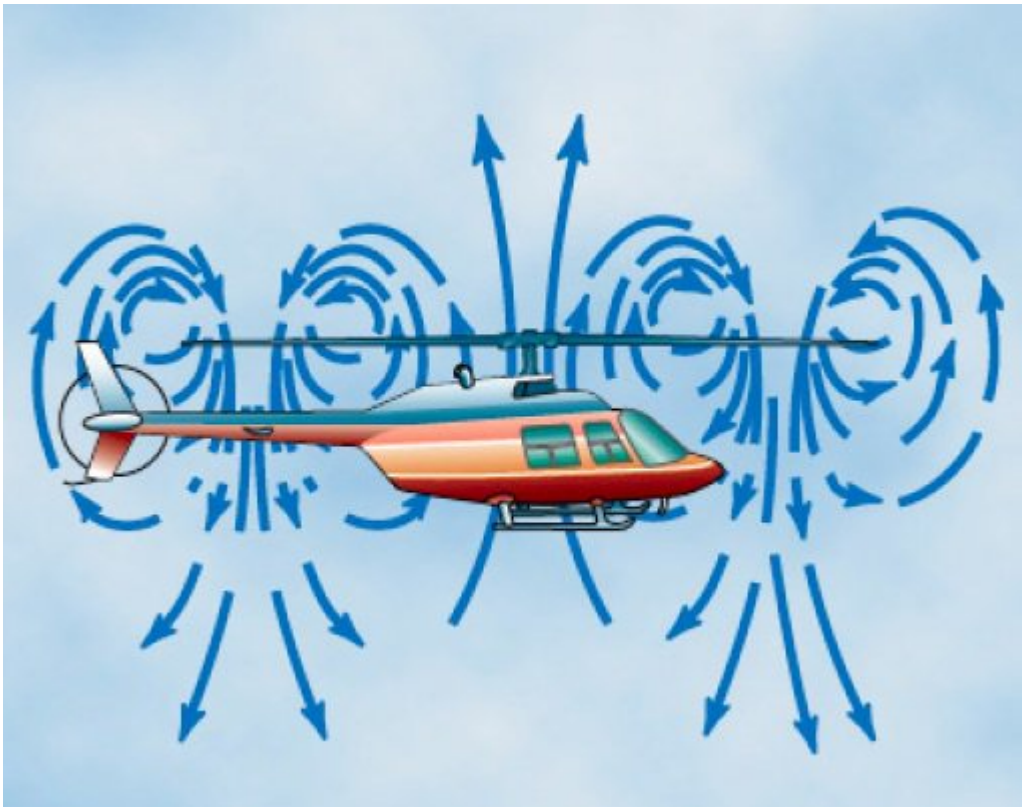
o (a) It is an indicator used for rigging the damper.

• (b) It is an indicator that shows the fluid level inside the damper.

o (c) It is an indication that becomes visible when the damper had been exposed to forces beyond its limits.

If choice b is selected set score to 1.

235. Which condition is illustated?



- (a) Hover flight.
- (b) Flying in ground effect.

- (c) Vortex ring state (settling with power).

If choice c is selected set score to 1.

236. What is the purpose of the hydraulic fluid in a hydraulic damper?

- (a) Cushion the movement of the damper.

- (b) Reduction of vibrations.
- (c) Cool and lubricate the damper.

If choice a is selected set score to 1.

237. On an engine with bleed air ant-icing, what is used as the source of bleed air?

- (a) The high pressure compressr of the other engine
- (b) The high pressure turbine of the engine being anti-iced

- (c) The high pressure compressor of the engine being anti-iced

If choice c is selected set score to 1.

238. The blade sweeping of main rotor blades is applicable to:

o (a) All types of main rotor.

• (b) Semi rigid main rotors.

o (c) Fully articulated main rotors.

If choice b is selected set score to 1.

239. Compared to a rotor blade with symetrical airfoil, what are the advantages of a blade with asymetrical airfoil.

o (a) They are lighter and stronger

• (b) They produce more lift

o (c) The allow higher airspeeds

If choice b is selected set score to 1.

240. The figure shows a pressure reverting servo altimeter. What is the benefit of this type of altimeter?

o (a) It switches to an internal servo system in case of a failure of the external master altimeter
o (b) It allows for automatic barometric pressure compensation

• (c) In case of a failure of the servo part of the altimeter, it switches to mechanical operation automatically

If choice c is selected set score to 1.

241. What is NOT a function of a voltage regulator?

- (a) Short circuit protection

o (b) Voltage regulation
o (c) Parallel generator operation

If choice a is selected set score to 1.

242. When will an Crash Position Indicator beacon activate?

o (a) When it is dropped

- (b) When it is purposly jettisoned

o (c) When it comes into contact with water

If choice b is selected set score to 1.

243. A helicopter makes a hard landing and goes into ground resonance. What can the pilot do to stop it?

o (a) Use cyclic input to try and act opposite to the resonance.
o (b) Increase rotor speed.

- (c) Take off again.

If choice c is selected set score to 1.

244. On a helicopter, which network can be accessed wireles?

o (a) Isolated date network

- (b) Both open and isolated data networks

o (c) Open data network

If choice b is selected set score to 1.

245. The system that allows long distance voice communication is called:

- (a) High Frequency communication (HF).

o (b) Selcal communication.
o (c) Very High Frequency communication (VHF).

If choice a is selected set score to 1.

246. The cable of a rescue hoist is coloured orange on the first and last 20 feet. Why is that?

- o (a) To indicate that the operator has to use slow speed when the cable is in this coloured zone.
- o (b) To make the cable more visible to the operator
- • (c) To indicate to the operator that he is reaching the beginning or end of the cable

If choice c is selected set score to 1.

247. Where does a helicopter generally store its fuel?

- • (a) Fuel tanks under the floor
- o (b) In external fuel tanks
- o (c) Fuel tanks in the aft section

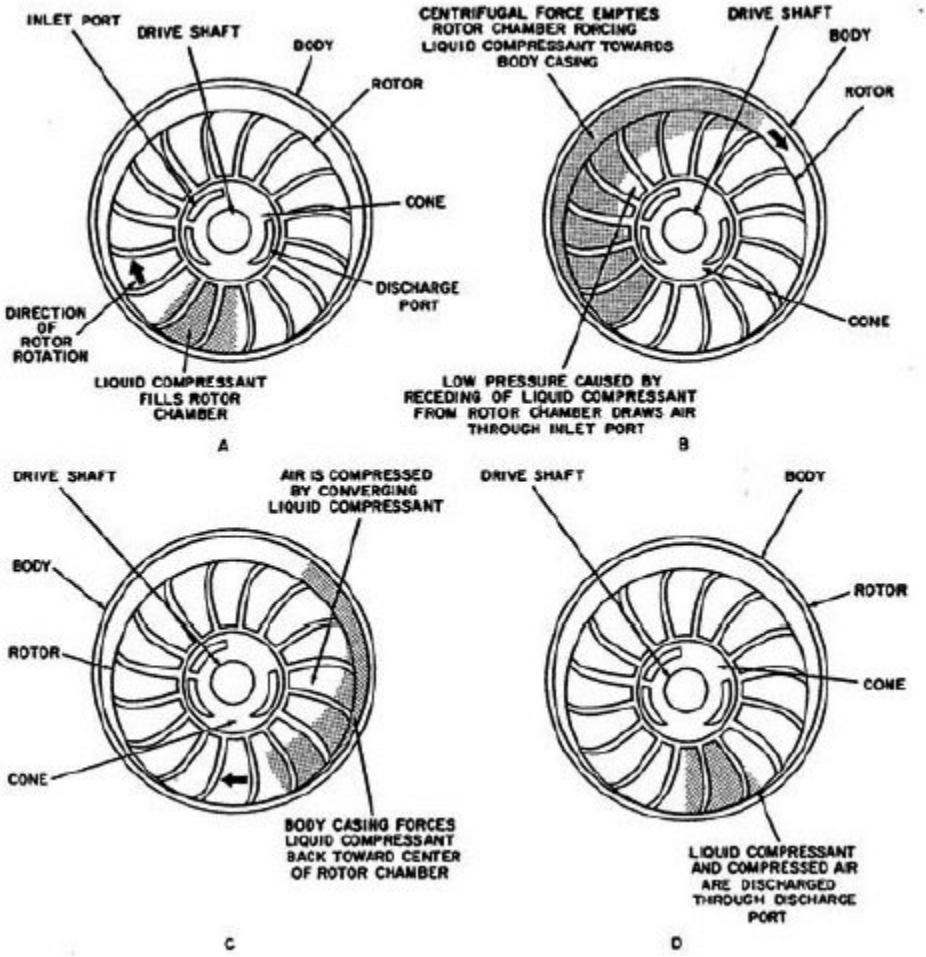
If choice a is selected set score to 1.

248. What happens if a manual rotor brake is accidentally applied during flight?

- o (a) Nothing. A feature in the rotor brake system prevents this from happening
- • (b) The rotor brake will overheat and could catch fire
- o (c) The rotor speed will decrease to a dangerously low level

If choice b is selected set score to 1.

249. What is the unit shown in the figure?



- (a) Vacuum pump

o (b) Turbo compressor
o (c) Vane type pump

If choice a is selected set score to 1.

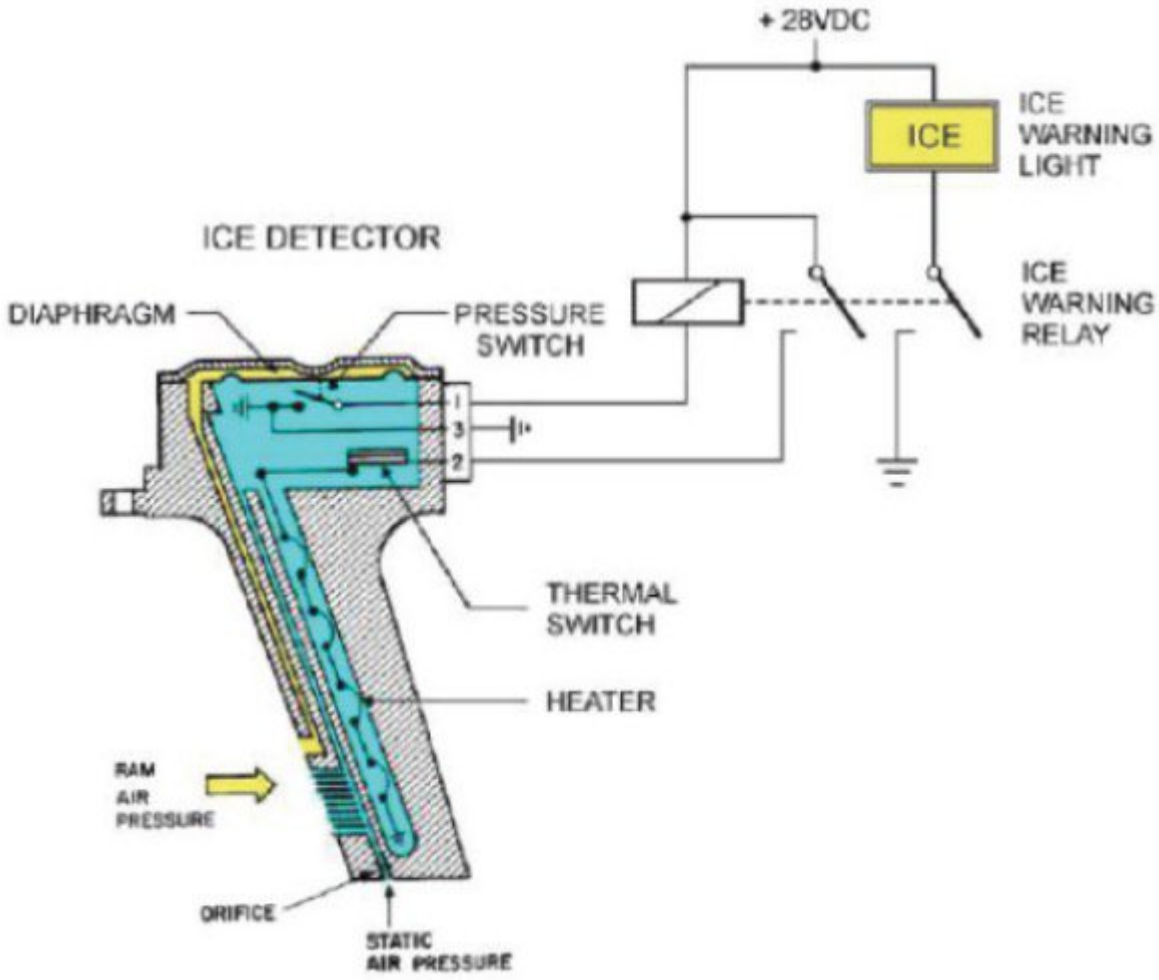
250. On an aircraft flying above 2500 feet, the radio alimeter will show?

- (a) Blank

o (b) 0
o (c) 2500

If choice a is selected set score to 1.

251. Using the figure, what happens when ice is detected?



- (a) The pressure switch opens due to the pressure difference in the diaphargm, closing the circuit and activating the ice warning relay. This in turn switches on the ICE warning light and the heater.
- (b) The ice detector which is heated, cools down until the thermal switch activates and closes the circuit which turns on the ICE warning light

- (c) The pressure switch closes due to the pressure difference in the diaphargm, closing the circuit and activating the ice warning relay. This in turn switches on the ICE warning light and the heater.

If choice c is selected set score to 1.

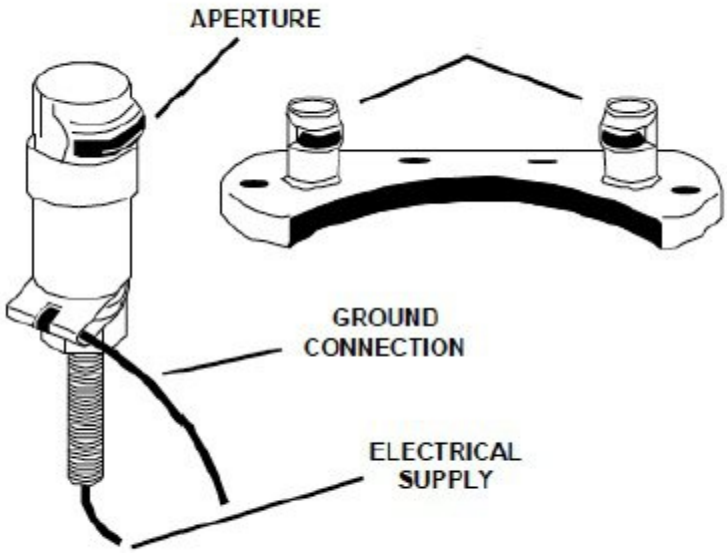
252. To completely empty a fuel tank, what is used?

- (a) Water drain valve
- (b) Tank defueling

- (c) Tank drain valve

If choice c is selected set score to 1.

253. What is the name of the lighting shown in the figure?



- o (a) Switch lights
- • (b) Pillar and bridge lights
- o (c) Wedge lighting

If choice b is selected set score to 1.

254. How are air data probes heated?

- o (a) Pneumatically
- • (b) Electrically
- o (c) Not heated

If choice b is selected set score to 1.

255. What type of fuel tanks is most common on helicopters?

- • (a) Bladder cells
- o (b) Integral fuel tanks
- o (c) External fuel tanks

If choice a is selected set score to 1.

256. In what way does Integrated modular avionics directly affect the line replaceable units (LRUs) used on a helicopter?

- (a) It replaces several key LRUs with software applications

o (b) It replaces several software applications with LRUs
o (c) It digitally links all the LRUs to a central computer, which constantly monitors their operation and reports any faults. It also provides BITE to be performed from a central point.

If choice a is selected set score to 1.

257. A helicopter hovering in ground effect will have?

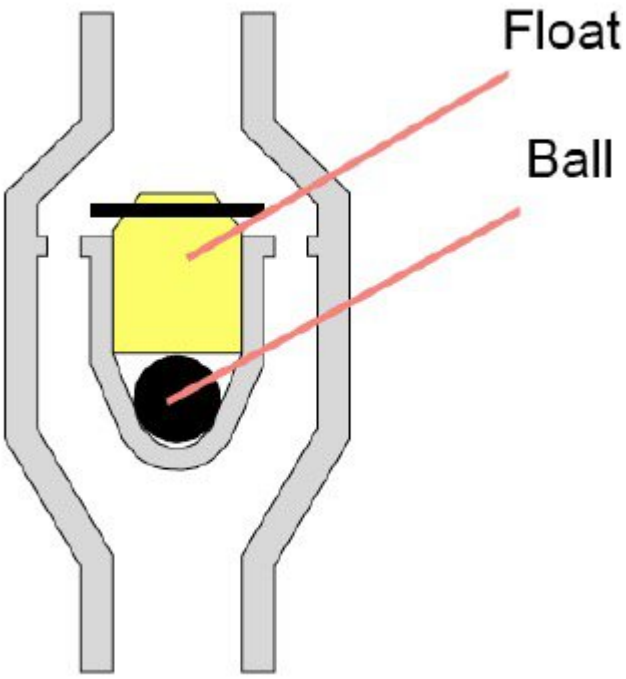
o (a) More drag and needs more engine power.

- (b) More lift and needs less engine power.

o (c) A higher rotor speed and needs less engine power.

If choice b is selected set score to 1.

258. What is the purpose of the item shown in the figure?

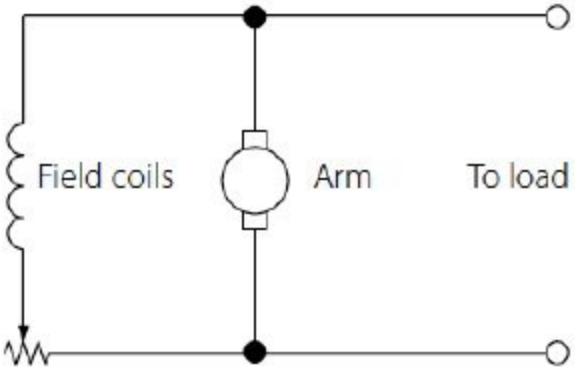


- (a) Seal off the vent line and stop the fuel leaking out in case the helicopter rolls over

o (b) Stop the fueling when the tank is full.
o (c) Seal off the vent line in case the tank becomes pressurized

If choice a is selected set score to 1.

259. The schematic of which type of generator is shown in the figure?



- o (a) Compound wound AC alternator
- o (b) Shunt wound DC alternator
- • (c) Shunt wound DC generator

If choice c is selected set score to 1.

260. What is the benefit of troop seats?

- o (a) They can carry more weight
- • (b) They provide more cargo space when folded up
- o (c) They provide more comfort

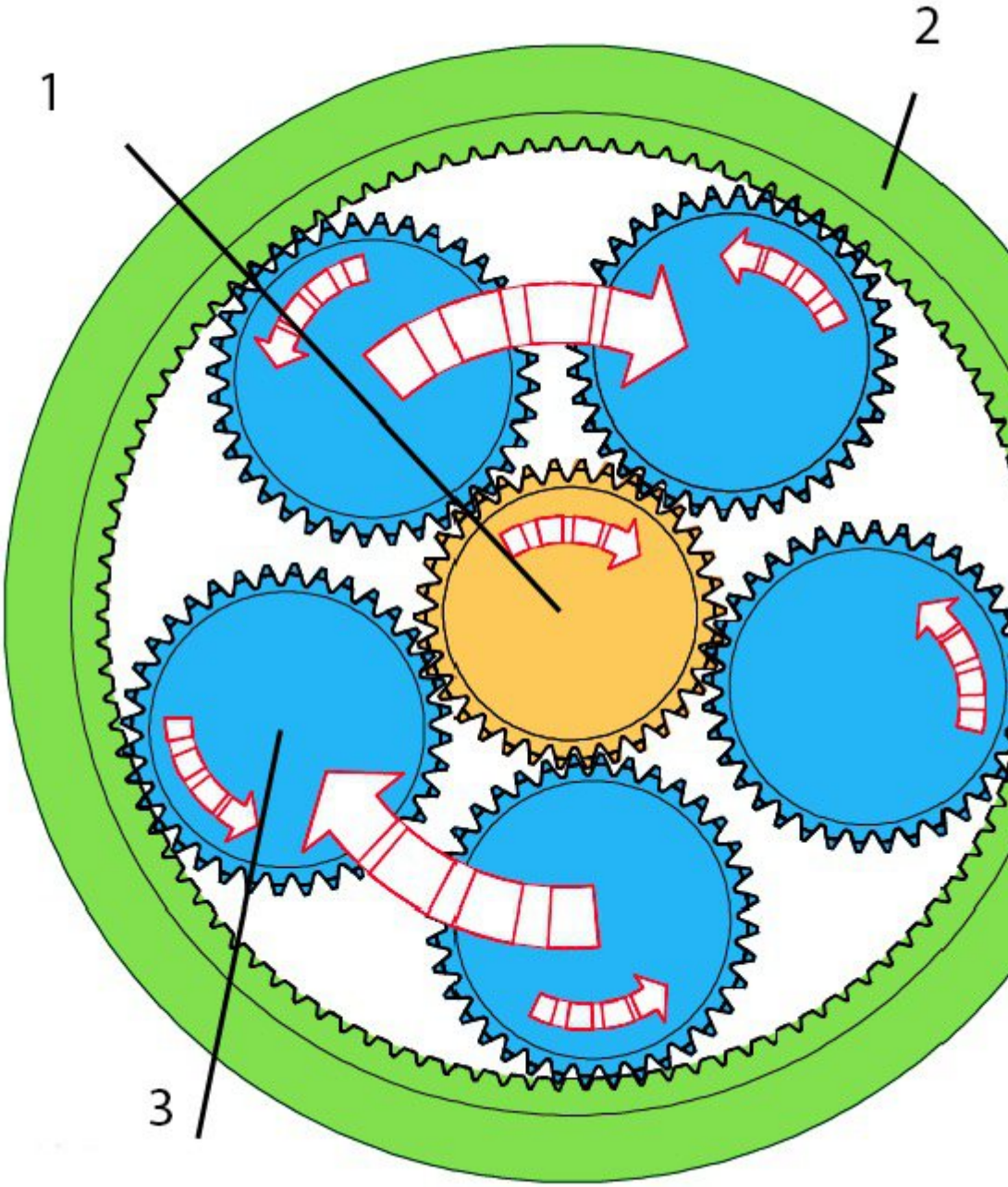
If choice b is selected set score to 1.

261. The emergency flotation gear is designed to:

- • (a) Keep the helicopter afloat long enough for the passengers to escape
- o (b) Stabilize the helicopters in the water
- o (c) Keep the helicopter afloat

If choice a is selected set score to 1.

262. Name the components in the figure.



- (a) 1= Ring gear,
  2= Sun gear,
  3= Planet gear

- (b) 1= Sun gear,
  2= Ring gear,
  3= Planet gear

o (c) 1= Center gear,
2= Perimeter gear,
3= Orbital gear

If choice b is selected set score to 1.

263. What is the primary function of Helicopter Usage Monitoring System (HUMS)

o (a) Monitor the rotors for correct track and balance

• (b) Monitor airframe and engine vibrations for abnormal levels and warn before they become a problem

o (c) Monitor gearbox and engine temperature and pressures and warn in case of an abnormality

If choice b is selected set score to 1.

264. Why must you always wet the windscreen before opening the wipers?

• (a) To prevent damage to the windscreen.

o (b) To prevent unnecessary wear of the wiper blades.
o (c) To prevent wear on the drive mechanism of the wipers.

If choice a is selected set score to 1.

265. In the systron-donner sensor, what provides the overheat function of the sensor?

o (a) Titanium wire
o (b) Integrity switch

• (c) Helium gas

If choice c is selected set score to 1.

266. Before any refueling operation is started, the aircraft and fuel truck needs to be bonded. What is the correct sequence?

o (a) (1) Aircraft to fuel truck, (2) fuel nozzle to aircraft, (3) fuel truck to ground

• (b) (1) Fuel truck to ground, (2) aircraft to fuel truck, (3) fuel nozzle to aircraft

o (c) (1) Aircraft to ground, (2) fuel truck to aircraft, (3) fuel nozzle to aircraft

If choice b is selected set score to 1.

267. What precaution should be taken when testing the windscreen wipers?

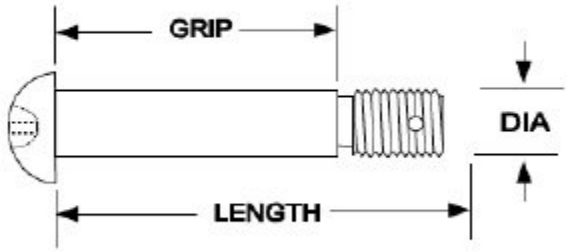
o (a) Never operate them at high speed

- (b) Never operate them on a dry windscreen

o (c) Ensure that the wiper blades do not touch the windscreen when testing

If choice b is selected set score to 1.

268. What does the number 14 indicate in the bolt partnumber AN24-14A?



o (a) The diameter of the bolt (14/64 inch diameter).
o (b) The material specification (14 = steel).

- (c) The bolt length (14/16 inch diameter.

If choice c is selected set score to 1.

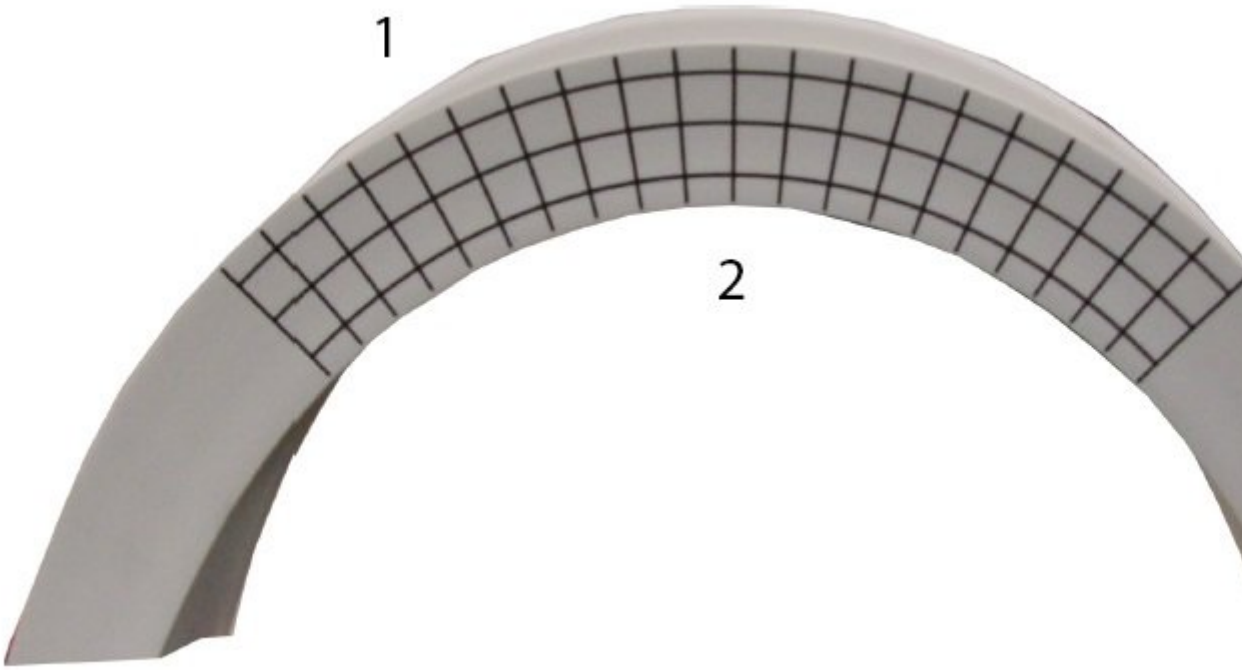
269. Which balance weights are installed during construction of a main rotor blade and may not be altered of moved?

o (a) mass chordwise weights
o (b) tracking weights

- (c) mass balance weights

If choice c is selected set score to 1.

270. The object is being subjected to a bending force. The stresses in area 1 and 2 will be?



- o (a) (1) Compression, (2) Hoop
- • (b) (1) Tension, (2) Compression
- o (c) (1) Shear, (2) Compression

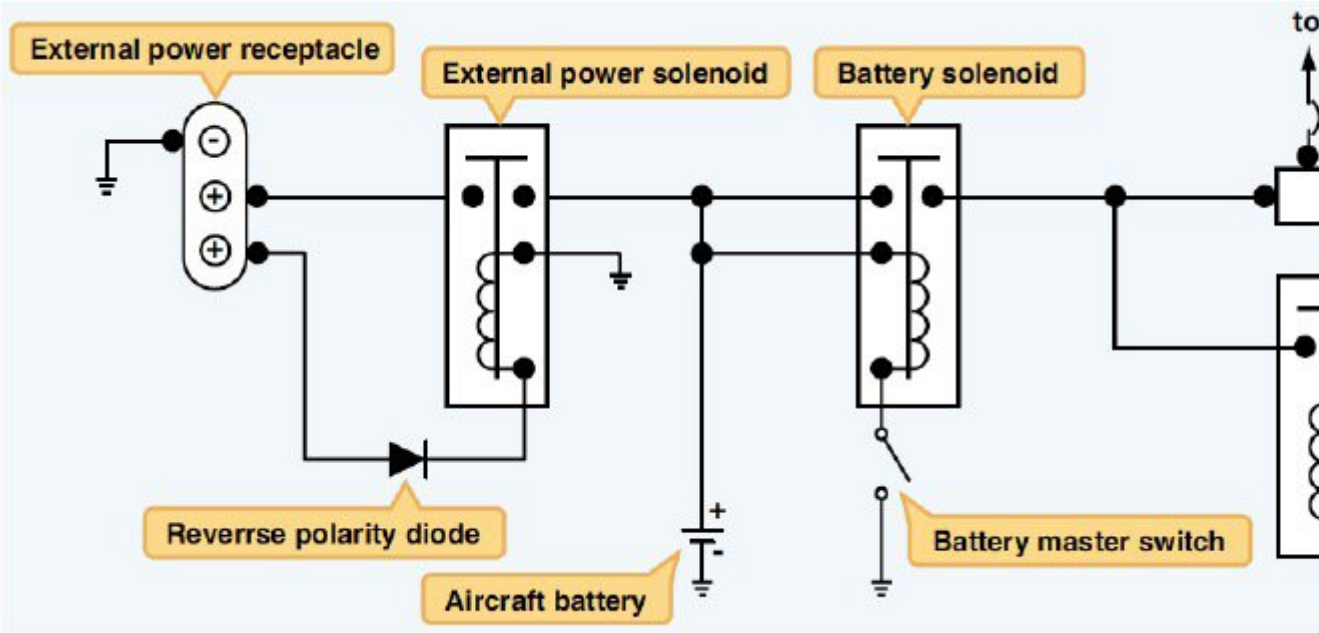
If choice b is selected set score to 1.

271. The reason for flight control rigging is:

- o (a) both answer A and B are correct
- o (b) to compensate for the wear of components like bearings and bolts
- • (c) to set the flight controls back to their correct position

If choice c is selected set score to 1.

272. In the figure, to charge the aircraft battery, what must you do after the external power has been connected to the aircraft?



o (a) Close the starter switch

• (b) Nothing

o (c) Close the battery master switch

If choice b is selected set score to 1.

273. What are the differences between LED position lights compared to incandescent position lights

o (a) LED's are only alowed for daylight (VFR) flights.

• (b) LED's are cheaper, lighter and produce a brighter light.

o (c) LED's are less power hungry but don't last so long.

If choice b is selected set score to 1.

274. Some cargo doors are fitted with gas spring rods. What are they used for?

o (a) To keep the door in closed position
o (b) To jettison the door when the emergency release is activated

• (c) To keep the door in open position

If choice c is selected set score to 1.

275. A main rotor with pitch links attached to the leading edge has to be adjusted so that the blades fly higher. Which adjustment must be made?

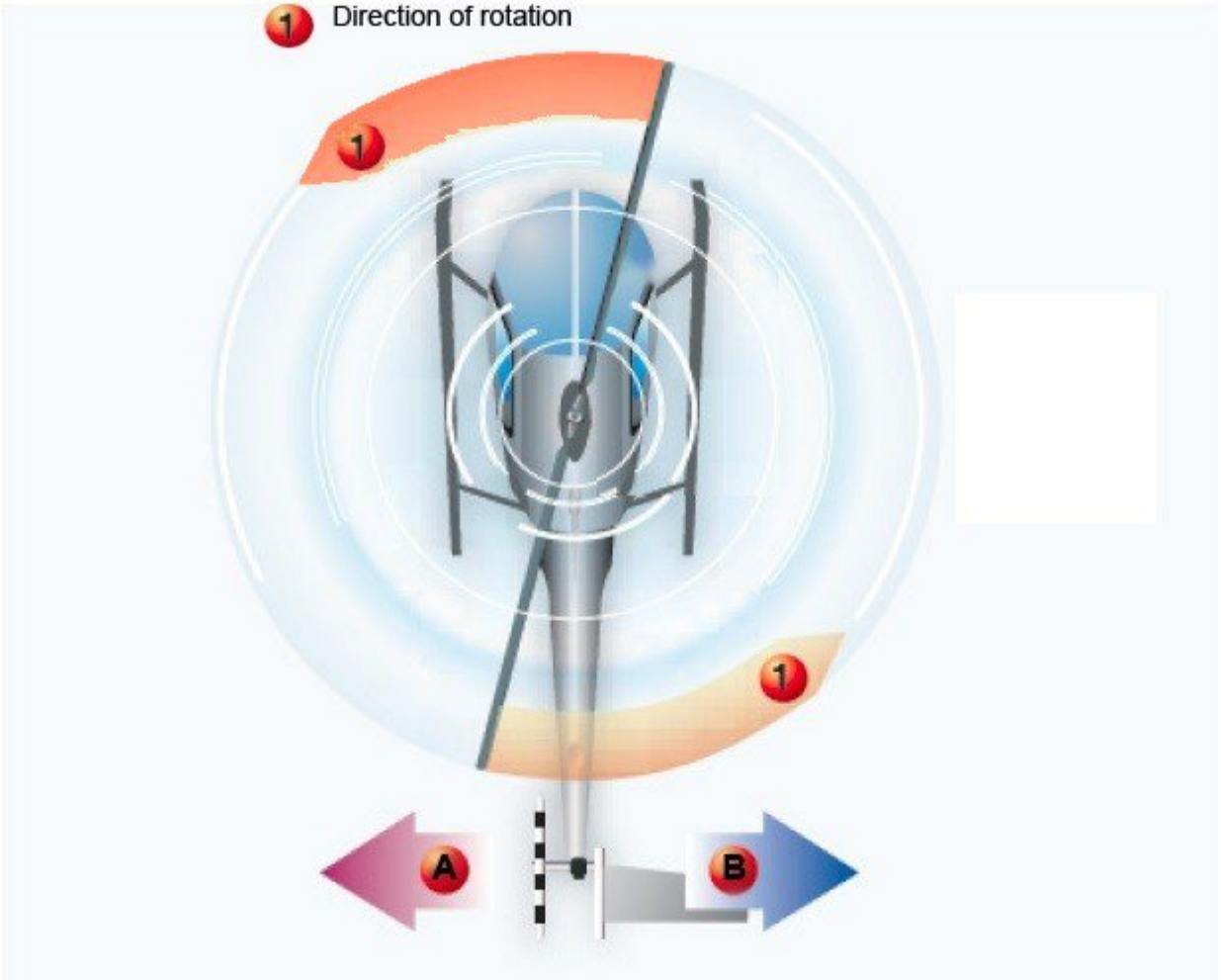
o (a) The weight of the blades must be increased by adding extra balance weights to the tips.

• (b) The pitch links must be lengthened.

o (c) The pitch links must be shortened.

If choice b is selected set score to 1.

276. On a helictopter in a hover flight as seen in the figure, with the main rotor rotating counter-clockwise, the tail rotor thrust will react:



o (a) Tail to the left (A)

• (b) Tail to the right (B)

o (c) No tail reaction in hover flight.

If choice b is selected set score to 1.

277. Which of the following is NOT concidered to be an emergency flotation system?

- o (a) Flotation bags
- o (b) Inflatable flotation system
- • (c) Fixed flotation system

If choice c is selected set score to 1.

278. What type of gyro would you find in an gyro horizon unit (artificial horizon)?

- o (a) Vertical gyro
- • (b) Displacement gyro
- o (c) Free gyro

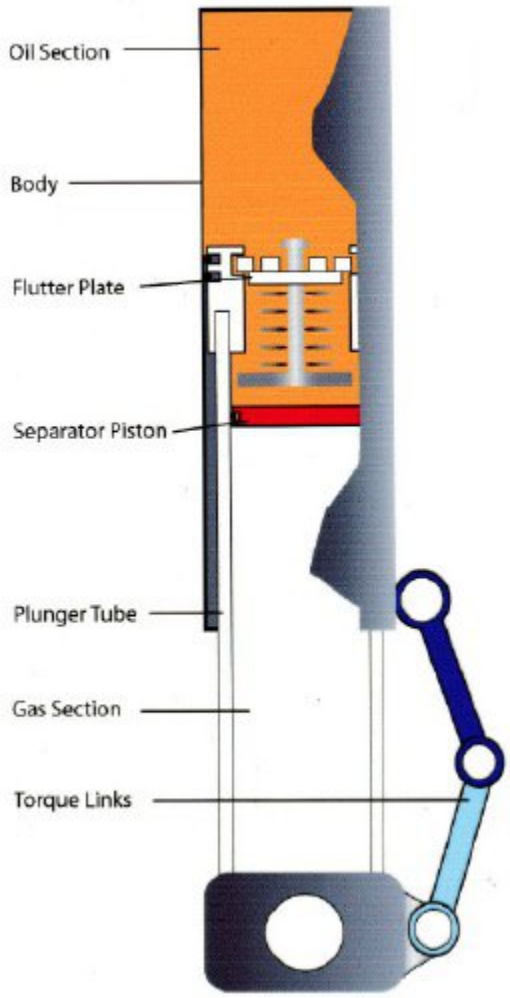
If choice b is selected set score to 1.

279. What type of fuel tank is shown in the figure?

- • (a) Bladder tank
- o (b) Integral tank
- o (c) Rigid tank

If choice a is selected set score to 1.

280. What is the purpose of the flutter plate inside an oleo (see the figure).



o (a) Prevent the oleo from collapsing in the event of an air leak.

• (b) Control the recoil of the oleo during landing.

o (c) Control the shock absorbsion during landing

If choice b is selected set score to 1.

281. What is used, to allow for slight misalignment of the tail rotor drive shaft sections?

• (a) Flexible couplings.

o (b) Bearings mounted in elastomer bushings.
o (c) Self aligning bearings.

If choice a is selected set score to 1.

282. In what type of databus are the connectors in the figure used?

- (a) Ethernet

o (b) Fibre-optic
o (c) ARINC 429

If choice a is selected set score to 1.

283. What is the advantage of troop seats?

o (a) They are easier to install and remove

- (b) They can be folded up to increase cabin space

o (c) They can carry more weight

If choice b is selected set score to 1.

284. Which of the following statements is true?

o (a) All helicopters are fitted with a tail skid.

- (b) Tail skids are designed to protect the tail boom and tail rotors from impact with the ground during a flare maneuvre.

o (c) Some helicopters have a movable tail skid.

If choice b is selected set score to 1.

285. The icing shown in the figure is knows as?

- o (a) Cleare icing
- o (b) Hoarfrost
- • (c) Rime icing

If choice c is selected set score to 1.

286. Which page in the Central maintenance system shows the actual flight control trim motor positions and the current condition of the control system?

- o (a) Test status and results page
- o (b) System diagnostics menu
- • (c) Synoptics page

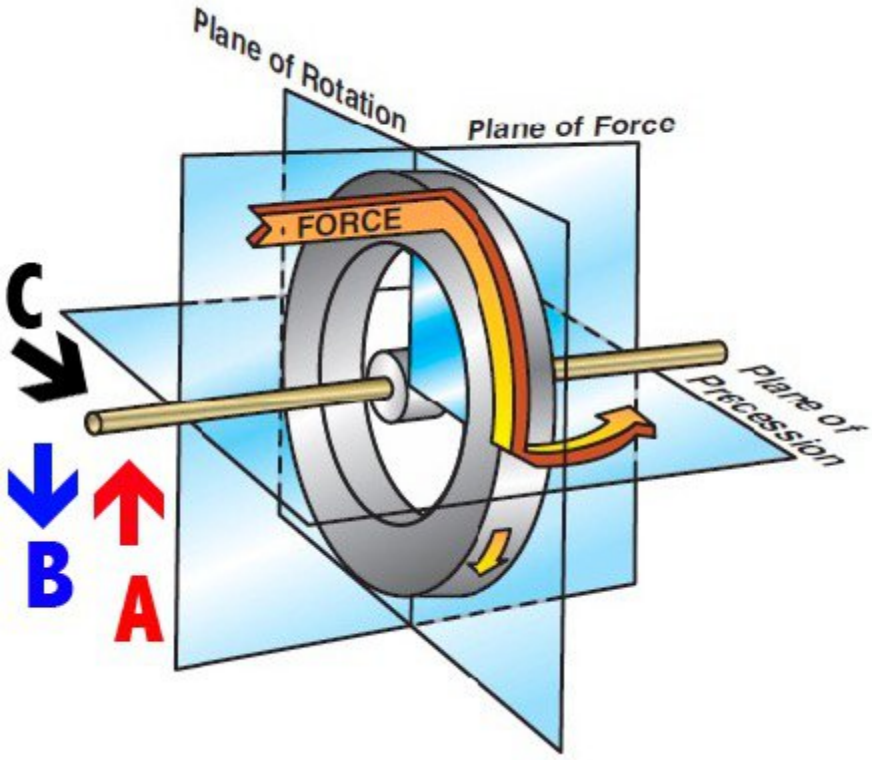
If choice c is selected set score to 1.

287. In the air/ground system using proximity sensors, a logic 0 would indicate:

- o (a) target far
- o (b) sensor fail
- • (c) target near

If choice c is selected set score to 1.

288. In the figure a spinning gyroscope is shown. In which direction must you push to achieve the illustrated reaction in the plane of procession of the gyroscope?



- (a) Up (Force A)

o (b) Down (Force B)
o (c) Right (Force C)

If choice a is selected set score to 1.

289. Which type of helicopters would use a compressor to power the air conditioning system?

- (a) Helicopters which have insufficient engine bleed

o (b) Helicopters which have powerful engines
o (c) Helicopters which have limited space

If choice a is selected set score to 1.

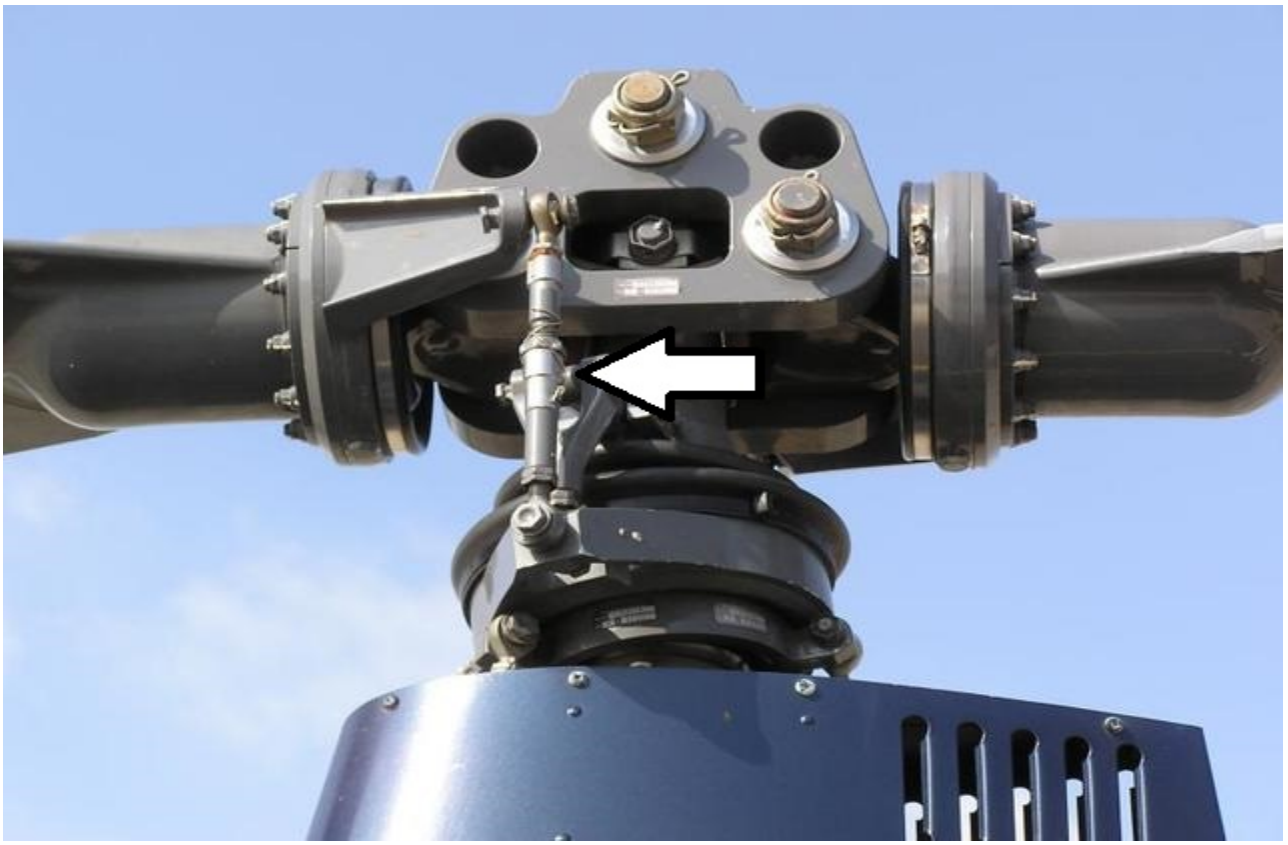
290. What is the purpose of the horizontal stabilizer installed on some helicopters?

- (a) keep the tail down in cruise flight

o (b) dampen out oscilations caused by the main rotor down wash
o (c) keep the tail up in cruise flight

If choice a is selected set score to 1.

291. To what part is pointed in the picture?



- o (a) Swash plate.
- o (b) Blade horn.
- • (c) Pitch link.

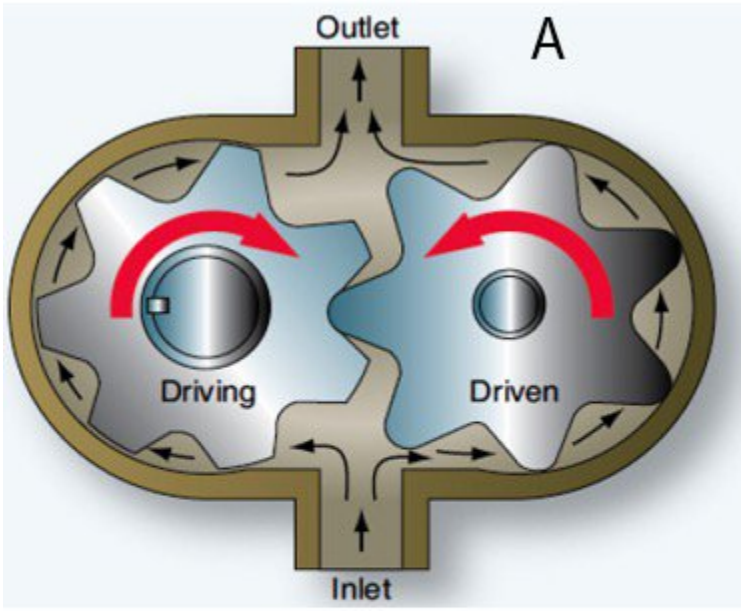
If choice c is selected set score to 1.

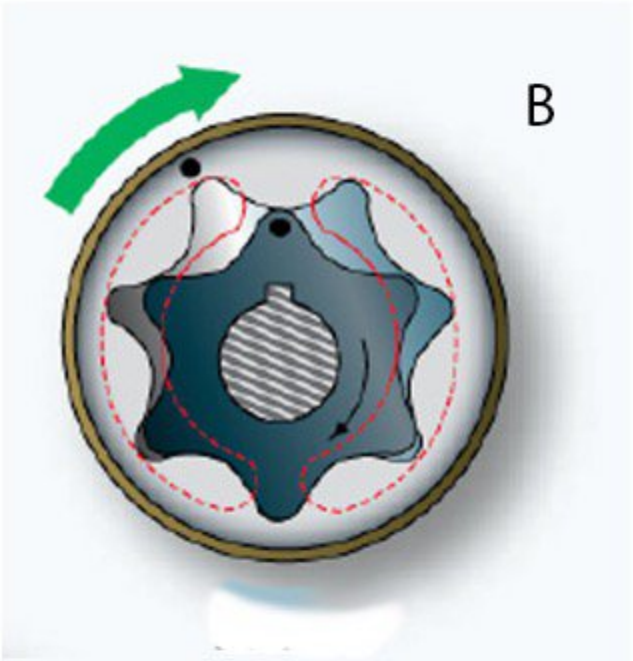
292. What is done to protect bleed air ducts from the effects of Skydrol hydraulic oil?

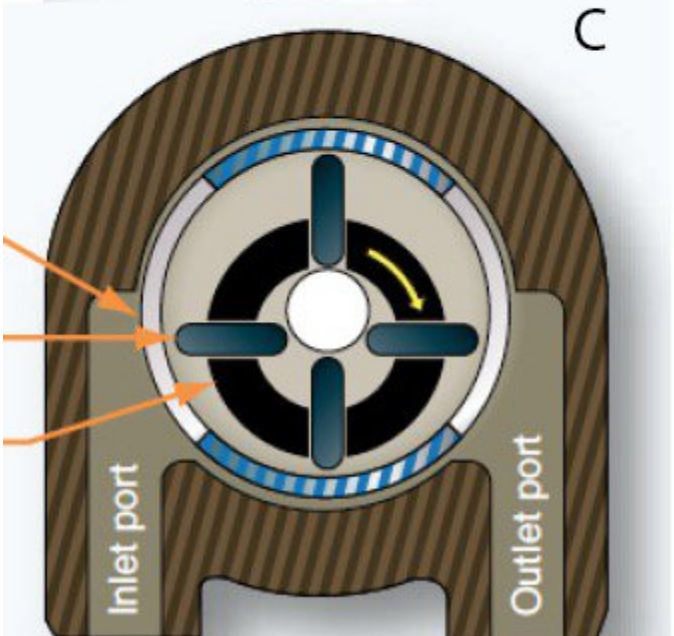
- o (a) They have a protective cover
- • (b) They are gold plated
- o (c) They are made of titanium

If choice b is selected set score to 1.

293. Which drawing in the figure shows the pump with the following properties: "Quiet in operation and supplies pressurized fluid in one direction irrespective of the direction of rotation."?


Outlet
A
Driving
Driven
Inlet


B


C
Inlet port
Outlet port

o (a) A

• (b) B

o (c) C

If choice b is selected set score to 1.

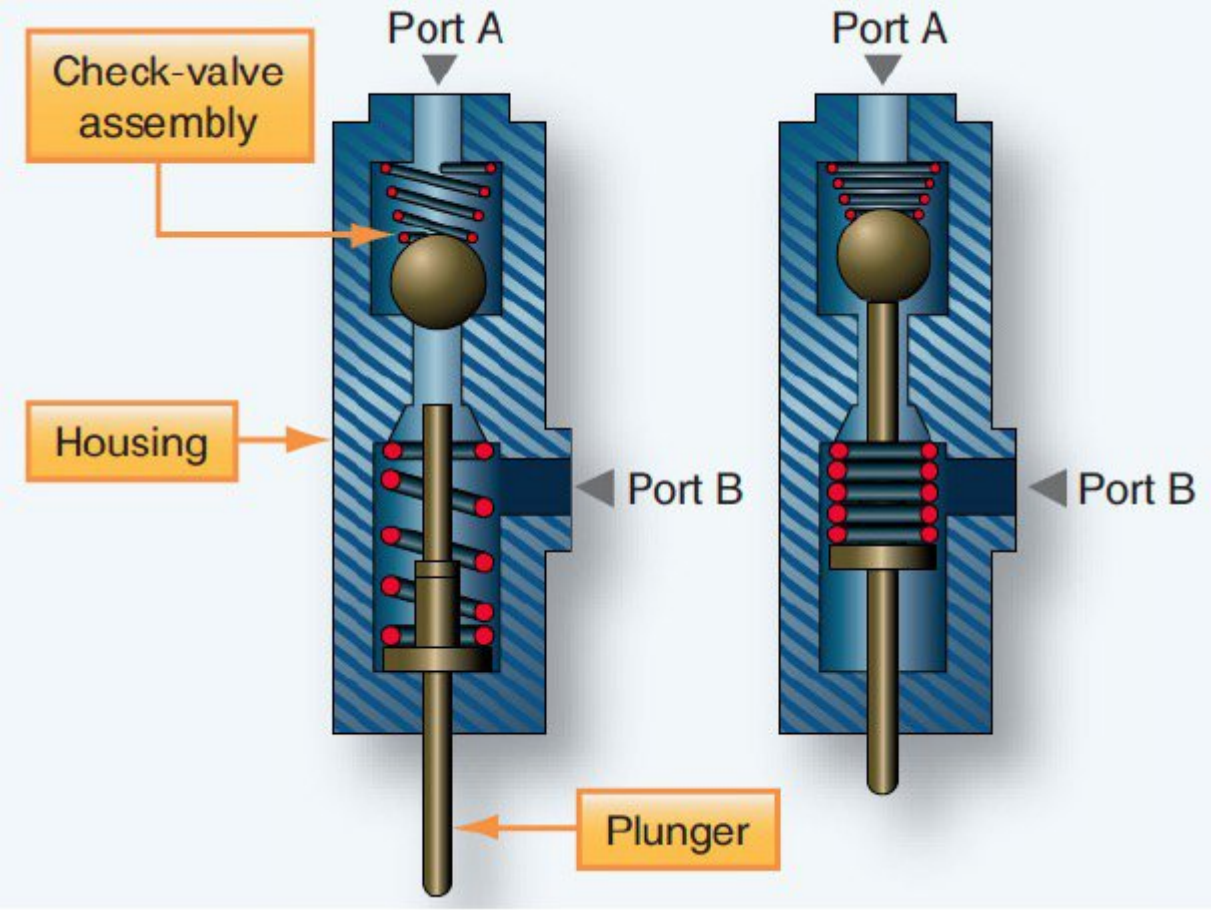
294. A lead-acid battery will be replaced by a NiCd battery. What must be done before the battery is installed?

• (a) The battery compartment must be neutralized and flushed with water

o (b) A battery temperature sensor must be installed
o (c) A battery vent system must be installed

If choice a is selected set score to 1.

295. What device is shown in the figure?



• (a) Mechanical sequence valve

o (b) Check valve
o (c) Hydraulicsecquence valve

If choice a is selected set score to 1.

296. Some helicopters have an immersion sensor located on the lower and upper fuselage. What is the function of these sensors?

- (a) To turn on the Emergency lights in case the helicopter rolls over

o (b) To turn on the Emergency lights in case the helicopter sinks
o (c) To turn on the Emergency distress beacon in case the helicopter sinks

If choice a is selected set score to 1.

297. The primary structure consists of:

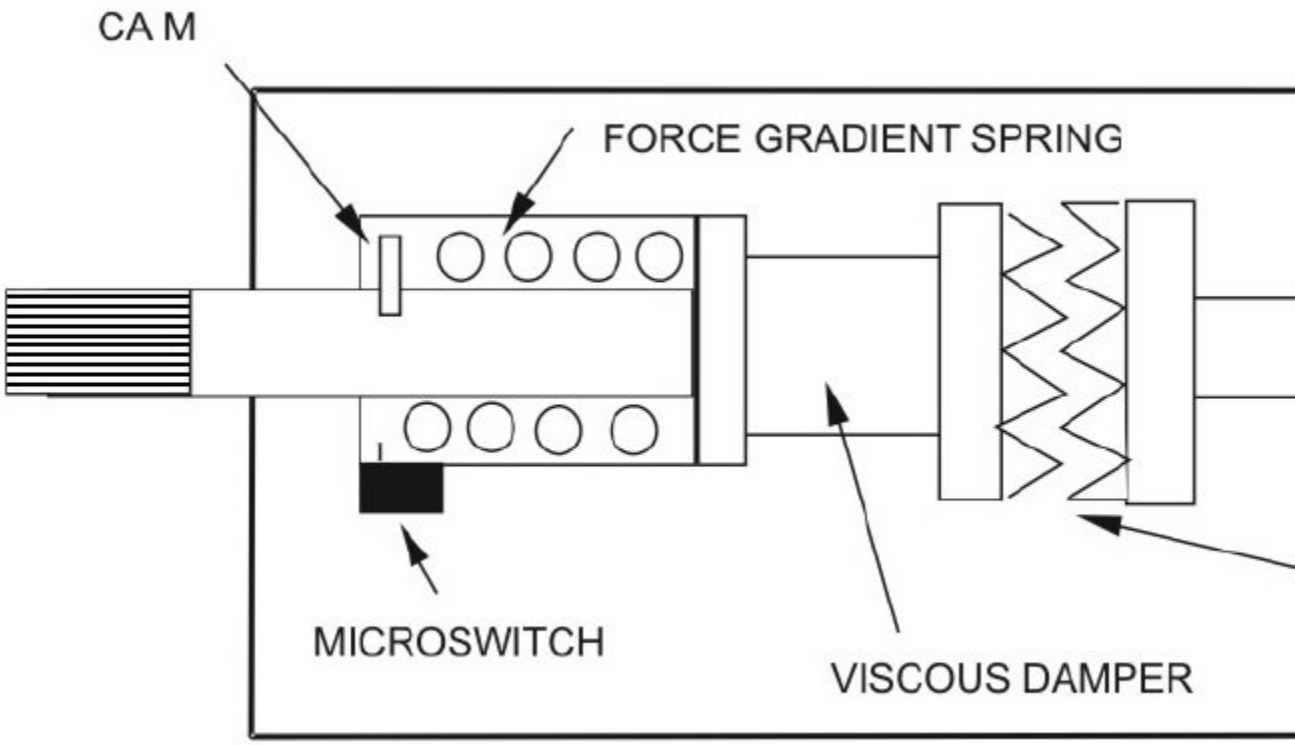
o (a) Lateral and diagonal elements

- (b) Longitudinal and vertical elements

o (c) Lateral and vertical elements

If choice b is selected set score to 1.

298. What is not a function of the force gradient spring?



o (a) Provide artificial feel.
o (b) Return the controls back to the neutral position.

- (c) Allow the magnetic clutch to be overriden.

If choice c is selected set score to 1.

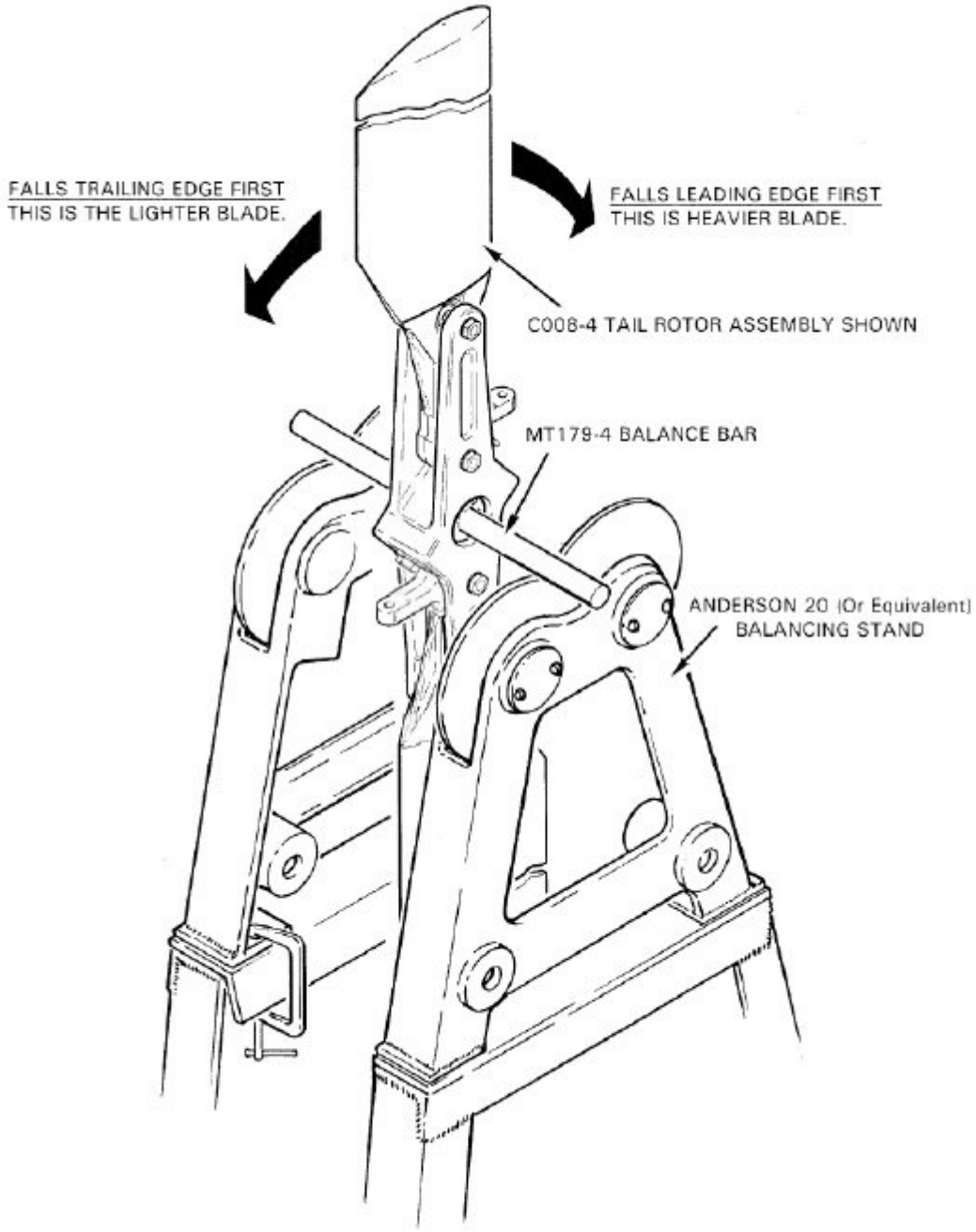
299. The system that determines the distance between the aircraft and the runway threshold is called:

o (a) VHF-navigation system.
o (b) ADF-system.

- (c) Marker Beacon system.

If choice c is selected set score to 1.

300. The device shown, is used for?



- (a) Tail rotor static chord balance.

o (b) Tail rotor axial balance.
o (c) Tail rotor dynamic balance.

If choice a is selected set score to 1.

301. Which of the following statements is correct?

- (a) Main rotor blades can have a negative twist to obtain a more even distribution of lift

- (b) Main rotor blade can have a positive twist to balance out blade loads
- (c) Main rotor blades can have a negative twist to make the blades usable at higher airspeeds

If choice a is selected set score to 1.

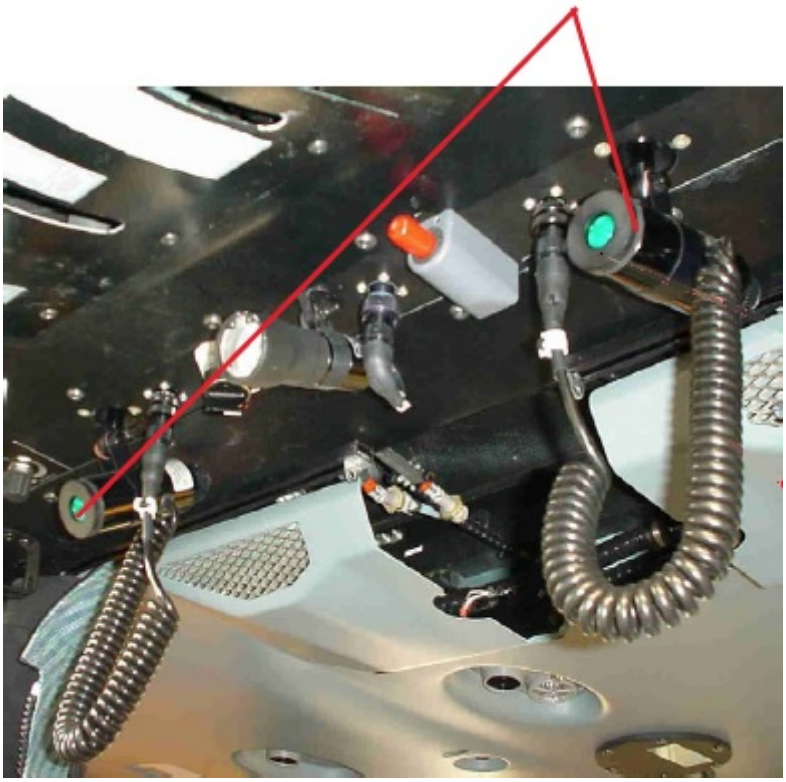
302. What is the advantage of using an internal exiter (or Permanent Magnet Generator) in an AC alternator.

- (a) More powerful alternator
- (b) No need for a generator control unit (GCU)

- (c) No need for brushes

If choice c is selected set score to 1.

303. On a flight deck spot light equiped with 2 switches and a rheostat, what are the function of the 2 switches?



- (a) One switch turns the light on and is then controllable by the rheostat, the other switch turns the light off

- (b) One switch turns the light on and is then controllable by the rheostat, the other switch turns the light on full bright

- (c) One switch turns the light on, the other turns it off

If choice b is selected set score to 1.

304. ARINC 653 is the industry standard for:

o (a) All aircraft IMA
o (b) Helicopter integrated modular avionics (IMA)

• (c) Future aircraft production IMA

If choice c is selected set score to 1.

305. The bus which powers components required for continued safe operation of the aircraft is called?

• (a) Emergency bus

o (b) Main bus
o (c) Essential bus

If choice a is selected set score to 1.

306. Probe heat system with a probe heat computer will operate automatically when?

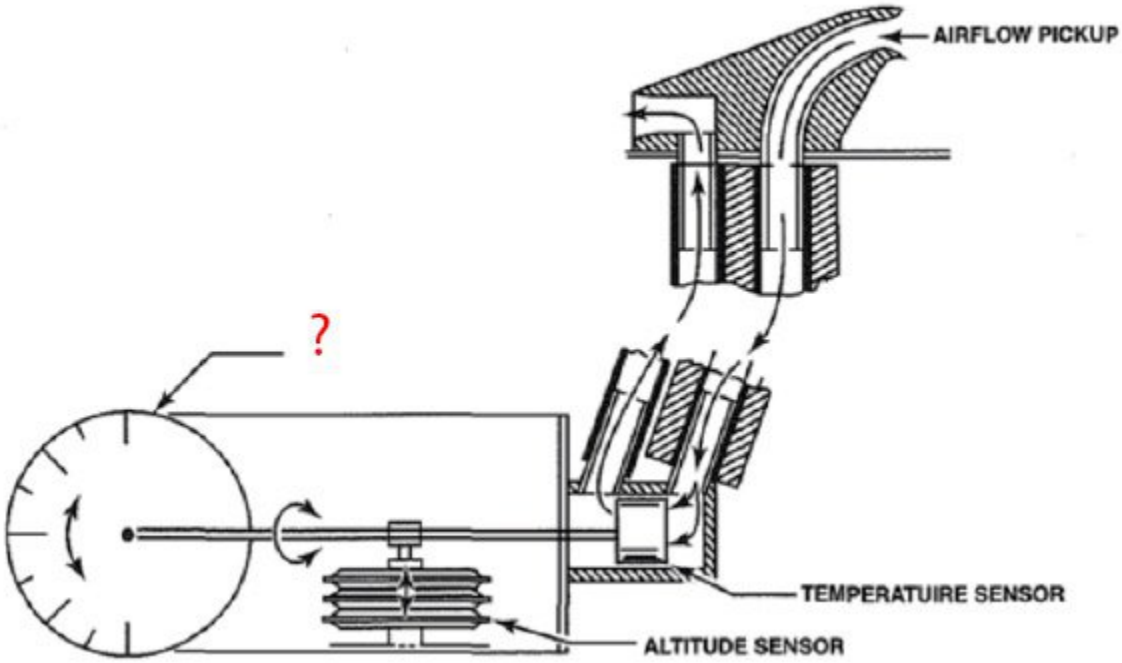
o (a) The electrical power is turned on

• (b) The aircraft takes off

o (c) The engines are off.

If choice b is selected set score to 1.

307. What air data instrument is represented in the figure?



- (a) True air speed indicator

o (b) Vertical speed indicator
o (c) Air speed indicator

If choice a is selected set score to 1.

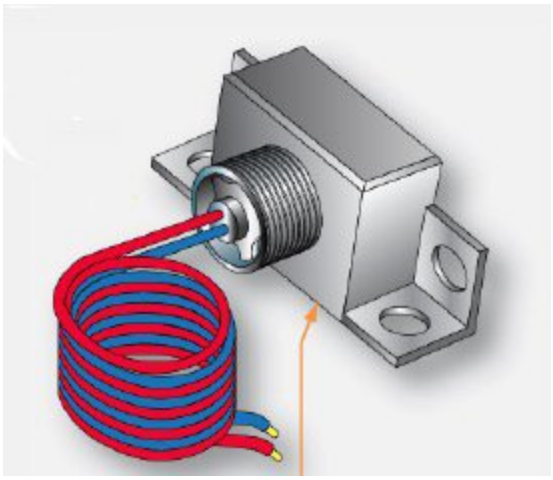
308. Which of the following is NOT a function of the emergency hydraulic system powered by an electric pump?

o (a) Pressurizing the parking brake
o (b) Pressurizing the main and tail rotor flight control actuators for testing on ground

- (c) Retracting the landing gear.

If choice c is selected set score to 1.

309. What is shown in the figure?



- o (a) A weight on wheel microswitch
- o (b) A squat switch
- • (c) A proximity sensor

If choice c is selected set score to 1.

310. The Flight Director:

- o (a) provides thrust commands for the engine trims.
- • (b) provides computed steering commands to the command bars of the ADI and/or to an autopilot system.
- o (c) provides data for the air data computers.

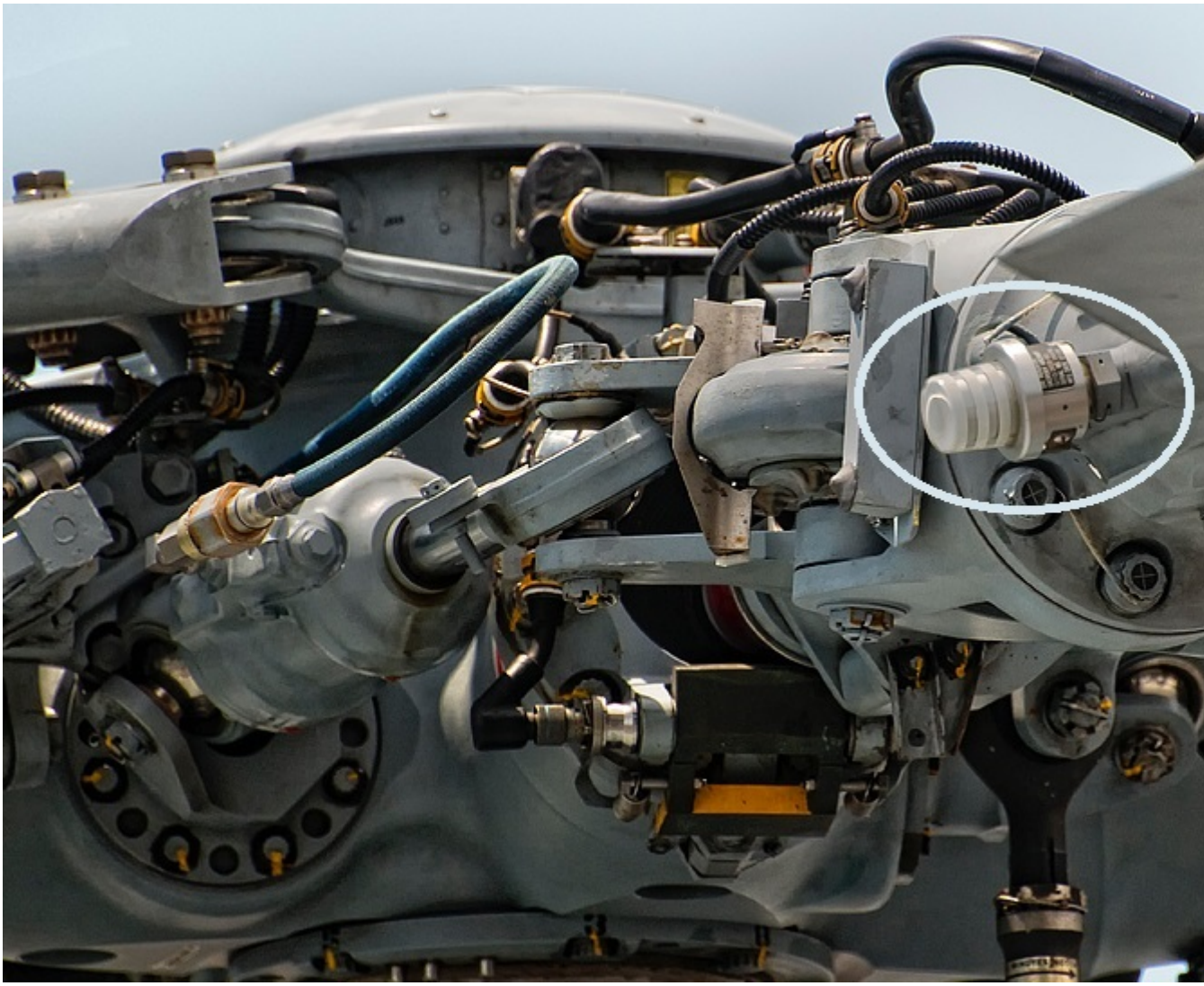
If choice b is selected set score to 1.

311. What are normal units for fuel?

- o (a) Kilograms or Tonnes.
- o (b) Liters or Gallons
- • (c) Kilograms or Pounds

If choice c is selected set score to 1.

312. What is the indicated component on the blade?



- (a) An indicator for the blade crack detection system.

o (b) An indicator for the blade damper fluid level.
o (c) A blade vibration sensor.

If choice a is selected set score to 1.

313. In the zonal system, 700 would be the number for:

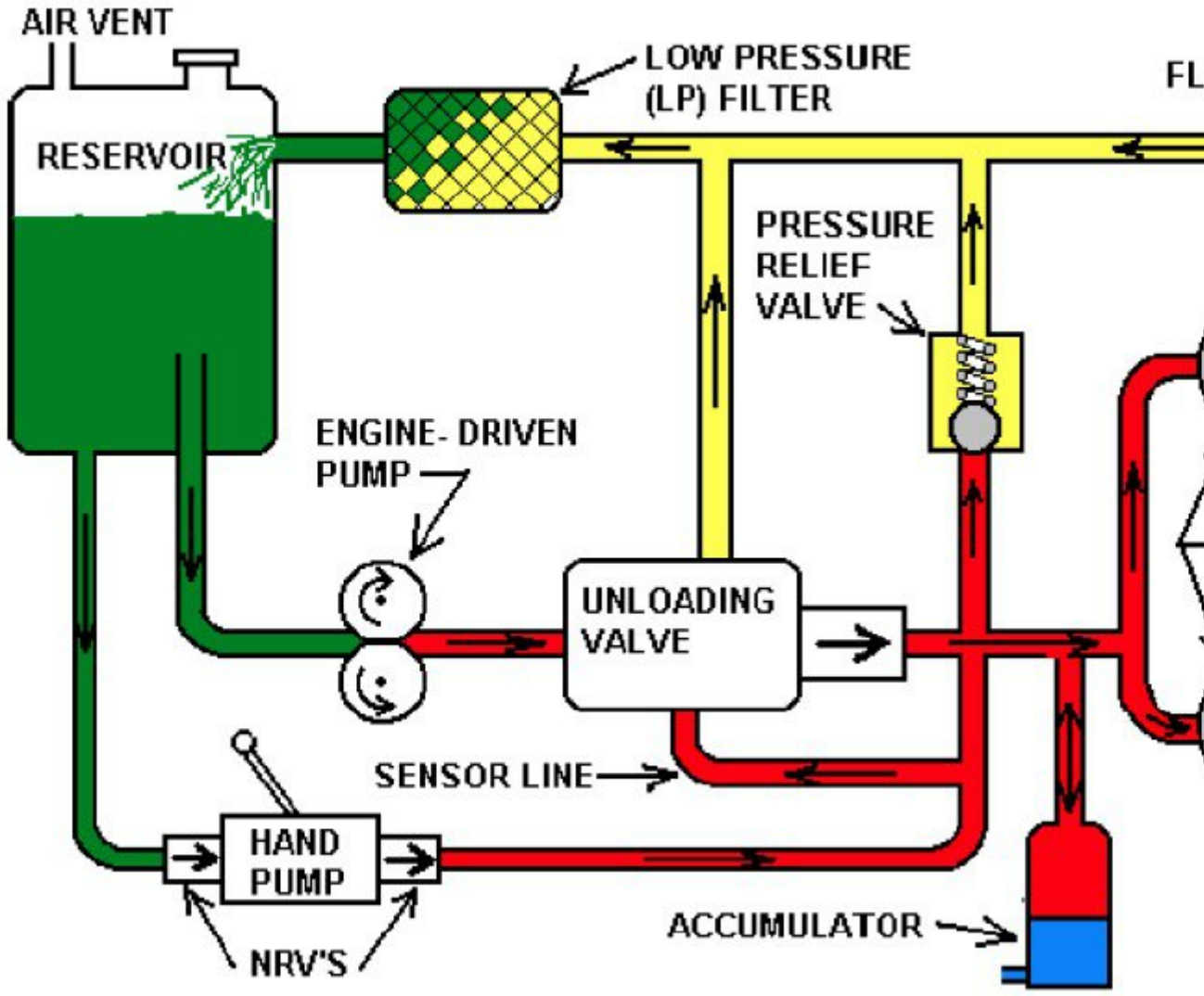
o (a) Doors

- (b) Landing gear

o (c) Fuselage

If choice b is selected set score to 1.

314. In the figure, what is the function of the unloading valve?



- (a) Diverts the oil from the pump back to the reservoir allowing the pump to run more freely when hydraulic pressure is not needed by the system

o (b) Overrides the engine driven pump when the hand pump is used to supply hydraulic pressure to the system
o (c) Overrides the hand pump when the engine driven pump is supplying hydraulic pressure to the system

If choice a is selected set score to 1.

315. On which electronic flight instrument display can weather radar information be selected?

o (a) Electronic attitude director indicator (EADI)

- (b) Electronic horizontal sutuation indicator (EHSI)

- o (c) Vehicle monitoring display (VMD)

If choice b is selected set score to 1.

316. In a modern aircraft, which of the following insturments is NOT connected to an inertial reference unit (IRU)?

- (a) Standby Horizon

- o (b) Attitude director indicator
- o (c) Horizontal situation indicator

If choice a is selected set score to 1.

317. A HELIONIX aircraft management Computer consists of:

- (a) 2 identical channels with 3 major elements

- o (b) 2 identical channels with 4 major elements
- o (c) 3 independent channels with 2 major elements

If choice a is selected set score to 1.

318. What is the hydraulic oil temperature limit that most manufacturers employ?

- o (a) 50 degrees Celsius

- (b) 100 degrees Celsius

- o (c) 250 degrees Celsius

If choice b is selected set score to 1.

319. Concerning fire extinguishing, what does a red disk on the side of the fuselage indicate?

- o (a) Indicates that the bottle nitrogen pressure is low and needs to be serviced

- (b) When the disk is missing, it indicates that the bottle has had a thermal discharge

- o (c) When the disk is missing, it Indicates that the firebottle has been fired

If choice b is selected set score to 1.

320. The Cockpit Voice Recorder:

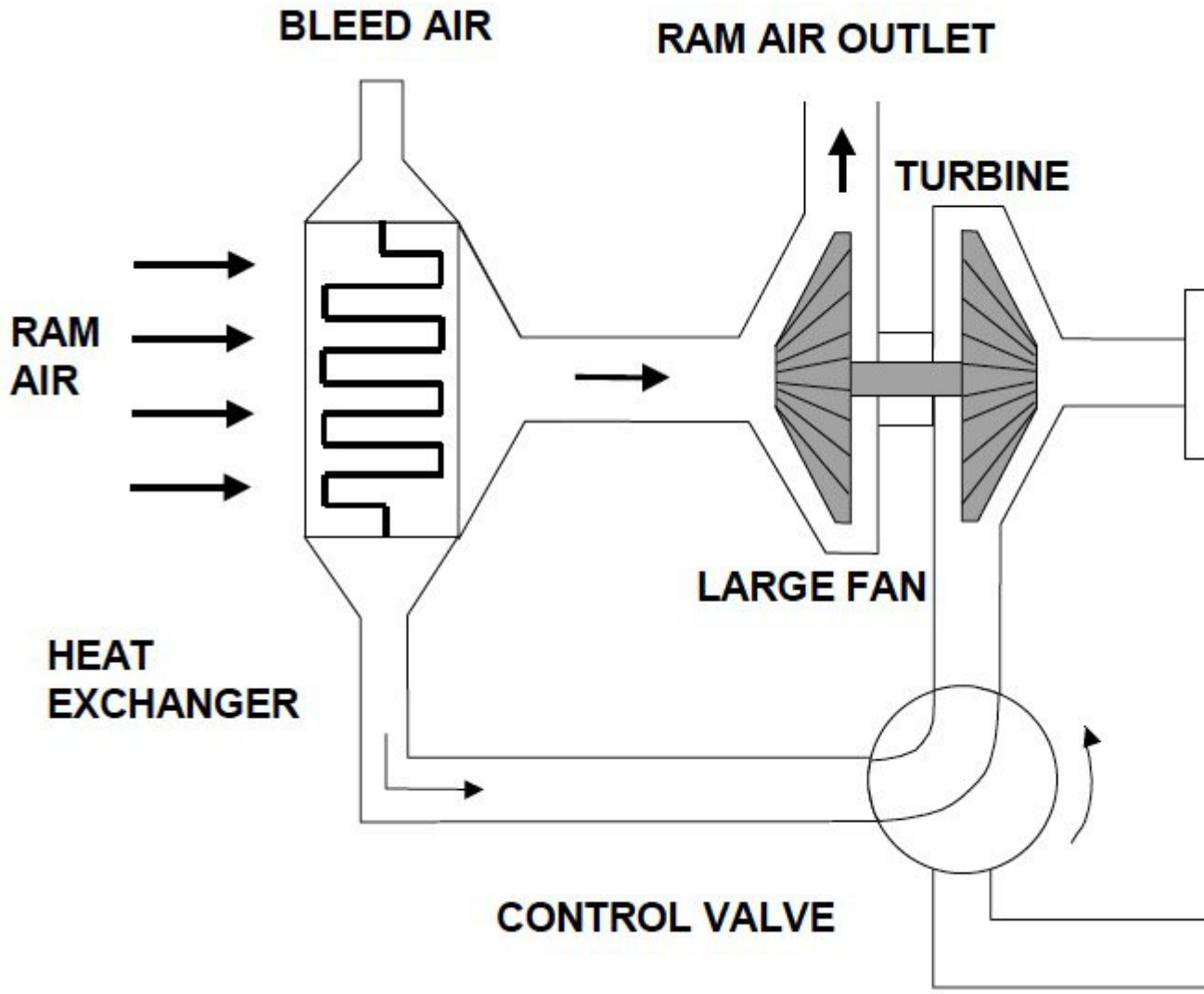
- o (a) contains also all engine and systems parameters.

- (b) allows a minimum of 30 minutes of recording.

- o (c) record all voice information of the cabin crew and the passengers.

If choice b is selected set score to 1.

321. What type of airconditioning system is shown in the figure?



- o (a) Turbo compressoor system
- o (b) Vapor cycle system

- • (c) Turbofan system

If choice c is selected set score to 1.

322. Which of the following would NOT be part of the flight compartment layout?

- o (a) Fire extinguisher
- o (b) Sun visors

- • (c) Personal service units

If choice c is selected set score to 1.

323. To provide the correct amount of rudder deflection to cancel the Dutch Roll is also called;

- o (a) glide slope
- o (b) pitch trim
- • (c) yaw damping

If choice c is selected set score to 1.

324. When will a hydraulic accumulator pressure indicator show the system pressure?

- • (a) When the hydraulic pumps are running
- o (b) When the hydraulic pumps are off
- o (c) When the accumulator is correctly charged with nitrogen

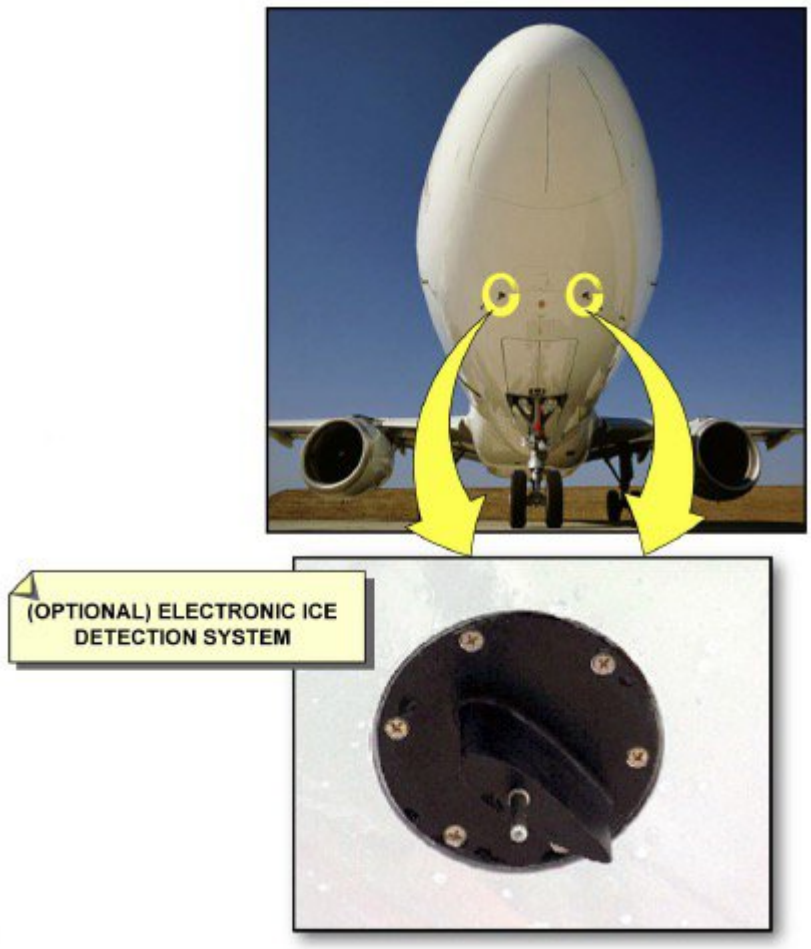
If choice a is selected set score to 1.

325. Gyroscopic precession is the resultant action on a spinning object when a force is applied. When will this action occur?

- o (a) 90 degrees earlier than the initial force
- • (b) 90 degrees later than the initial force
- o (c) 180 degrees later than the initial force

If choice b is selected set score to 1.

326. The figure shows an electronic ice detector. What principle does it use to trigger an ice warning?



- o (a) Change in temperature of the protruding probe
- o (b) Change in electrical resistance of the protruding probe
- • (c) Change in vibration frequency of the protruding probe

If choice c is selected set score to 1.

327. What is the main difference between higher harmonic control (HHC) and individual blade control (IBC)?

- o (a) HHC controls all blades at the same time while IBC controls the blades individually.
- • (b) HHC uses actuators on the non-rotation part of the rotor system while IBC inputs on the rotating part of the main rotor.
- o (c) HHC is a passive vibration reduction system while IBC is an active system.

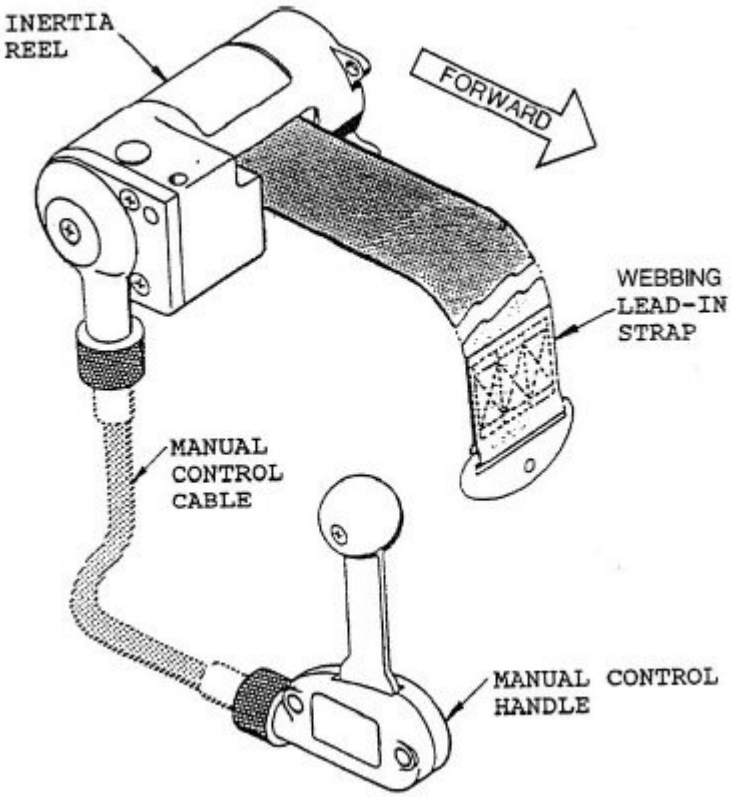
If choice b is selected set score to 1.

328. What is a "prime pump"

- o (a) A pump used to evacuate the air from the fuel lines (prime the fuel system)
- • (b) A fuel pump used for engine start only
- o (c) The pumps that supplies fuel from the tank to the engine fuel pump

If choice b is selected set score to 1.

329. What is the function of the manual control handle of the inertia reel shown in the figure?



- o (a) To adjust the sensitivity of the inertia reel.
- o (b) To retract the lead-in strap
- • (c) To lock/unlock the reel

If choice c is selected set score to 1.

330. What is the purpose of the securing device shown in the figure?

o (a) To attach the passenger seatbelts to

• (b) To secure the cargo

o (c) To secure the passenger seats

If choice b is selected set score to 1.

331. When would bleed air from the high stage of the compressor be used to supply the pneumatic system

• (a) When the supply from the low stage is not sufficient to operate the pneumatics

o (b) When the aircraft is at cruise altitude
o (c) When the engine is not at full power

If choice a is selected set score to 1.

332. A tail drive shaft fails while the rotors are turning.

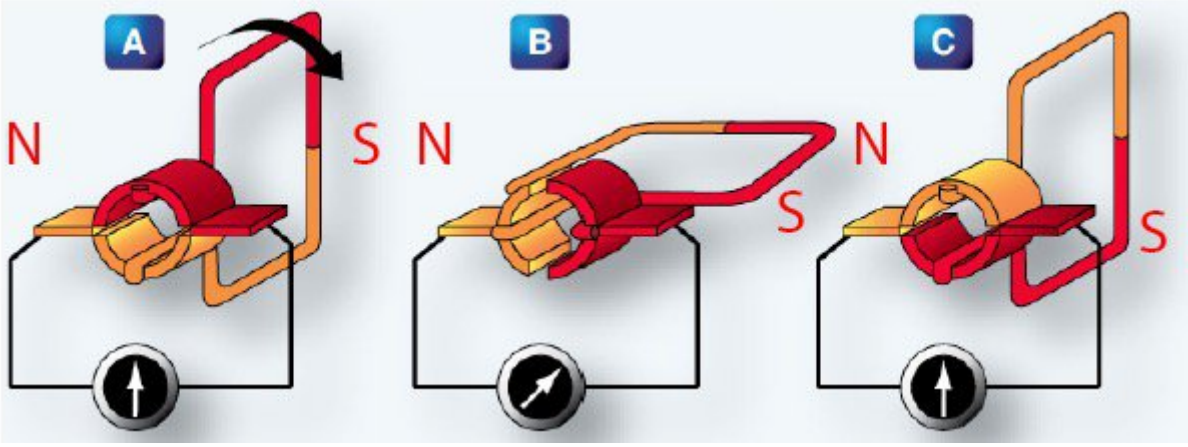
What prevents the shaft from causing more damage to the structure?

o (a) Dampers.
o (b) Flexible couplings.

• (c) Anti- flail device

If choice c is selected set score to 1.

333. In which of the diagrams in the figure will the induced voltage be at maximum?



o (a) A

- (b) B

o (c) C

If choice b is selected set score to 1.

334. What type of construction is show in the figure?

- (a) Monocoque construction

- o (b) Semi-Monocoque construction
- o (c) Welded steel fuselage construction

If choice a is selected set score to 1.

335. What is commonly used in the engine mounting system to allow for misalignment of the main gear box and engine?

- o (a) Elastomeric couplings.

- • (b) Gimbal joint

- o (c) Adjustable engine supports.

If choice b is selected set score to 1.

336. The ACARS system uses which conmunication systems to transmit and receive?

- o (a) SATCOM and SELCAL
- o (b) VHF and HF

- • (c) VHF and SATCOM

If choice c is selected set score to 1.

337. How is the build-up of pressure in the fuel tanks prevented during refueling?

- o (a) By overpressure valves in the fuel system

- • (b) By ventilating the fuel tank

- o (c) The fuel tanks cannot pressurize because the fuel tank is open to atmosphere via the open fuel cap.

If choice b is selected set score to 1.

338. In a systron donner sensing loop, what causes the alarm to trigger due to a fire?

- o (a) Heating of the sensor causes the ceramic core to become conductive, closing the circuit and triggering the alarm.
- o (b) Heating of the helium gas makes it expand and activate a switch when the pressure builds up high enough

- • (c) Heating of the center titanium wire causes hydrogen to be released, building up the pressure inside the stainless steel tube until it is sufficient to activate a switch

If choice c is selected set score to 1.

339. In a fuel measuring system using multiple probes in a tank, how are the individual signals from the probes processed?

- o (a) They are added together by the fuel level indicator
- o (b) They are averaged by the fuel control unit
- • (c) They are added together by the fuel control unit

If choice c is selected set score to 1.

340. What are the possible methods used to up-lock the helicopter landing gear?

- • (a) Mechanical Up lock hook, Internal uplock mechanism, hydraulic lock
- o (b) Mechanical uplock hook, overcentering device, internal lock
- o (c) Hydraulic lock, external uplock mechanism, overcentering device

If choice a is selected set score to 1.

341. What is the most likely cause of an overpressure warning in the engine pneumatic system?

- o (a) Failure of the pressure regulating valve
- • (b) Failure of the high pressure shut off valve
- o (c) Failure of the low pressure shut off valve

If choice b is selected set score to 1.

342. To set the parking brake on a helicopter with unpowered brake system, you must first:

- o (a) Pull the parking brake handle to set the brakes
- o (b) Ensure there is hydraulic pressure in the main hydraulic system
- • (c) Depress the brake pedals

If choice c is selected set score to 1.

343. What is the biggest negative aspect of an auto transformer?

- o (a) They create a large magnetic field which can interfere with sensitive systems
- • (b) In case of an insulation failure, the primary voltage goes to the secondary coil
- o (c) They are big and heavy

If choice b is selected set score to 1.

344. What is the main reason of having drains in the aircraft structure?

- o (a) The humidity caused by the fluid can influence the air-conditioning system.

- (b) To avoid the extra weight. This can overload the structure.

- (c) Collecting fluids without draining could cause fire, corrosion or causing short cuts in the electrical system.

If choice c is selected set score to 1.

345. The engine bay firewall of a helicopter is made up of:

- (a) A front, rear and lateral firewall.
- (b) A front, top and bottom firewall.

- (c) A front, rear and longitudinal firewall.

If choice c is selected set score to 1.

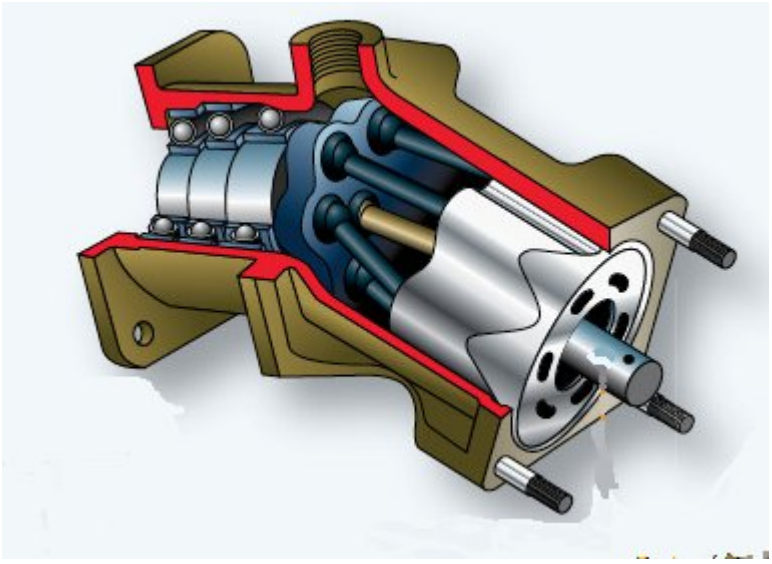
346. Clamshell type doors are generally used to give access to?

- (a) Cargo compartment

- (b) Passenger compartment
- (c) Cockpit

If choice a is selected set score to 1.

347. Which type of actuator operates on the principle shown in the figure?



- (a) double acting balanced actuator

- (b) bent-axis rotary actuator

- (c) Vane type motor

If choice b is selected set score to 1.

348. In which type of generation system would you find a commutator?

- o (a) DC alternator
- o (b) AC generator
- • (c) DC generator

If choice c is selected set score to 1.

349. In the figure, what is the marked item?

- o (a) Main rotor blade track adjustment
- • (b) Passive vibration reduction device.

o (c) Active vibration reduction device.

If choice b is selected set score to 1.

350. How can the rotor brake be used to prevent "Blade sailing"?

- (a) By keeping the rotor brake engaged during start up to pre-load the gearbox

o (b) By applying the rotor brake immediately after engine shut down
o (c) By keeping the rotor brake engaged to prevent it from spinning due to the wind

If choice a is selected set score to 1.

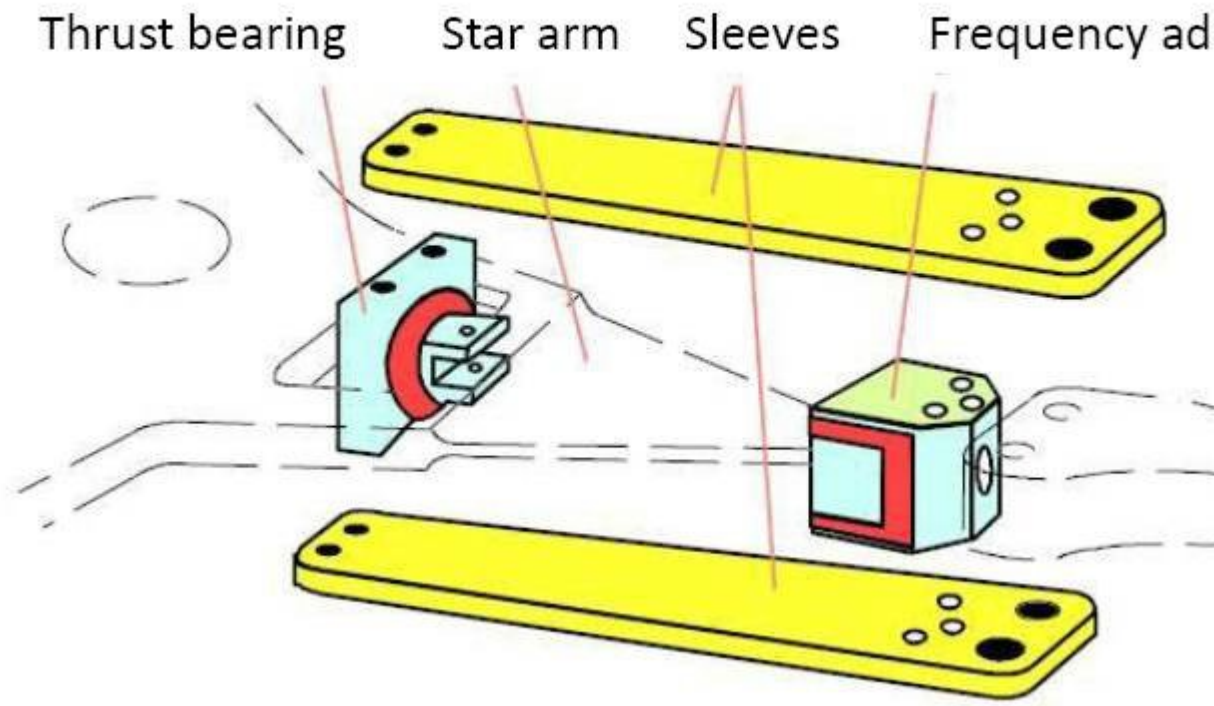
351. When the pilot moves the cyclic stick away from the neurtral position, what happens to the main rotor?

o (a) The swashplte slides down and decreases the pitch angle of the blades simultaniously causing a decrease in lift
o (b) The swashplate slides up vertically and changes the pitch angle of all blades simultaniously causing an increase in lift

- (c) The swashplate tilts and changes the pitch angle of each blade individually causing a change of direction of the helicopter

If choice c is selected set score to 1.

352. Which movement is made possible by the elastomeric frequency adapters in a hybrid rotor system?

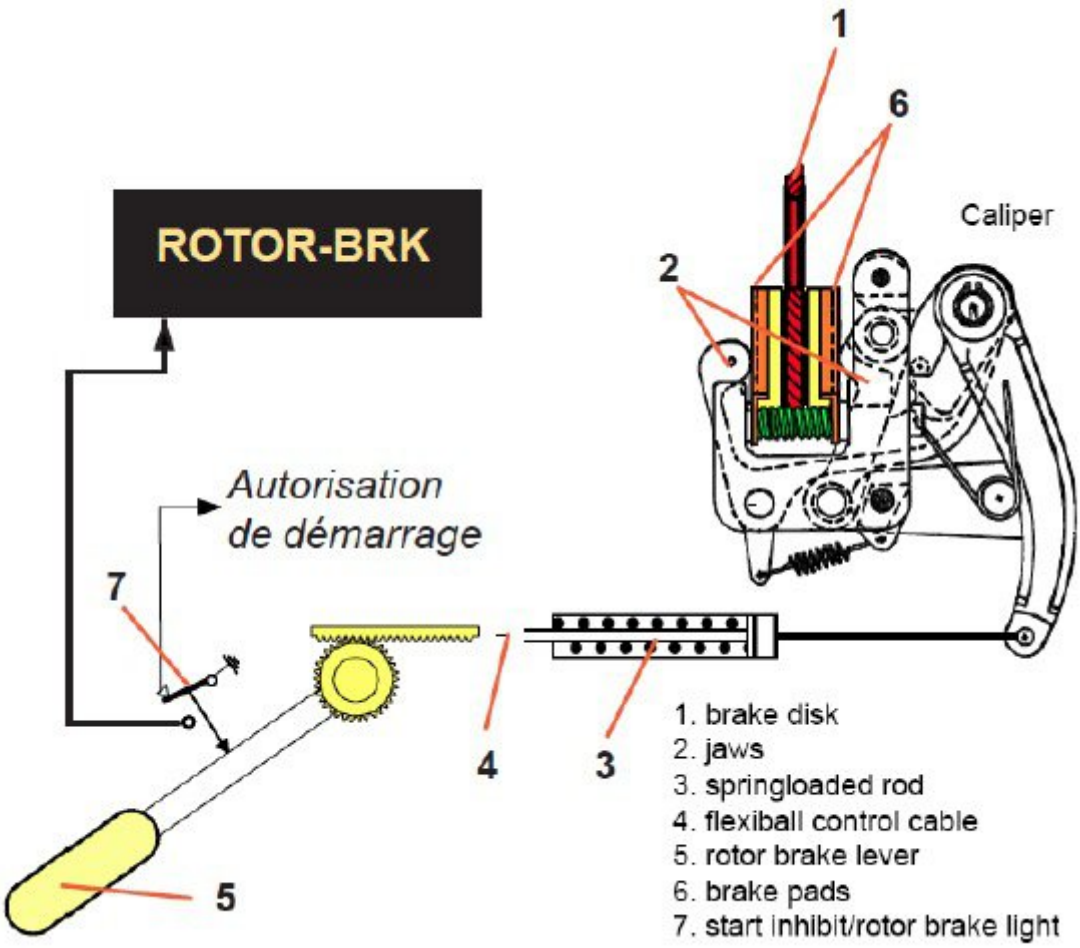


- (a) Lead-lag

o (b) Flapping
o (c) Feathering

If choice a is selected set score to 1.

353. In the figure, what is the purpose of the spring rod (3)?

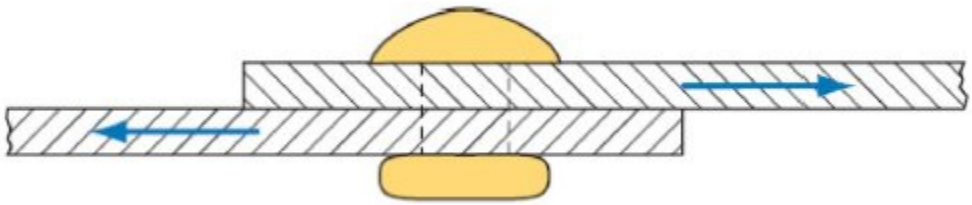


o (a) Adjusts for thermal expension of the control cable
o (b) Maintains the rotor brake ON in case of control cable failure.

• (c) Adjusts for rotor brakepad wear.

If choice c is selected set score to 1.

354. What kind of stress is the indicated rivet subject to?



o (a) Bending

- (b) Tension

- (c) Shear

If choice c is selected set score to 1.

355. What kind of stress is a rivetsubjected to during installation?

- (a) Shear

- (b) Compression

- (c) Hoop

If choice b is selected set score to 1.

356. The flight data from HUMS is analysed by?

- (a) By anybody using the Multifunctional Digital Acquisition Unit (MFDAU).

- (b) By the operator in a ground station.

- (c) By the helicopter constructor.

If choice b is selected set score to 1.

357. What are the functions of a three-unit regulator?

- (a) voltage regulation, over-voltage protection, reverse current protection
- (b) differential voltage protection, over-voltage protection, parallel generator operation

- (c) voltage regulation, current limiter, reverse current protection

If choice c is selected set score to 1.

358. A low pressure warning light in the cockpit is operated by a:

- (a) pressure transmitter

- (b) pressure switch

- (c) pressure sensor

If choice b is selected set score to 1.

359. An aircraft has 2 engine driven generators which both power the entire electical system. What type of bus system would be used?

- (a) Split bus system

- (b) Parallel bus system

o (c) Split-parallel bus system

If choice b is selected set score to 1.

If assessment score is 0% to 100% Feedback