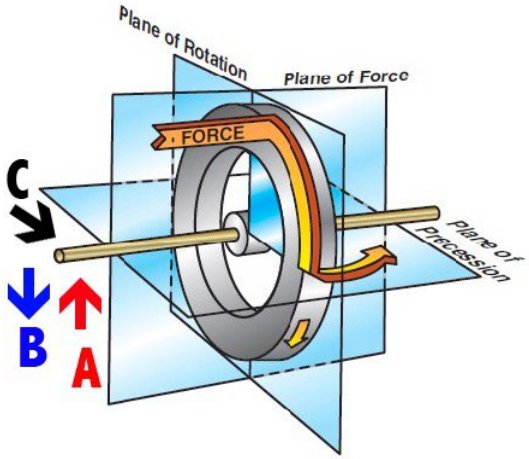
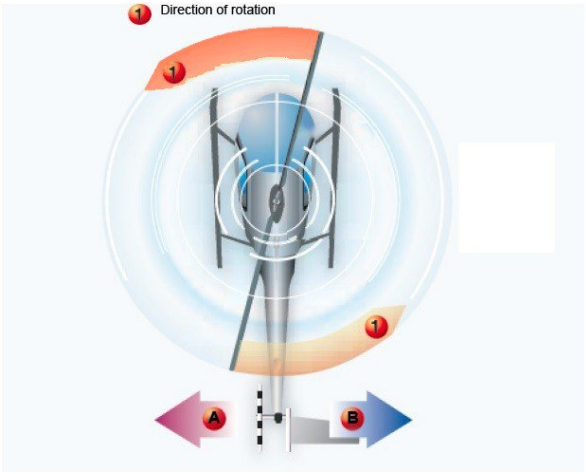
# Question block created by wizard

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

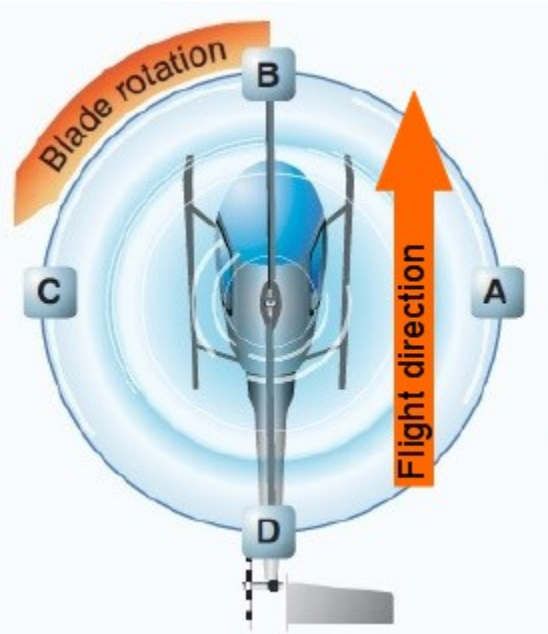
**2.** In the figure a spinning gyroscope is shown. In which direction must you push to achieve the illustrated reaction in the plane of procession of the gyroscope?



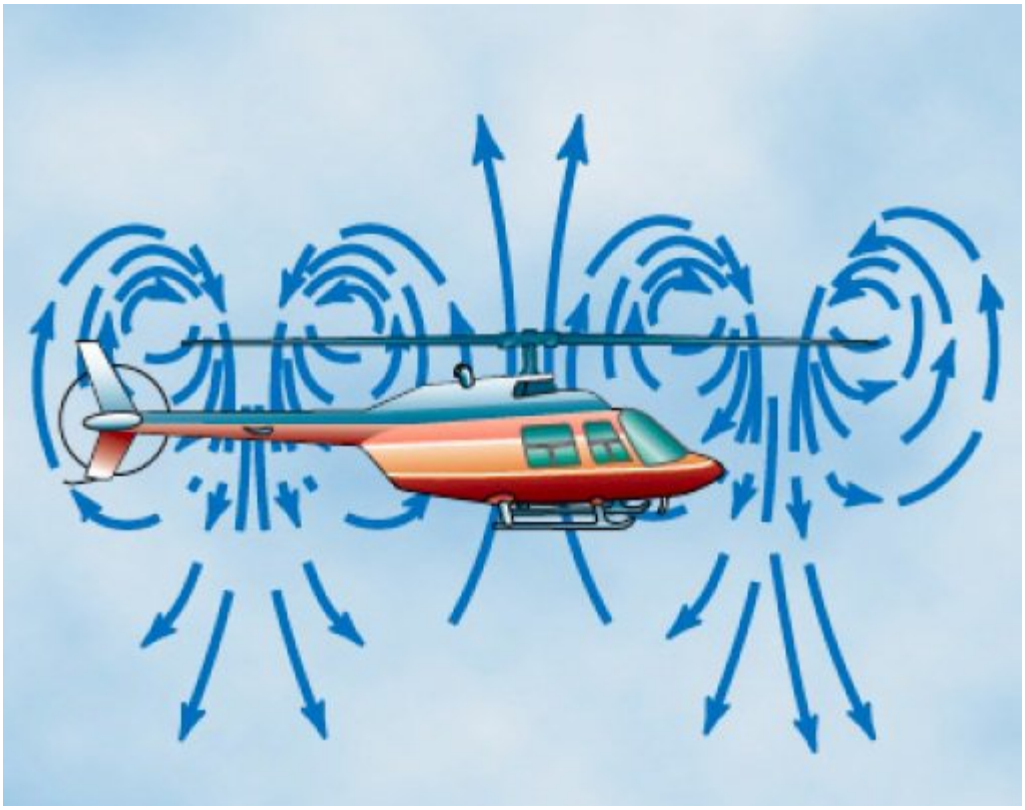

**3.** On a helictopter in a hover flight as seen in the figure, with the main rotor rotating counter-clockwise, the tail rotor thrust will react:



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




**5.** Which condition is illustated?

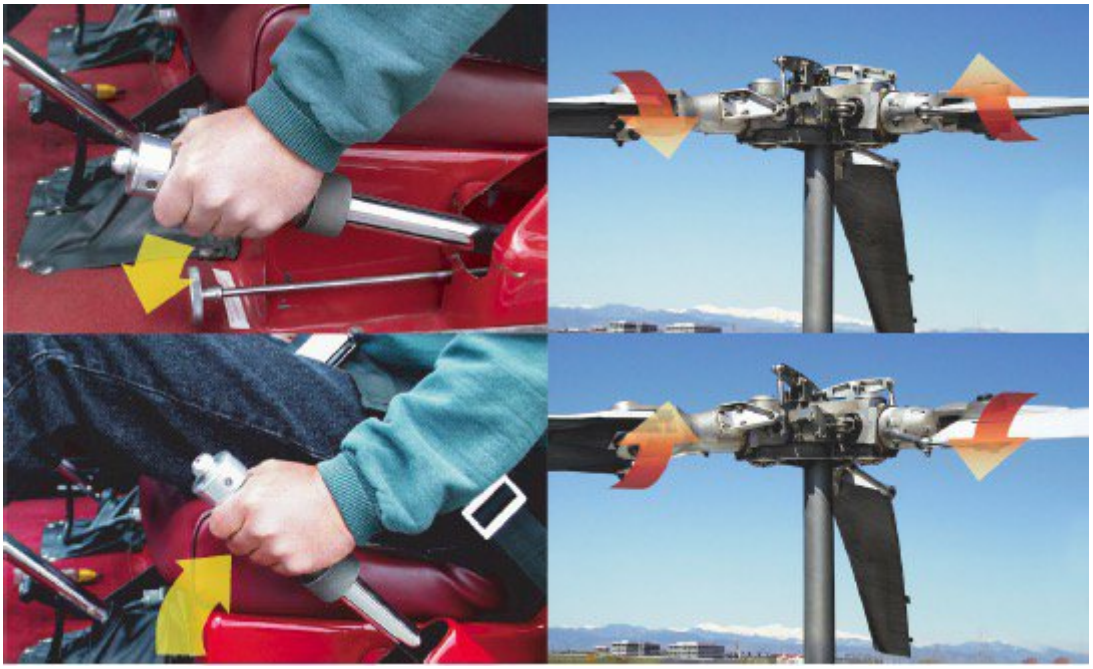


**6.** What is the pilots first reaction when the engine fails?

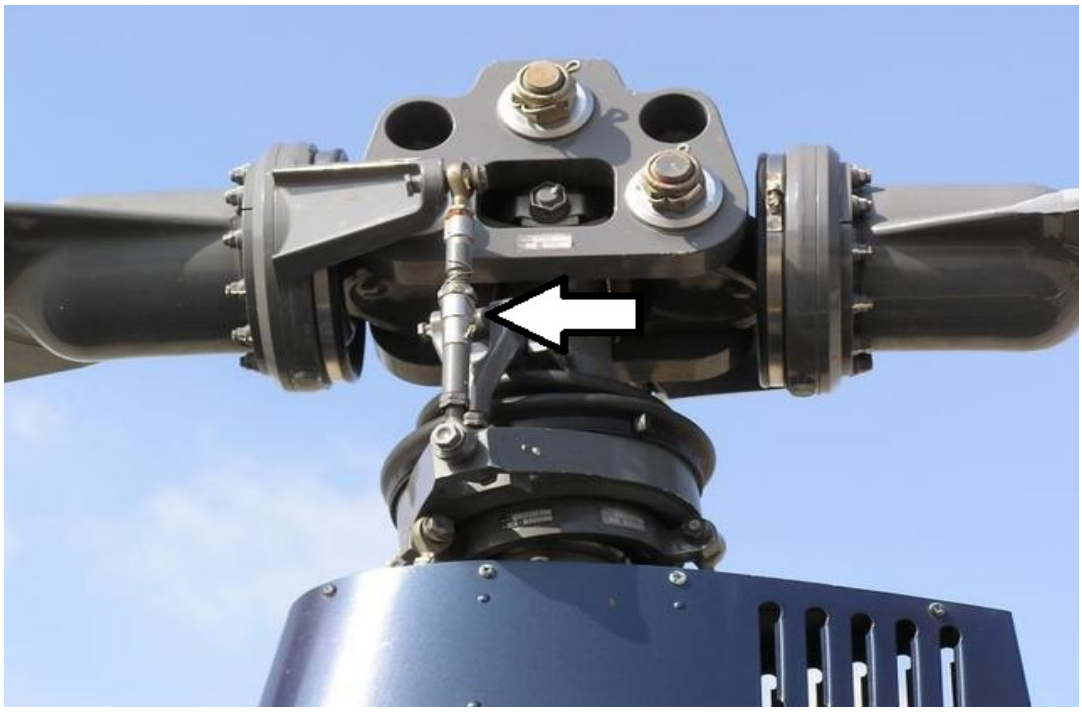
**7.** A helicopter hovering in ground effect will have?

**8.** Cyclic control inputs are sent to the main rotor:

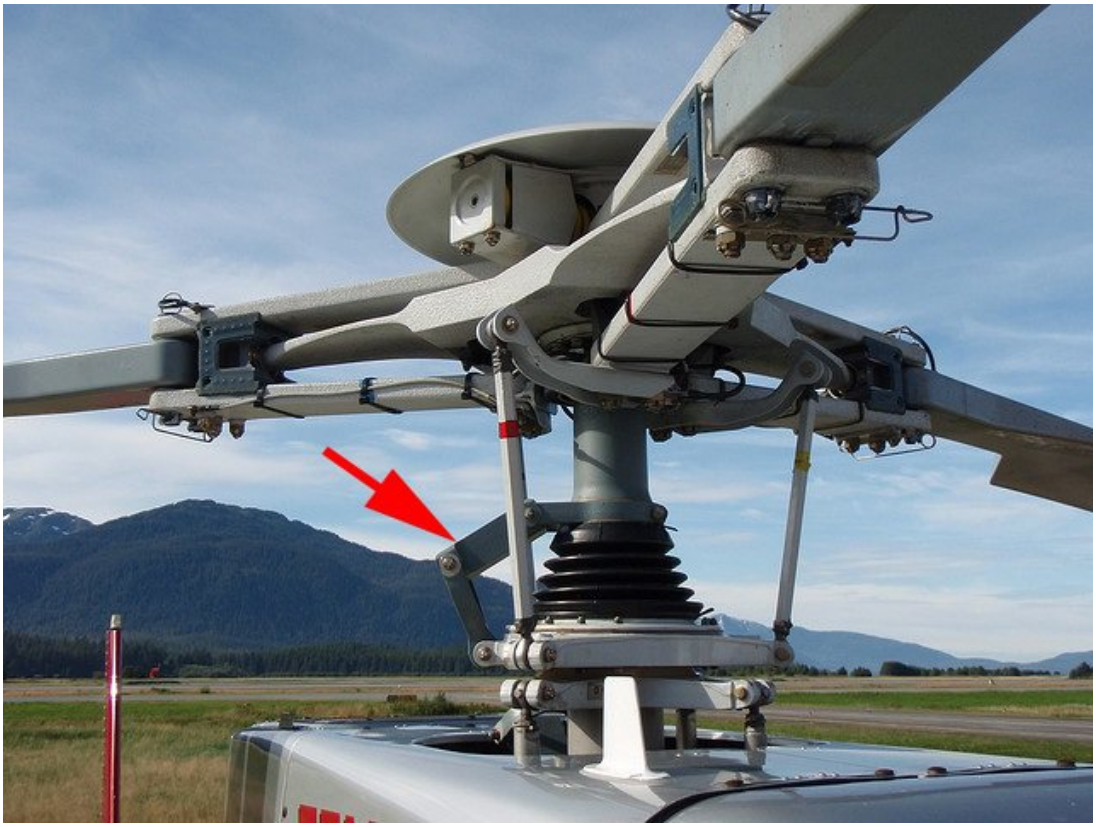
**9.** Which flight control system is illustrated in the figure?



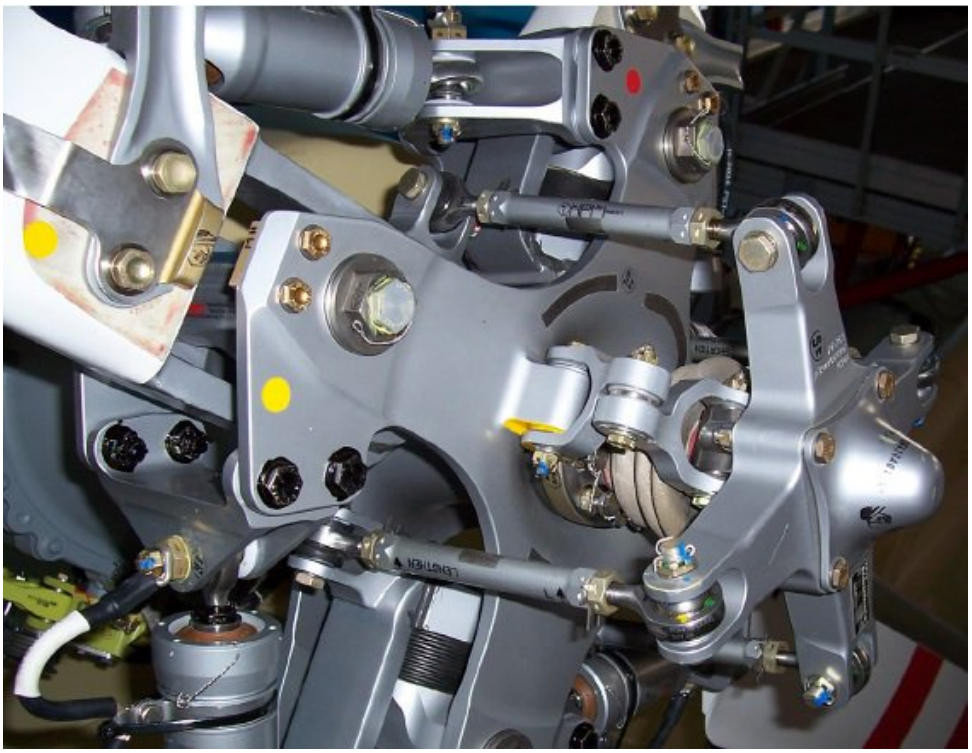
**10.** To what part is pointed in the picture?



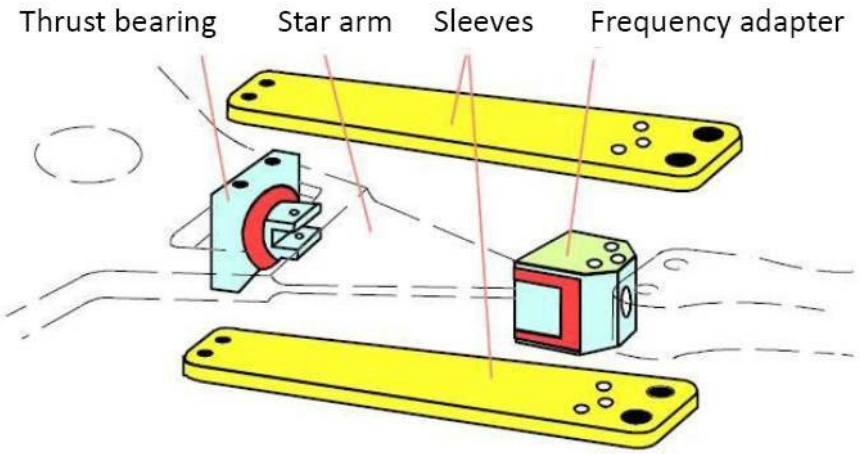
**11.** What is the purpose of the indicated component?



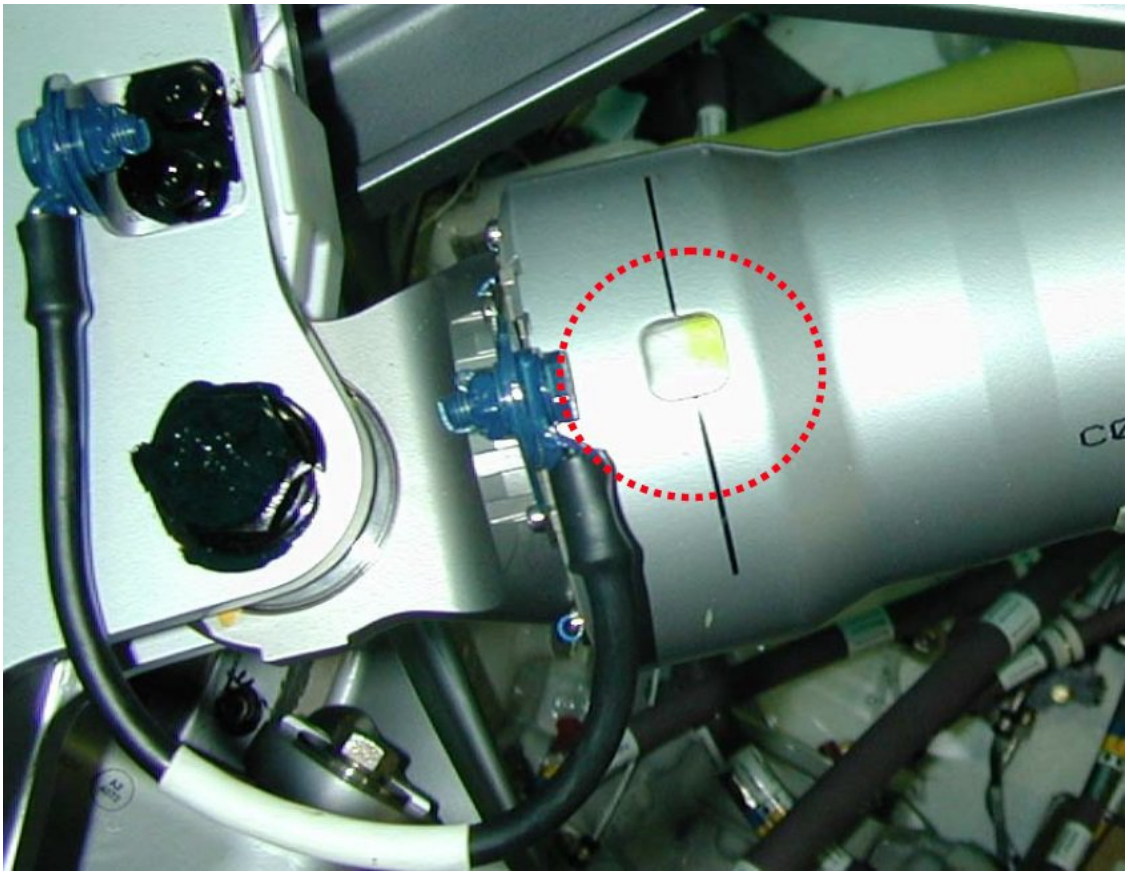
**12.** What type of tail rotor is shown?



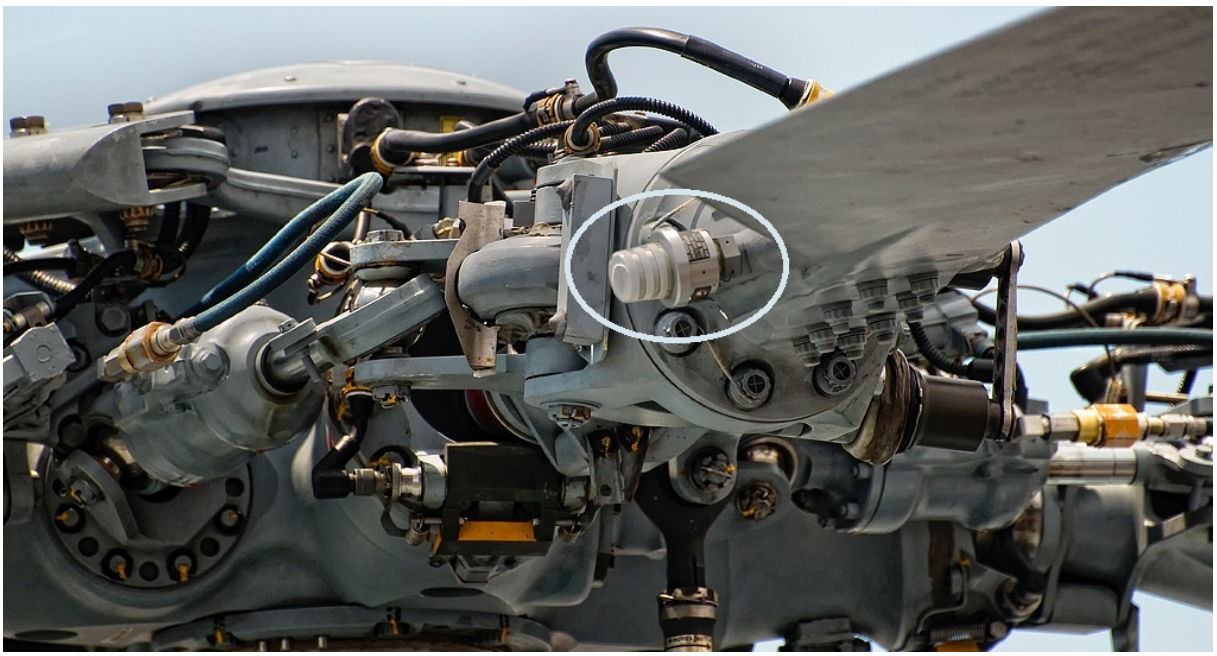
**13.** Which movement is made possible by the elastomeric frequency adapters in a hybrid rotor system?



**14.** What is the function of the indicated item?

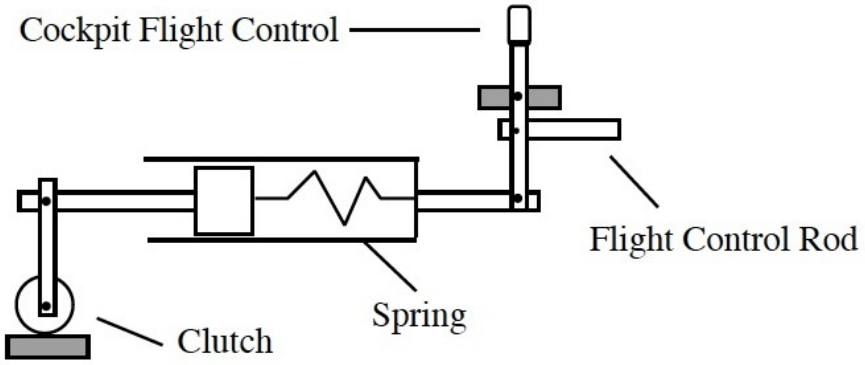


**15.** What is the indicated component on the blade?

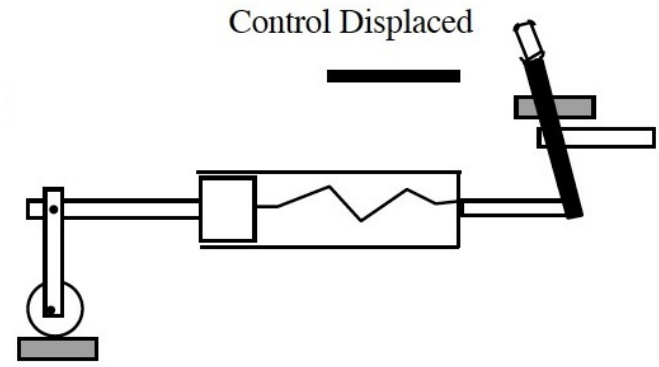


**16.** Which of the 3 illustrations shows the condition where the trim force release switch is activated, clutch disengaged and there is no force in the cockpit control?

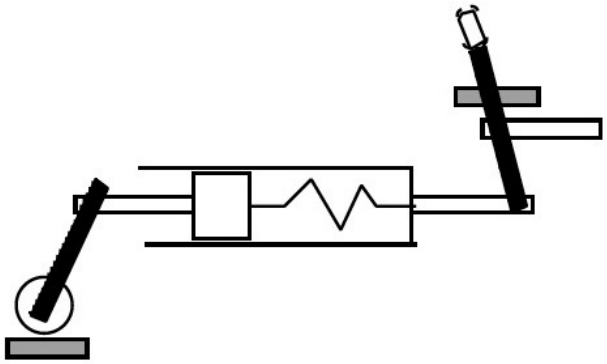
a.




b.

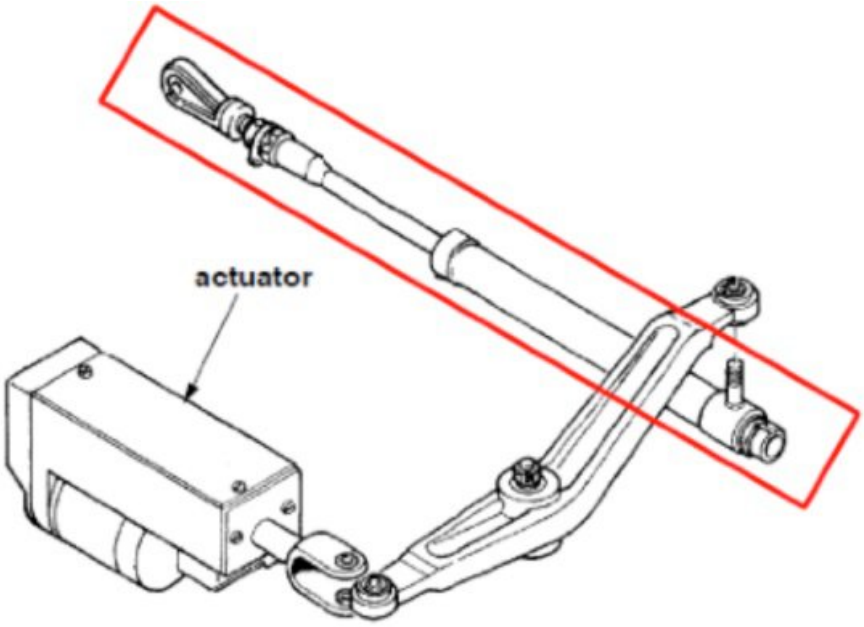



c.



**17.** Which flight control system requires the least maintenance time?

**18.** What is indicated in the figure?



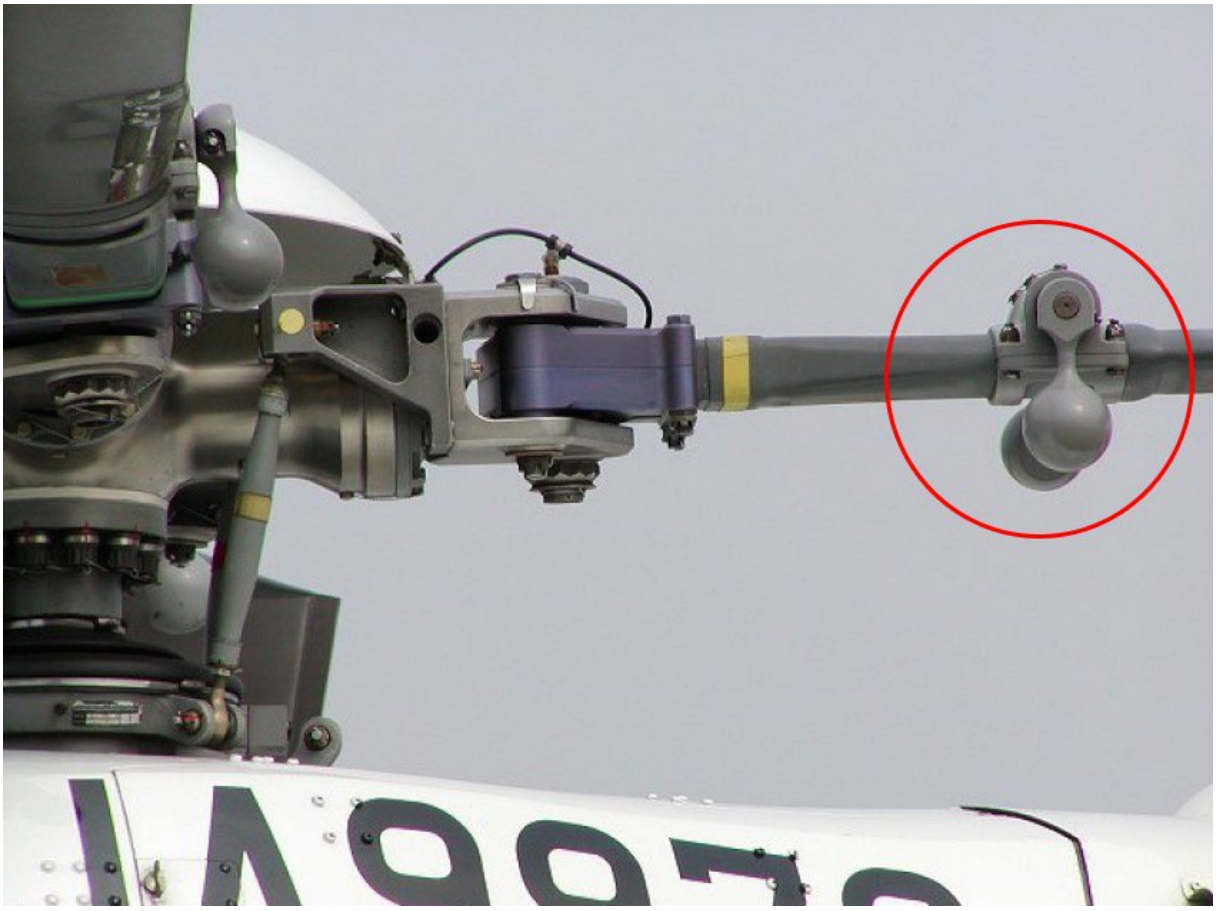

**19.** How can the blade track be adjusted?

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

**21.** 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?

**22.** Identify the two items?

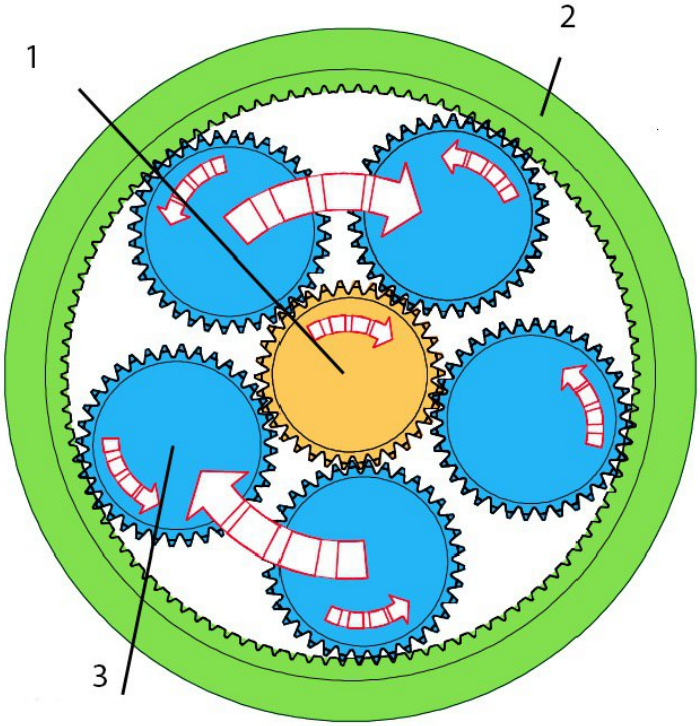
**23.** In the figure, what is the marked item?



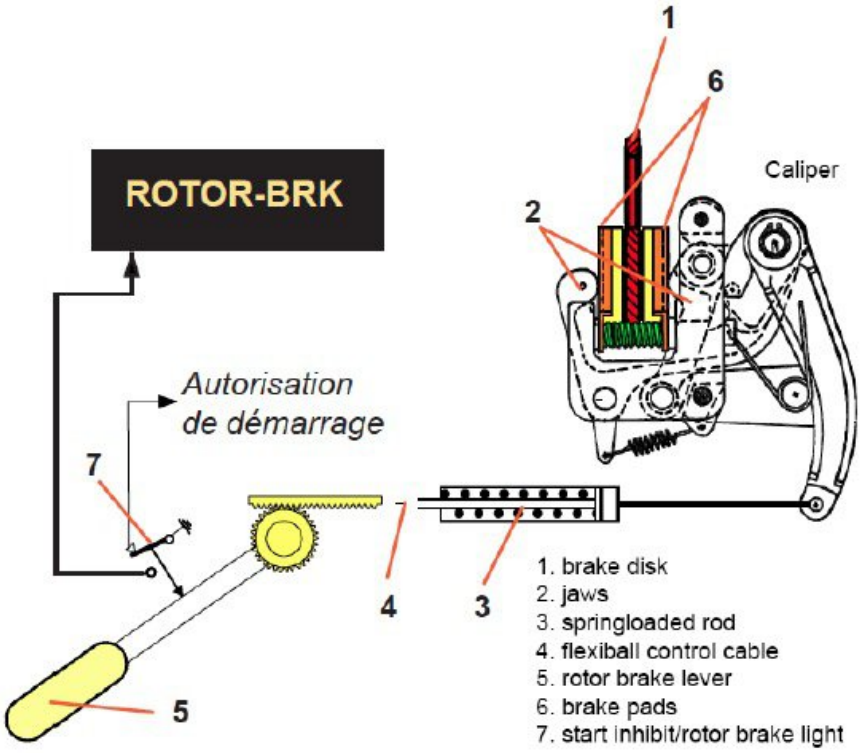
**24.** What is the main difference between higher harmonic control (HHC) and individual blade control (IBC)?

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

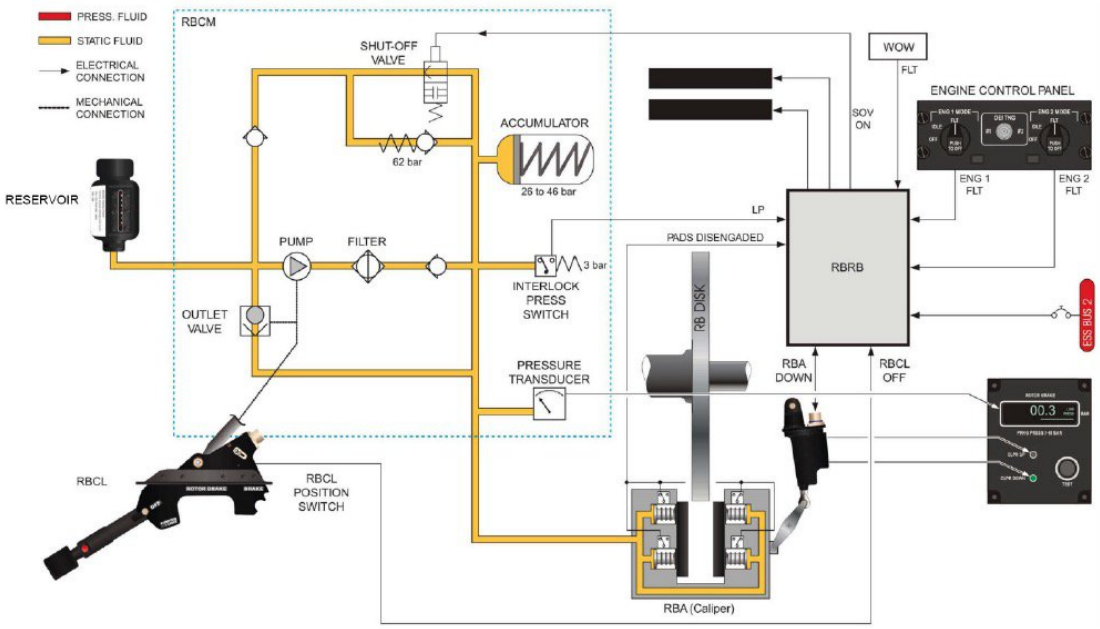
**26.** Name the components in the figure.




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



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

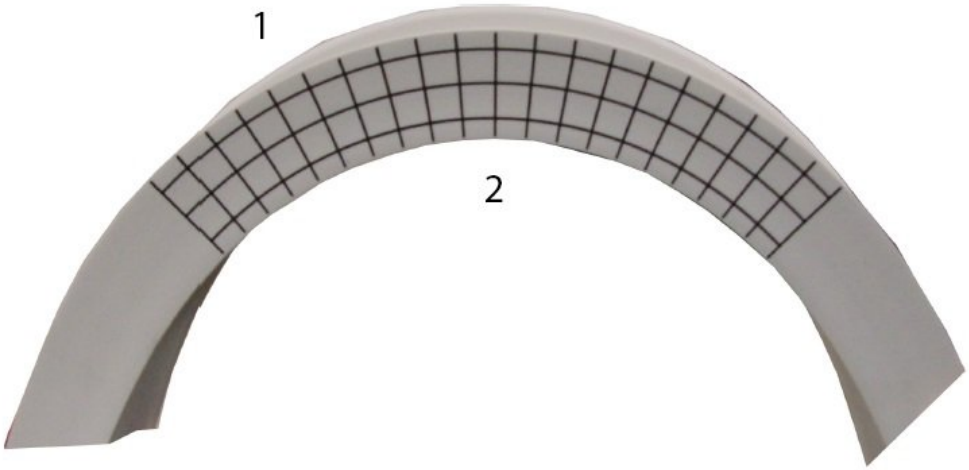



**29.** What is used, to allow for slight misalignment of the tail rotor drive shaft sections?

**30.** The primary structure consists of:

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

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




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

**34.** What is the function of the Static dischargers?

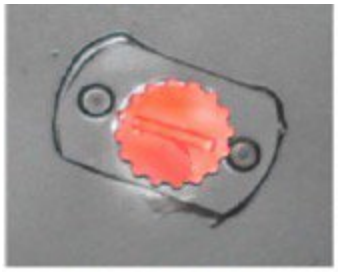
**35.** What type of construction is show in the figure?


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

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

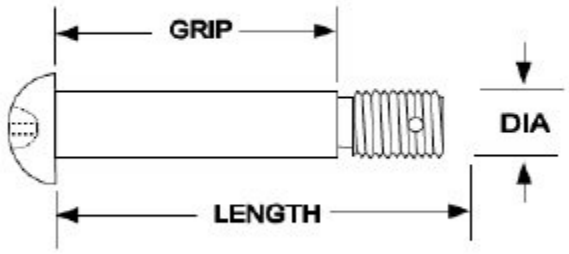
**38.** In addition to keeping the windshield ice and fog free, what other purpose does heating of the windshield have?

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


Drain plug

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

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

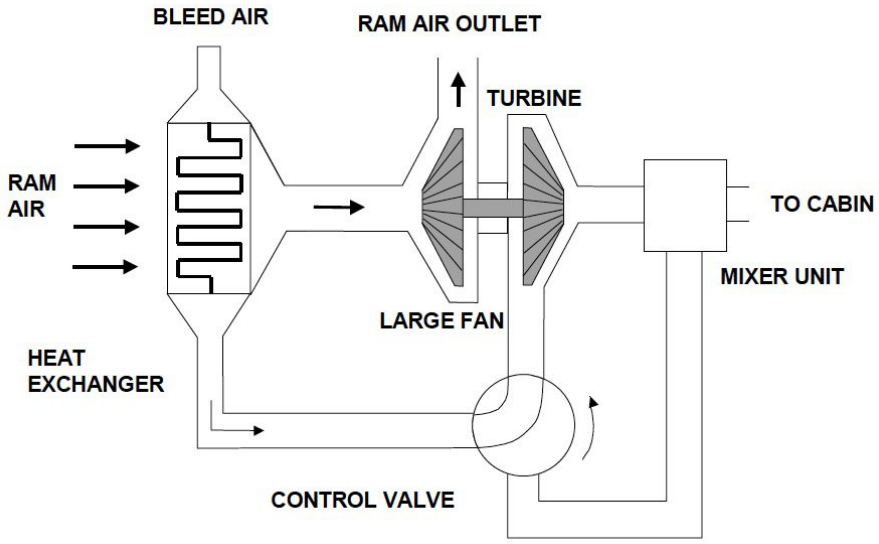



**42.** Is it permissable to de-grease a landing gear with a steam cleaner?

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

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

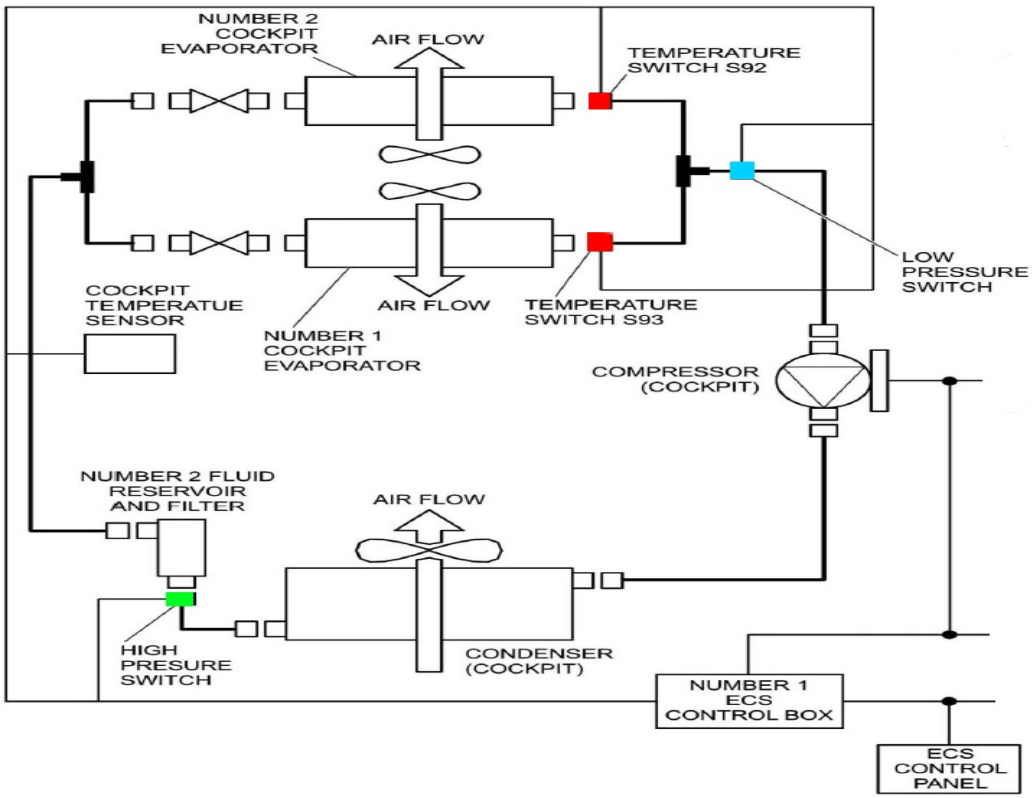
**45.** What type of airconditioning system is shown in the figure?




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

**47.** What are electrical heaters used for?

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




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


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

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

**52.** The flight data from HUMS is analysed by?

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

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

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

**56.** What is pitot pressure?

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

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

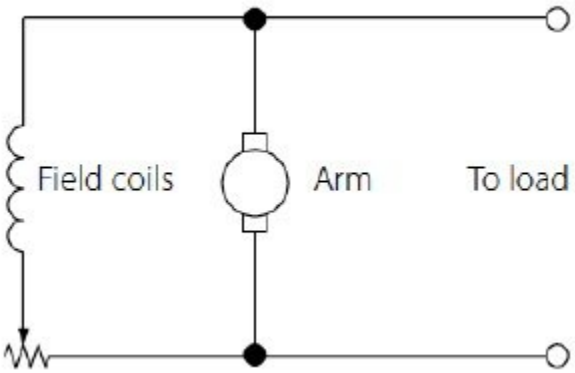
**59.** The system that determines the distance between the aircraft and the runway threshold is called:

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

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

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

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




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

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

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

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

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

**69.** What is the purpose of the DC interlock?

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

**71.** Which of the following statements in NOT true?

**72.** The operating mechanisms for emergency exits are:

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

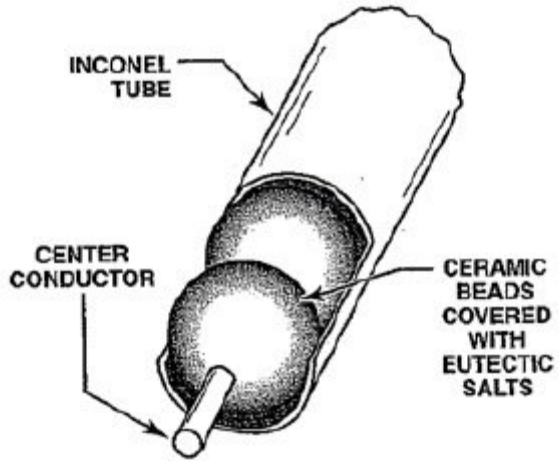
**74.** Operation of the rescue hoist is normally performed by....

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

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

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

**78.** Which sensing system is shown in the figure?




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

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

**81.** Where does a helicopter generally store its fuel?

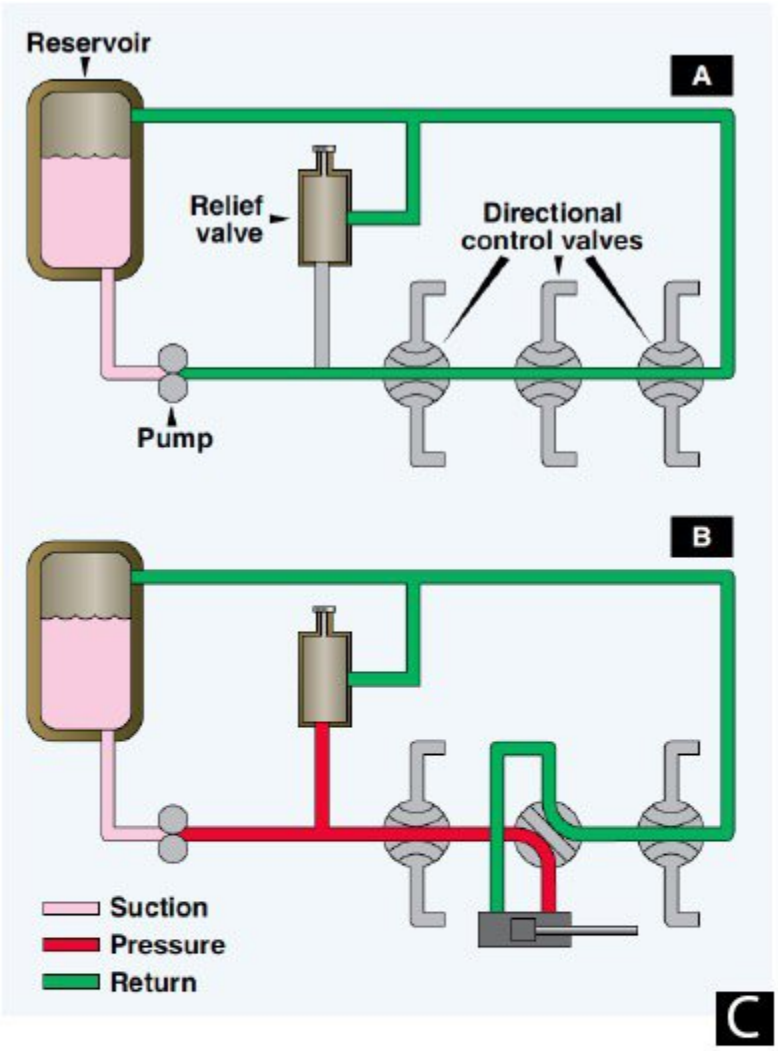
**82.** In a fuel tank system with a feeder tank, what is the purpose of the jet pump.

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

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

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

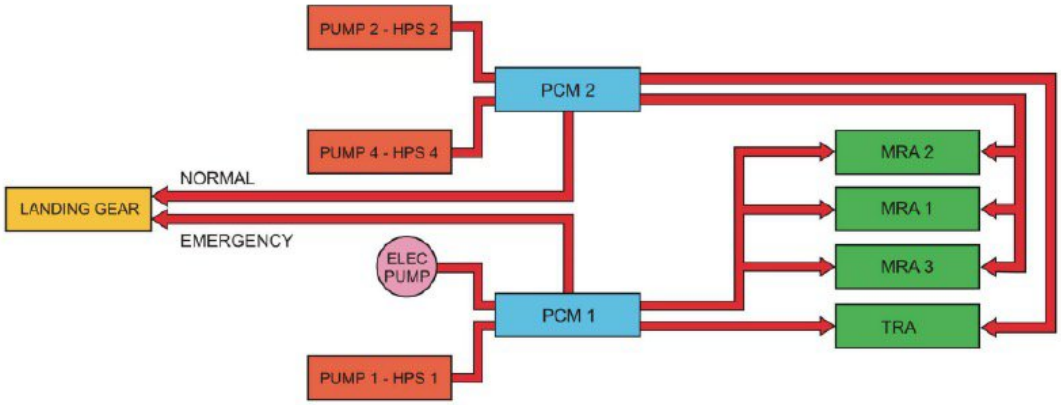
**86.** In the figure, which diagram shows a closed center hydraulic system?




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

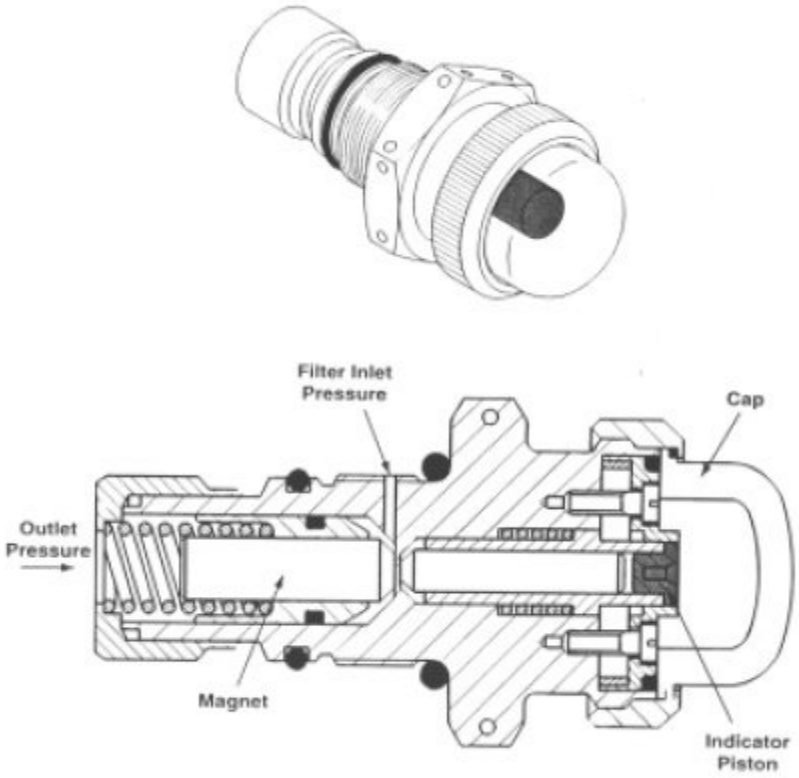
**88.** In a hydraulic system with a vented reservoir, what is done to ensure positive head of pressure?

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

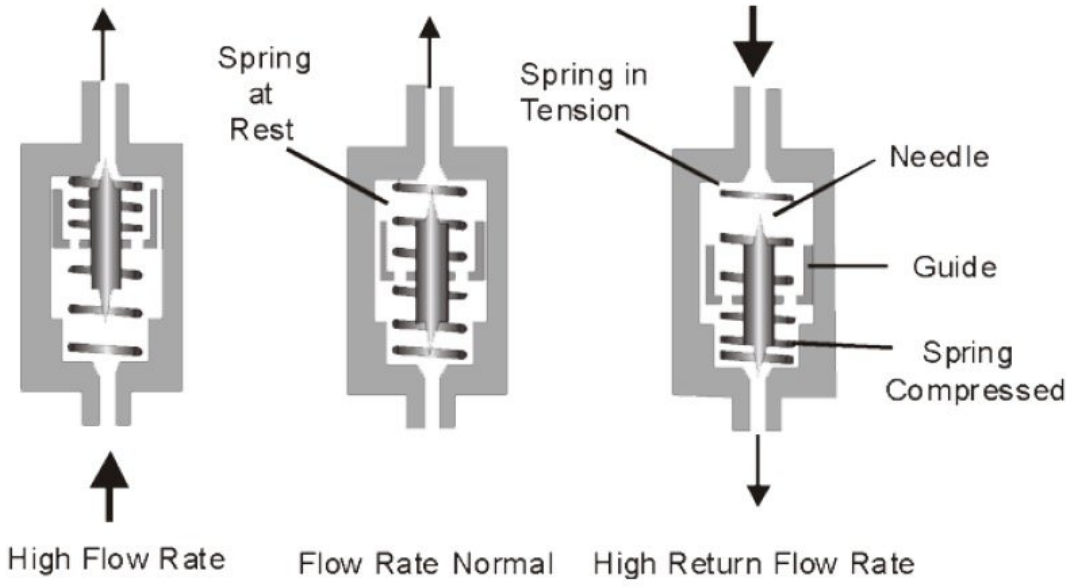



**90.** Which of the following is NOT a function of the emergency hydraulic system powered by an electric pump?

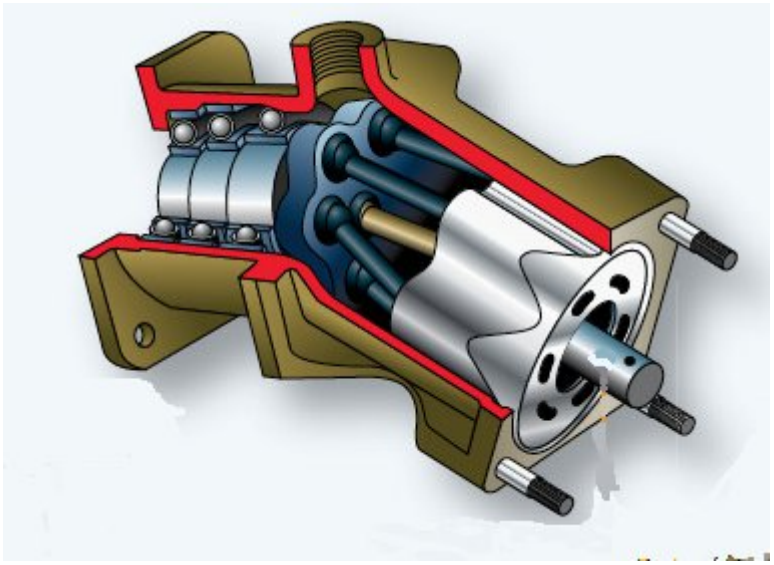
**91.** What would cause the device shown in the figure to activate?



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



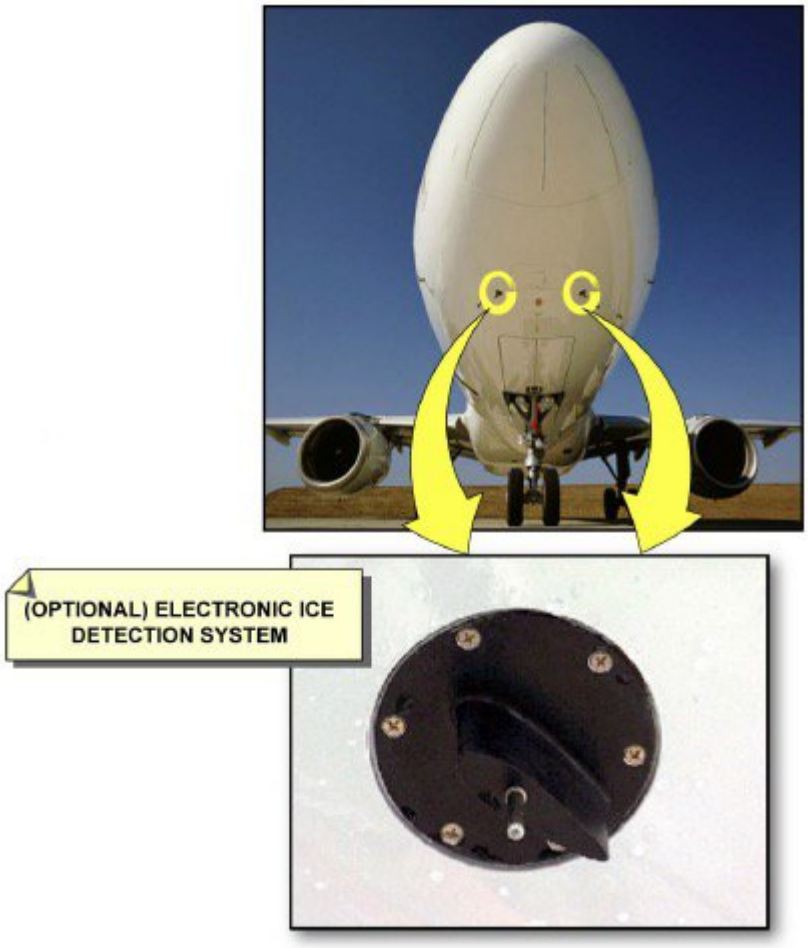

**93.** Which type of actuator operates on the principle shown in the figure?



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

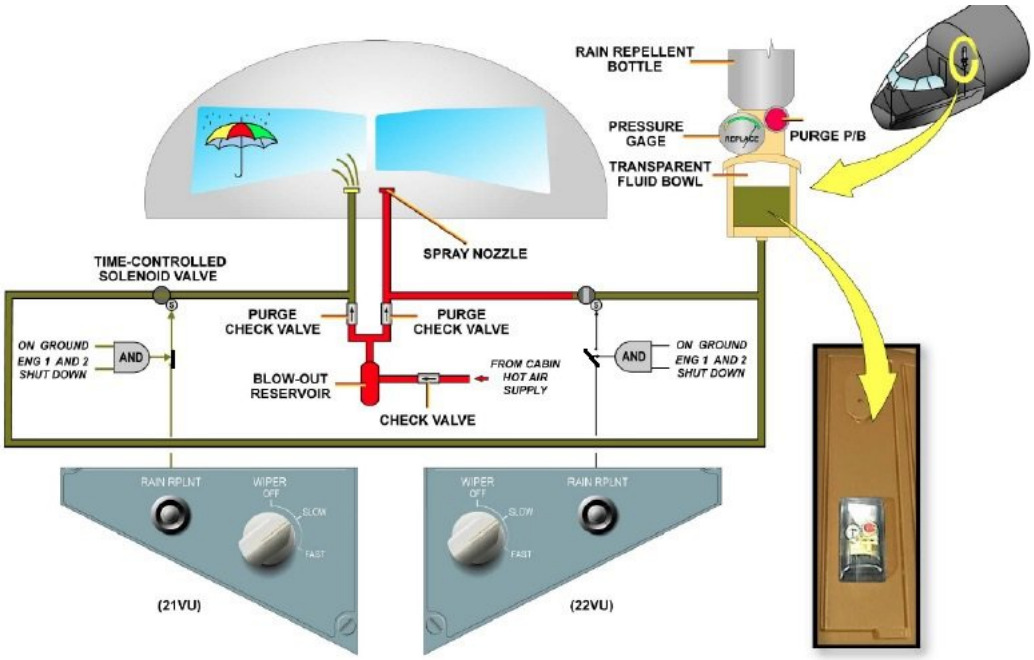
**95.** What triggers the ice detection warning on a serrated rotor ice detector?

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




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

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




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

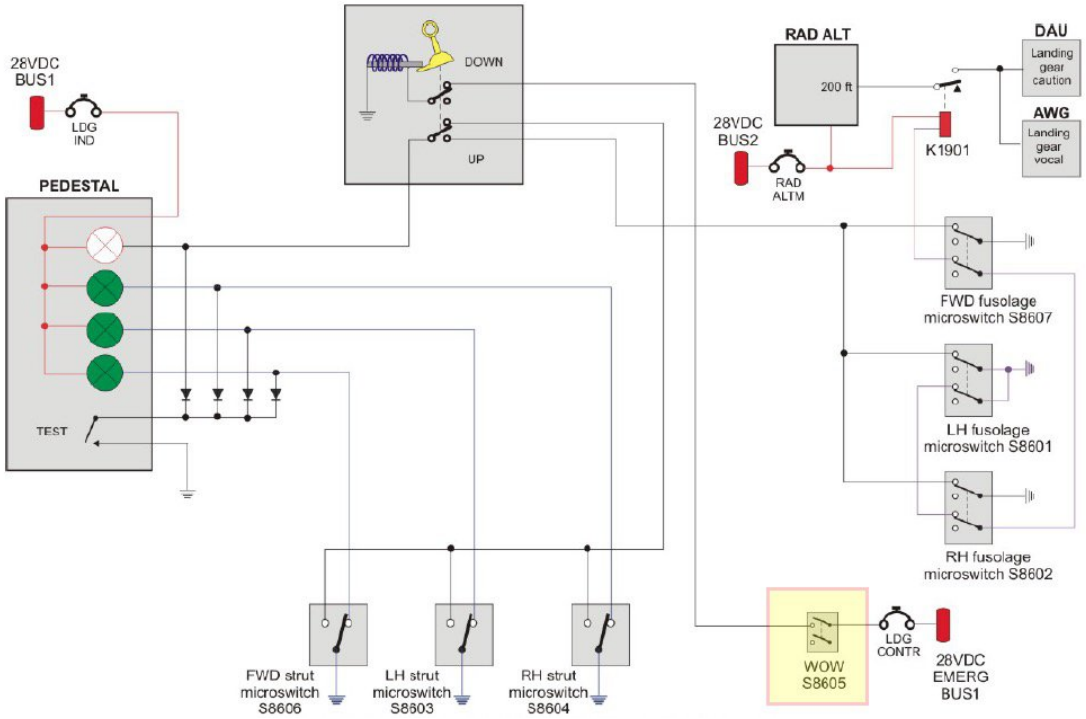
**100.** Why must you always wet the windscreen before opening the wipers?

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

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

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

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




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

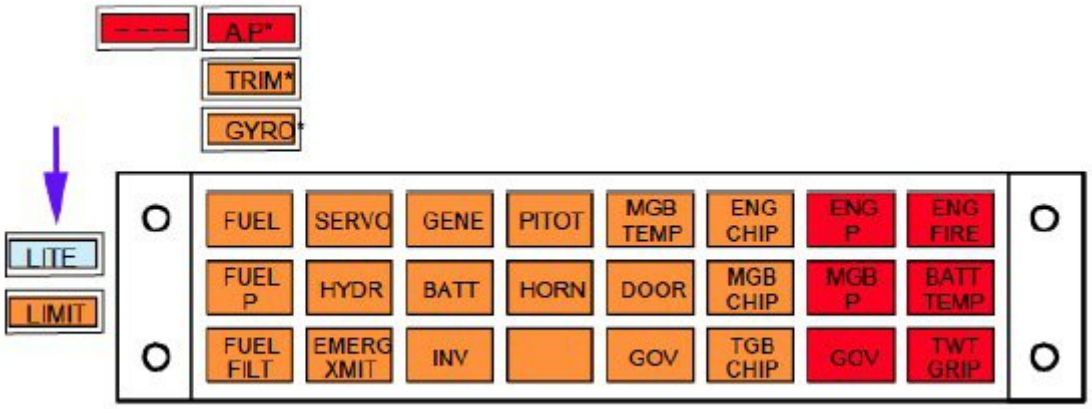
**106.** What is the purpose of the white paint mark on the tyre and rim as can be seen in the figure?

**107.** Which of the following statements is true?

**108.** What is shown in the figure?

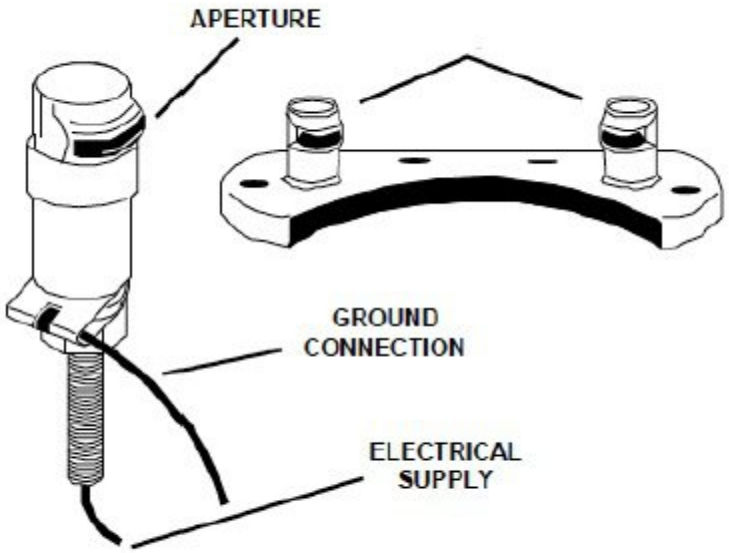
**109.** What is the purpose of a "Bear paw" (See the figure)?

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




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

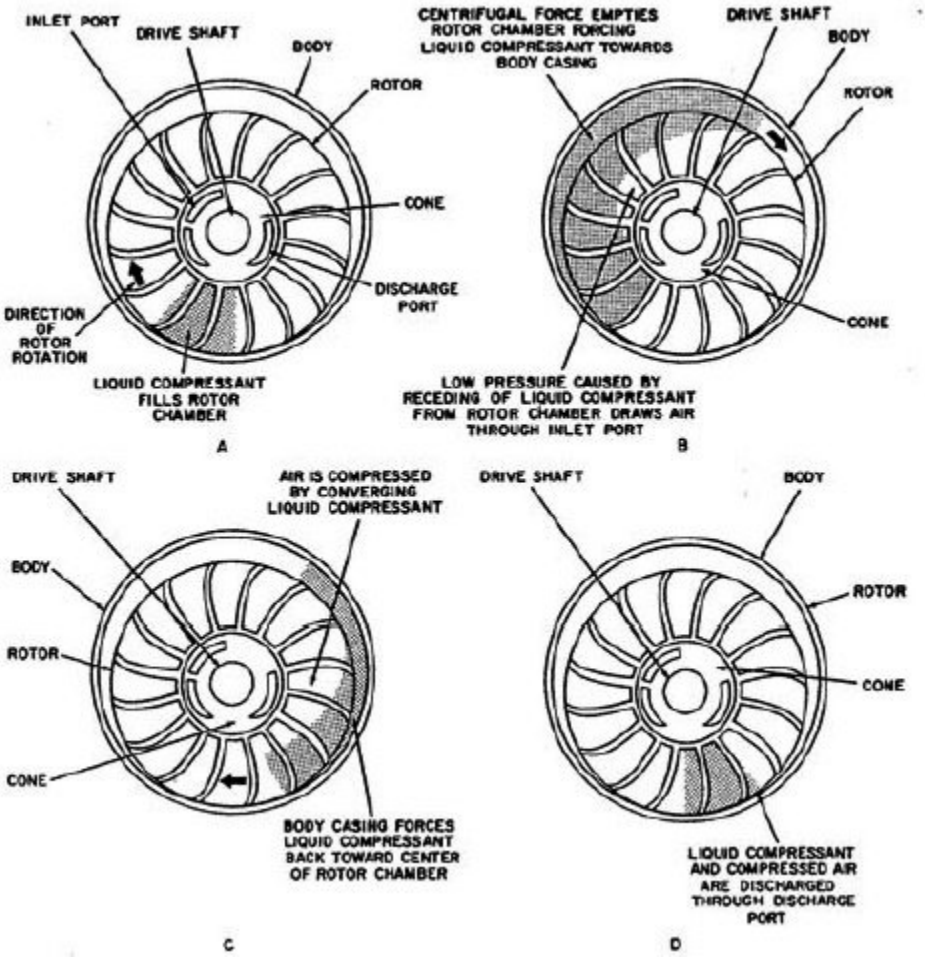
**112.** What is the name of the lighting shown in the figure?




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

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

**115.** What is the unit shown in the figure?




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

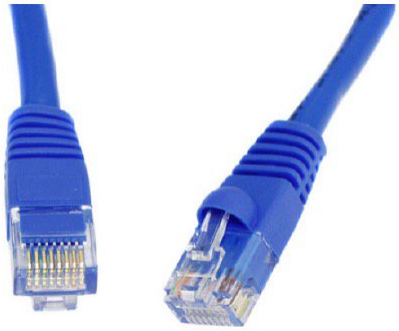
**117.** In a helicopter, what is bleed air mostly used for?

**118.** A HELIONIX aircraft management Computer consists of:

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

**120.** Integrated modular avionics (IMA) software is:

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



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

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

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

**125.** Where is HUMS data stored?

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

**127.** A Class 3 electronic flight bag is:

**128.** On a helicopter, which network can be accessed wireless?