

# Emergency Operations

TEST PREP

1

If the pitot tube and outside static vents become clogged, which instruments would be affected?

- a. The altimeter, airspeed indicator, and turn-and-slip indicator.
- b. The altimeter, attitude indicator, and turn-and-slip indicator.
- c. The altimeter, airspeed indicator, and vertical speed indicator.

2

If a pilot suspects that the engine (with a fixed-pitch propeller) is detonating during climb-out after takeoff, the initial corrective action to take would be to

- a. apply carburetor heat.
- b. lean the mixture.
- c. lower the nose slightly to increase airspeed.

3

What would happen if your airplane experienced a complete electrical failure during flight?

- a. The airplane will lose all electrical equipment.
- b. The engine driven fuel pump will fail.
- c. The engine ignition system will fail.

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Carburetor ice is most likely to occur when temperatures are:

- a. Below 20 degrees Fahrenheit.
- b. Above 105 degrees Fahrenheit (°F).
- c. Below 70 degrees Fahrenheit (°F) and the relative humidity is above 80 percent.

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Excessively high engine temperatures, either in the air or on the ground, will

- a. cause loss of power, excessive oil consumption, and possible permanent internal engine damage.
- b. result in damage to heat-conducting hoses and warping of cylinder cooling fans.
- c. increase fuel consumption and may increase power due to the increased heat.

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What effect will landing with a tailwind have during an engine-out approach and landing?

- a. Results in lower energy after the touchdown
- b. Decreased landing distance
- c. **Increased landing distance**

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When executing an emergency approach to land in a single-engine airplane, it is important to maintain a constant glide speed because variations in glide speed will

- a. assure the proper descent angle is maintained until entering the flare.
- b. **nullify all attempts at accuracy in judgment of gliding distance and landing spot.**
- c. increase the chances of shock cooling the engine.

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The possibility of carburetor icing exists even when the ambient air temperature is as

- a. **high as 70 °F and the relative humidity is high.**
- b. high as 95 °F and there is visible moisture.
- c. low as 0 °F and the relative humidity is high.

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When activated, an emergency locator transmitter (ELT) transmits on

- a. 118.0 and 118.8 MHz.
- b. 123.0 and 119.0 MHz.
- c. **121.5 and 243.0 MHz.**

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Detonation occurs in a reciprocating aircraft engine when

- a. **the unburned charge in the cylinders explodes instead of burning normally.**
- b. hot spots in the combustion chamber ignite the fuel/air mixture in advance of normal ignition.
- c. the spark plugs are fouled or shorted out or the wiring is defective.

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An electrical system failure (battery and alternator) occurs during flight. In this situation, you would

probably experience failure of the engine ignition system, fuel gauges, aircraft lighting system, and avionics equipment.

- a. **experience avionics equipment failure.**
- b. probably experience engine failure due to the loss of the engine-driven fuel pump and also
- c. experience failure of the radio equipment, lights, and all instruments that require alternating current.

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Detonation may occur at high-power settings when

- a. **the fuel mixture ignites instantaneously instead of burning progressively and evenly.**
- b. the fuel mixture is ignited too early by hot carbon deposits in the cylinder.
- c. an excessively rich fuel mixture causes an explosive gain in power.

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Which instrument(s) will become inoperative if the static vents become clogged?

- a. **Airspeed, altimeter, and vertical speed.**
- b. Altimeter only.
- c. Airspeed only.

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How will the wind affect your engine-out gliding distance?

- a. A headwind increases your gliding distance
- b. A tailwind decreases the gliding distance
- c. **A tailwind increases the gliding distance**

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What is the best course of action right after the engine quits in flight?

- a. Call ATC and declare an emergency
- b. Complete the emergency checklist immediately
- c. **Use the emergency checklist if practical**

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Excessively high engine temperatures will

- a. not appreciably affect an aircraft engine.
- b. **cause loss of power, excessive oil consumption, and possible permanent internal engine damage.**
- c. cause damage to heat-conducting hoses and warping of the cylinder cooling fins.

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When may an 121.5 MHz emergency locator transmitter (ELT) be tested?

- a. **During the first 5 minutes after the hour.**
- b. At 15 and 45 minutes past the hour.
- c. Anytime.

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When are non-rechargeable batteries of an emergency locator transmitter (ELT) required to be replaced?

- a. Every 24 months.
- b. At the time of each 100-hour or annual inspection.
- c. **When 50 percent of their useful life expires.**

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When an ATC clearance has been obtained, no pilot in command may deviate from that clearance, unless that pilot obtains an amended clearance. The one exception to this regulation is

- a. if the clearance contains a restriction.
- b. when the clearance states 'at pilot's discretion.'
- c. **an emergency.**

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An abnormally high engine oil temperature indication may be caused by

- a. **the oil level being too low.**
- b. operating with an excessively rich mixture.
- c. operating with a too high viscosity oil.

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If an emergency situation requires a downwind landing, pilots should expect a faster

- a. airspeed at touchdown, a longer ground roll, and better control throughout the landing roll.
- b. **groundspeed at touchdown, a longer ground roll, and the likelihood of overshooting the desired touchdown point.**
- c. groundspeed at touchdown, a shorter ground roll, and the likelihood of undershooting the desired touchdown point.

22

What is one procedure to aid in cooling an engine that is overheating?

- a. **Enrichen the fuel mixture.**
- b. Increase the RPM.
- c. Reduce the airspeed.

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If an in-flight emergency requires immediate action, the pilot in command may

- a. not deviate from any rule of 14 CFR part 91 unless prior to the deviation approval is granted by the Administrator.
- b. **deviate from any rule of 14 CFR part 91 to the extent required to meet that emergency.**
- c. deviate from any rule of 14 CFR part 91 to the extent required to meet the emergency, but must submit a written report to the Administrator within 24 hours.

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If you don't maintain a constant glide speed in attempting to land in an emergency:

- a. You will cause the engine to cool too rapidly.
- b. **It is difficult to judge your gliding distance and landing spot.**
- c. You will land beyond your desired landing spot.

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What should you do to determine that your emergency locator transmitter (ELT) hasn't been activated?

- a. Ask the airport tower if they are receiving an ELT signal.
- b. Turn off the aircraft ELT after landing.
- c. **Monitor 121.5 before engine shutdown.**

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The most important rule to remember in the event of a power failure after becoming airborne is to

- a. quickly check the fuel supply for possible fuel exhaustion.
- b. **immediately establish the proper gliding attitude and airspeed.**
- c. determine the wind direction to plan for the forced landing.

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While on a VFR cross country and not in contact with ATC, what frequency would you use in the event of an emergency?

- a. **121.5 MHz.**
- b. 122.5 MHz.
- c. 128.725 MHz.

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If the engine oil temperature and cylinder head temperature gauges have exceeded their normal operating range, the pilot may have been operating with

- a. the mixture set too rich.
- b. higher-than-normal oil pressure.
- c. **too much power and with the mixture set too lean.**