

**ROBINSON**  
**HELICOPTER COMPANY**

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**Safety Notice SN-25**

Issued: Dec 86 Rev: Nov 99

**CARBURETOR ICE**

Carburetor ice can cause engine stoppage and is most likely to occur when there is high humidity or visible moisture and air temperature is below 70°F (21°C). When these conditions exist, the following precautions must be taken:

**During Takeoff** - Unlike airplanes, which take off at wide open throttle, helicopters take off using only power as required, making them vulnerable to carb ice, especially when engine and induction system are still cold. Use full carb heat (it is filtered) during engine warm-up to preheat induction system and then apply carb heat as required during hover and takeoff to keep CAT gage out of yellow arc.

**During Climb or Cruise** - Apply carb heat as required to keep CAT gage out of yellow arc.

**During Descent or Autorotation** -

R22 - Below 18 inches manifold pressure, ignore CAT gage and apply full carb heat.

R44 - Apply carb heat as required to keep CAT gage out of yellow arc and full carb heat when there is visible moisture.

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**Safety Notice SN-26**

Issued: Jan 87 Rev: Jun 94

**NIGHT FLIGHT PLUS BAD WEATHER CAN BE DEADLY**

Many fatal accidents have occurred at night when the pilot attempted to fly in marginal weather after dark. The fatal accident rate during night flight is many times higher than during daylight hours.

When it is dark, the pilot cannot see wires or the bottom of clouds, nor low hanging scud or fog. Even when he does see it, he is unable to judge its altitude because there is no horizon for reference. He doesn't realize it is there until he has actually flown into it and suddenly loses his outside visual references and his ability to control the attitude of the helicopter. As helicopters are not inherently stable and have very high roll rates, the aircraft will quickly go out of control, resulting in a high velocity crash which is usually fatal.

Be sure you NEVER fly at night unless you have clear weather with unlimited or very high ceilings and plenty of celestial or ground lights for reference.

## **Safety Notice SN-18**

Issued: Jan 85 Rev: Feb 89; Jun 94

### **LOSS OF VISIBILITY CAN BE FATAL**

Flying a helicopter in obscured visibility due to fog, snow, low ceiling, or even a dark night can be fatal. Helicopters have less inherent stability and much faster roll and pitch rates than airplanes. Loss of the pilot's outside visual references, even for a moment, can result in disorientation, wrong control inputs, and an uncontrolled crash. This type of situation is likely to occur when a pilot attempts to fly through a partially obscured area and realizes too late that he is losing visibility. He loses control of the helicopter when he attempts a turn to regain visibility but is unable to complete the turn without visual references.

You must take corrective action before visibility is lost! Remember, unlike the airplane, the unique capability of the helicopter allows you to land and use alternate transportation during bad weather, provided you have the good judgement and necessary willpower to make the correct decision.

### **OVERCONFIDENCE PREVAILS IN ACCIDENTS**

A personal trait most often found in pilots having serious accidents is overconfidence. High-time fixed-wing pilots transitioning into helicopters and private owners are particularly susceptible. Airplane pilots feel confident and relaxed in the air, but have not yet developed the control feel, coordination, and sensitivity demanded by a helicopter. Private owners are their own boss and can fly without discipline, enforced rules, or periodic flight checks and critique by a chief pilot. A private owner must depend on self-discipline, which is sometimes forgotten.

When flown properly and conservatively, helicopters are potentially the safest aircraft built. But helicopters are also probably the least forgiving. They must always be flown defensively. The pilot should allow himself a greater safety margin than he thinks will be necessary, just in case.