

Topic 4 Glossary

cockpit	where the pilot can control the helicopter's movements. The many instruments tell the pilot how high the helicopter is, in what direction it is flying, and how fast it is going. The cockpit also contains all the communication equipment.
collective control stick	also known as the joystick; a lever used by the pilot to control the movements of the rotor blades; the stick is located between the pilot's knees; it makes the helicopter fly forward, backward, or sideways.
cyclic pitch control	this control, located at the pilot's left, tilts or pitches the main rotor to make the helicopter go up or down
drive shaft	runs from the main rotor's transmission back through to the tail rotor's transmission. The turbine engine powers this shaft.
helicopter engines	two engines are located behind the cockpit. They are connected to the main shaft and power both the main rotor and the tail rotor. Earlier helicopters used gas engines. The turbo shaft engine replaced the gas engine. It is the turbine that powers the helicopter's drive shaft.
hovers	stays still in the air
landing skids	some have landing gear that looks like skids and others have wheels. Skids are mainly used because they weigh less than wheels. In larger helicopters, where speed is critical, retractable wheels allow for greater speed and increased fuel economy over long distances.
main rotor	the main rotor contains the rotor blades. These rotor blades are shaped like long, thin wings. The main rotor head spins the main rotor. As the blades spin, they raise the helicopter into the air.
main rotor head	one of the most important parts of the helicopter. This is the piece of machinery located at the center of all the blades. It is designed to spin the rotor blades around, as well as tilt or angle them. This produces the lift that raises the helicopter up.
rudder pedals	control the tail rotor to keep the helicopter pointed in the exact direction
tail rotor	the helicopter has another set of blades (propellers) attached at the end of its long tail. The tail rotor produces thrust just like an airplane's propeller does. By producing thrust in a sideways direction, it counteracts the engine's desire to spin the body. Instead of producing lift, the tail rotor stops the tail from swinging around. The pitch or angle of attack of the tail rotor can be changed to make the helicopter turn left or right, becoming a rudder.
VTOL	vertical takeoff and landing aircraft such as the helicopter