

AERONAUTICS

# Fastest Fighter

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► THE NEW jet-propelled combat plane, the P-80 Shooting Star, has a speed of over 550 miles an hour and is probably the fastest fighter in existence. Performance data and other information relative to this new craft were released by Gen. H. H. Arnold, commanding general of the Army Air Forces. It has a service ceiling of more than 45,000 feet, and armament of six .50-caliber machine guns.

The P-80 is a low-wing, all-metal single-plane craft intended for interception and attack of enemy planes at high altitudes. It has an interchangeable nose constructed for photographic equipment, so can also serve for high-speed photo reconnaissance.

The plane is one of the "cleanest" aerodynamic aircraft in existence. Air scoops and the bubble-type free-flow canopy are the only protuberances on the fuselage, which actually is round in shape but appears oval when viewed head-on. The wing tapers both at leading and trailing edges. The canopy is mounted well forward of the wing to give improved visibility for the pilot. An armor-glass windshield and steel armor plate afford the pilot protection.

Each wingtip is equipped with shackles for bombs or droppable fuel tanks. The nose section, aside from armament or photographic equipment, contains compartments for oxygen and radio equipment. The mid-section houses the cockpit in the forward structure, a fuel tank compartment in the center, and the power plant at the after end. The after section supporting the tail group is joined to the mid-section with detachable fittings to facilitate power-plant removal. A complete engine change can be made in 20 minutes.

Designed and developed in cooperation with Army engineers, the new jet-fighter is produced by the Lockheed Air Corporation. Its gas turbine engine is built by General Electric and by the Allison Division of General Motors. The engine is larger and greatly improved over others previously used, but is a light, compact unit, considering its power output.

The P-80 has a wing-span of 39 feet

and is only 11 feet 4 inches high from the ground to the tip of the rudder. It is 34 feet 6 inches in length; its empty weight is approximately 8,000 pounds. Carrying a maximum fuel load for long-range operation, its weight is 14,000 pounds.

Magnesium rather than aluminum is used for engine castings, saving 100 pounds of weight. The first P-80 engines were designed to operate on kerosene, but now, with modification of the fuel system, can operate on gasoline of any octane rating.

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AERONAUTICS-VOLCANOLOGY

## Helicopter Performs Well Over Mexican Volcano

► EVEN at two miles above sea level the Army's Sikorsky helicopter, although built for lower altitude operation, will fly successfully and do jobs in war and peace that conventional airplanes cannot do.

This has been proved by two weeks of helicopter flights at the Mexican volcano, Paricutin, in an expedition of the Army's Air Technical Service Command of Wright Field, Dayton, Ohio, and the U. S.-Mexican Volcano Commission.

Several dozen flights have been made carrying scientists of Mexico and the United States aloft for leisurely views of the new volcano that after 2½ years is still in active eruption.

Igor Sikorsky, pioneer aviation engineer and designer of the helicopter used, joined the the expedition at the volcano for several days and made several hops in his helicopter as a passenger. The performance of the volcano interested him almost as much as the way the helicopter behaved. Last year he visited Paricutin and had a ground view of its splendor by night and by day. On this trip he lived at the helicopter camp near the lava-destroyed village of San Juan Parangaricutiro, and was able to take to the air when it was desired to observe the changing moods of the natural monster.

Just how the helicopter would act at the 7,200 foot altitude of the volcano's base or the 10,000 foot altitude necessary to fly above it was an unanswered question before the expedition. Now Mr. Sikorsky and the Army's helicopter experts are sure that the helicopter can perform military missions at high altitudes as it has at lower altitudes.

*Science News Letter, August 11, 1945*



**JET FIGHTER**—Shown in flight is the U. S. Army Air Forces' new P-80 Shooting Star. The plane is powered by a new jet propulsion gas turbine engine and is capable of speeds in excess of 550 miles per hour. The service ceiling is above 40,000 feet.