

Contact Centennial

100 years of aerial refueling, and counting

BY PAT CHIESA, BOEING WRITER

In 1923, the U.S. Army conducted the first successful aerial refueling by passing gasoline through a 50-foot (15-meter) rubber hose.

In the century that followed, the U.S. Air Force and Boeing evolved this capability into the backbone of military aviation.

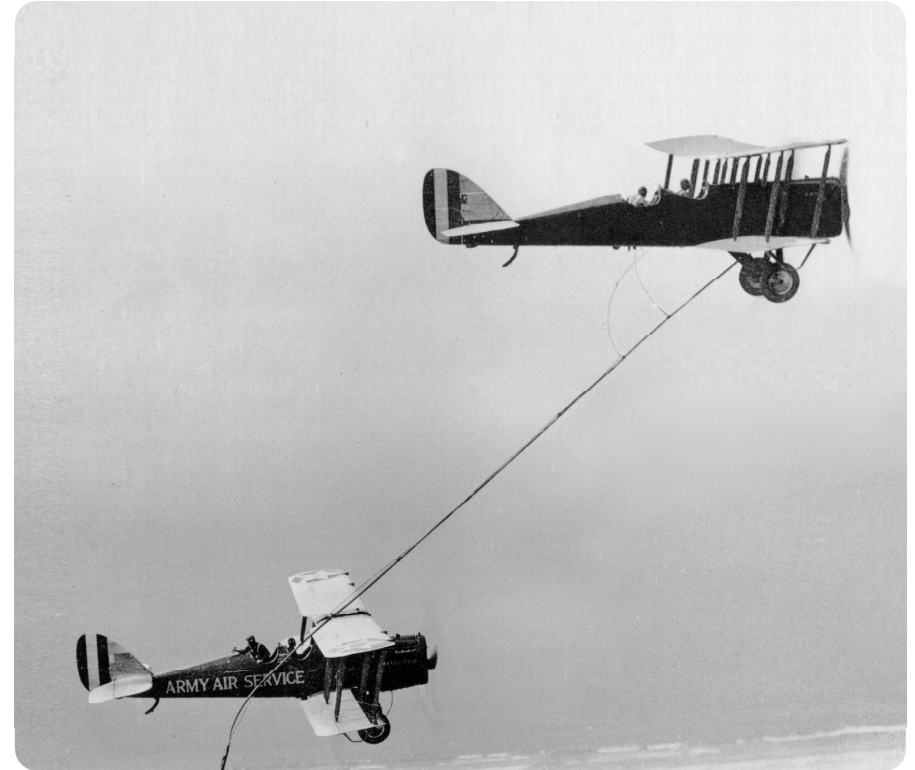


PHOTO: U.S. AIR FORCE

1923

Two DH-4B biplanes conducted history's first aerial refueling exercise on June 27, 1923, over Rockwell Field in San Diego. First Lt. Virgil Hine piloted the tanker while 1st Lt. Frank W. Seifert held the hose in the rear cockpit. Capt. Lowell Smith flew the receiving aircraft as 1st Lt. John Richter connected the hose to pass fuel.

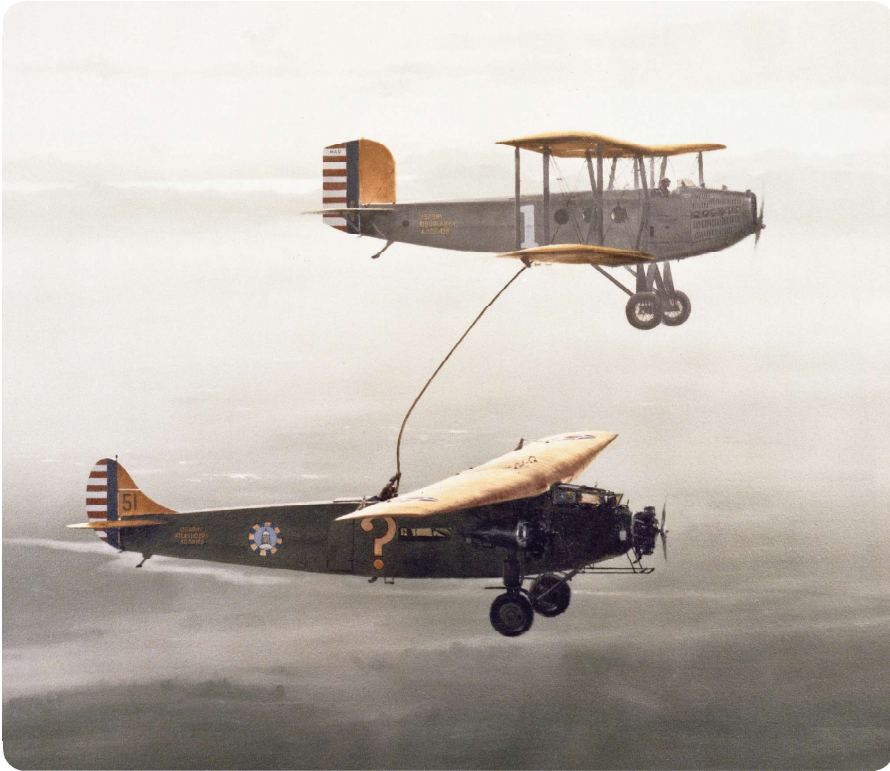


PHOTO: BOEING ARCHIVES

1929

Boeing played a role in a pivotal moment in aerial refueling history with the flight of the "Question Mark," Jan. 1-7, 1929. The U.S. Army Air Corps C-2A, built by Boeing heritage company Atlantic Aircraft, flew for nearly 151 uninterrupted hours and made 43 contacts with a C-1 tanker aircraft, built by Boeing heritage company Douglas Aircraft, setting numerous endurance records.



PHOTO: BOEING ARCHIVES

1948

Boeing reactivated its Kansas plant to convert B-29 Superfortress bombers into KB-29M tankers. In 1950, the KB-29P tankers, equipped with a flying boom, began operation. Between 1948 and 1951, 208 B-29s were converted for aerial refueling.



PHOTO: BOEING ARCHIVES

1950

The four-engine, propeller-powered B-50 bomber first flew in 1947. Converted to the KB-50 tanker in 1950, some KB-50s served until 1965 and acted as refueling tankers during the Vietnam War.



PHOTO: BOEING ARCHIVES

1951

The C-97 received its KC-97 designation when it was equipped with the Boeing-designed flying boom for aerial refueling. The boom had controls so the boom operator could literally fly the end of the boom from the KC-97 aerial tanker into the receiving aircraft.



PHOTO: BOEING ARCHIVES

1953

Two converted B-47Bs conducted the world's first jet-to-jet refueling by connecting the drogue, or cone, of the refueling aircraft to the probe on the receiving aircraft. Flight crews referred to the KB-47G tanker (right) as "Maw" and the YB-47F receiver aircraft (left) as "Paw."



PHOTO: BOEING ARCHIVES

1956

Introduced to replace the KC-97, the KC-135 still comprises the majority of the U.S. Air Force's tanker fleet, with nearly 400 aircraft currently in service. It was the first aircraft designed specifically for aerial refueling.



PHOTO: BOEING ARCHIVES

1980

The McDonnell Douglas KC-10 Extender can perform airlift and refueling missions simultaneously. The KC-10's hose-and-drogue system allows the refueling of the U.S. Navy, U.S. Marine Corps and most allied aircraft, all in one mission. It is still in service today.



PHOTO: BOEING ARCHIVES

2019

The world's most advanced multimission aerial refueler is approved by the U.S. Air Force for global deployments, including combat operations. Today, the KC-46A is delivering fuel, data and multimission capability for the U.S. and allies around the world.