Fact Sheet

U.S. Air Force Fact Sheet

KC-135 STRATOTANKER

Mission

The KC-135 Stratotanker provides the core aerial refueling capability for the United States Air Force and has excelled in this role for more than 50 years. This unique asset enhances the Air Force's capability to accomplish its primary mission of global reach. It also provides aerial refueling support to Air Force, Navy, Marine Corps and allied nation aircraft. The KC-135 is also capable of transporting litter and ambulatory patients using patient support pallets during aeromedical evacuations.

Features

Four turbofans, mounted under 35-degree swept wings, power the KC-135 to takeoffs at gross weights of up to 322,500 pounds. A cargo deck above the refueling system can hold a mixed load of passengers and cargo. Depending on fuel storage configuration, t he KC-135 can carry up to 83,000 pounds of cargo.

Nearly all internal fuel can be pumped through the flying boom, the KC-135's primary fuel transfer method. One crewmember, known as the boom operator, is stationed in the rear of the plane and controls the boom during in-flight air refueling.

A special shuttlecock-shaped drogue attached to and trailing behind the flying boom may be used to refuel aircraft fitted with probes. Some aircraft have been configured with the multipoint refueling system, which consists of special pods mounted on the wingtips. These KC-135s are capable of refueling two receiver aircraft at the same time.

Background

Air Mobility Command manages an inventory of 414 Stratotankers, of which the Air Force Reserve and Air National Guard fly 247 aircraft in support of AMC's mission.

The Boeing Company's model 367-80 was the basic design for the commercial 707 passenger plane as well as the KC-135A Stratotanker. In 1954, the Air Force purchased the first 29 of its future 732-plane fleet. The first aircraft flew in August 1956 and the initial production Stratotanker was delivered to Castle Air Force Base, Calif., in June 1957. The last KC-135 was delivered to the Air Force in 1965.

Of the original KC-135As, more than 415 have been modified with new CFM-56 engines produced by CFM-International. The re-engined tanker, designated either the KC-135R or KC-135T, can offload 50 percent more fuel, is 25 percent more fuel efficient, costs 25 percent less to operate and is 96 percent quieter than the KC-135A.

Under another modification program, a re-engined tanker with the TF-33-PW-102 engine was designated the KC-135E. In 2009, the last KC-135E retired from the inventory.

Through the years, the KC-135 has been altered to do other jobs ranging from flying command post missions to reconnaissance. RC-135s are used for special reconnaissance and Air Force Materiel Command's NKC-135As are flown in test programs. Air Combat Command operates the OC-135 as an observation platform in compliance with the Open Skies Treaty.

The KC-135RT aircraft continue to undergo life-cycle upgrades to expand their capabilities and improve reliability. Among these are improved communications, navigation, autopilot and surveillance equipment to meet future civil air traffic control needs.

General Characteristics

Primary Function: Aerial refueling and airlift
Prime Contractor: The Boeing Company
Power Plant: CFM International CFM-56 turbofan engines
Thrust: 21,634 pounds each engine
Wingspan: 130 feet, 10 inches (39.88 meters)
Length: 136 feet, 3 inches (41.53 meters)
Height: 41 feet, 8 inches (12.7 meters)
Speed: 530 miles per hour at 30,000 feet (9,144 meters)
Ceiling: 50,000 feet (15,240 meters)
Range: 1,500 miles (2,419 kilometers) with 150,000 pounds (68,039 kilograms) of transfer fuel; ferry mission, up to 11,015 miles (17,766 kilometers)
Maximum Takeoff Weight: 322,500 pounds (146,285 kilograms)
Maximum Transfer Fuel Load: 200,000 pounds (90,719 kilograms)
Maximum Cargo Capability: 83,000 pounds (37,648 kilograms), 37 passengers
Pallet Positions: 6
Crew: Three: pilot, co-pilot and boom operator. Some KC-135 missions require the addition of a navigator. The Air Force has a limited number of navigator suites that can be installed for unique missions.
Aeromedical Evacuation Crew: A basic crew of five (two flight nurses and three medical technicians) is added for aeromedical evacuation missions. Medical crew may be altered as required by the needs of patients.
Unit Cost: $39.6 million (fiscal 98 constant dollars)
Date Deployed: August 1956
Inventory: Active duty, 167; Air National Guard, 180; Air Force Reserve, 67

(Current as of May 2014)