



# FACT SHEET



## Vance AFB T-38C Talon



### ***MISSION***

The T-38 Talon is a twin-engine, high-altitude, supersonic jet trainer used in a variety of roles because of its design, economy of operations, ease of maintenance, high performance and exceptional safety record. Air Education and Training Command is the primary user of the T-38 for joint specialized undergraduate pilot training. Air Combat Command, Air Force Materiel Command and the National Aeronautics and Space Administration also use the T-38A in various roles.

### ***FEATURES***

The T-38 has swept wings, a streamlined fuselage and tricycle landing gear with a steerable nose wheel. Two independent hydraulic systems power the ailerons, rudder and other flight control surfaces. Critical aircraft components are waist high and can be easily reached by maintenance crews.

The T-38C incorporates a "glass cockpit" with integrated avionics displays, head-up display and an electronic "no drop bomb" scoring system. The AT-38B has a gun sight and practice bomb dispenser.

The T-38 needs as little as 2,300 feet (695.2 meters) of runway to take off and can climb from sea level to nearly 30,000 feet (9,068 meters) in one minute. T-38s modified by the propulsion modernization program have approximately 19 percent more thrust, reducing takeoff distance by 9 percent.

The instructor and student sit in tandem on rocket-powered ejection seats in a pressurized, air-conditioned cockpit.

### ***BACKGROUND***

Air Education and Training Command uses the T-38C to prepare pilots for front-line fighter and bomber aircraft such as the F-15E Strike Eagle, F-15C Eagle, F-16 Fighting Falcon, B-1B Lancer, A-10 Warthog and F-22 Raptor.

The Talon first flew in 1959. More than 1,100 were delivered to the Air Force between 1961 and 1972 when production ended. As the T-38 fleet has aged, specific airframe, engine and system components have been modified or replaced. Pacer Classic is the name given to a sustainment program that integrates essential modifications, and includes major structural replacements into one process.

AETC began receiving T-38C models in 2001 as part of the Avionics Upgrade Program. T-38C models will also undergo a propulsion modernization program which replaces major engine components to enhance reliability and maintainability, and an engine inlet/injector modification to increase available takeoff thrust. These upgrades and modifications, with the Pacer Classic program, should extend the service life of T-38s to 2020.

Advanced JSUPT students fly the T-38C in aerobatics, formation, night, instrument and cross-country navigation training.

Test pilots and flight test engineers are trained in T-38s at the U.S. Air Force Test Pilot School at Edwards Air Force Base, Calif. Air Force Materiel Command uses the T-38 to test experimental equipment such as electrical and weapon systems.

Pilots from most North Atlantic Treaty Organization countries train in the T-38 at Sheppard AFB, Texas, through the Euro-NATO Joint Jet Pilot Training Program.

The National Aeronautics and Space Administration uses T-38 aircraft as trainers for astronauts and as observers and chase planes on programs such as the space shuttle.

### ***GENERAL CHARACTERISTICS***

Primary Function: Advanced jet pilot trainer

Builder: Northrop Corp.

Power Plant: Two General Electric J85-GE-5 turbojet engines with afterburners

Thrust: 2,050 pounds dry thrust; 2,900 with afterburners

Thrust (with PMP): 2,200 pounds dry thrust; 3,300 with afterburners

Length: 46 feet, 4 inches (14 meters)

Height: 12 feet, 10 inches (3.8 meters)

Wingspan: 25 feet, 3 inches (7.6 meters)

Speed: 812 mph (Mach 1.08 at sea level)

Ceiling: Above 55,000 feet (16,764 meters)

Maximum Takeoff Weight: 12,093 pounds (5,485 kilograms)

Range: 1,093 miles

Armament: T-38A/C: none; AT-38B: provisions for practice bomb dispenser

Unit Cost: \$756,000 (1961 constant dollars)

Crew: Two, student and instructor

Date Deployed: March 1961

Inventory: Active force, 546; ANG, 0; Reserve 0