



T-7A Red Hawk

Mission

The T-7A Red Hawk is the Air Force's next-generation advanced pilot training aircraft. It is designed to replace the aging T-38C Talon and prepare pilots and weapon systems officers for 4th, 5th, and future 6th generation fighter and bomber aircraft. The T-7A, along with its Ground Based Training System (GBTS), provides a safer, more robust, and more sustainable training platform to meet national defense pilot production requirements.

Features

The T-7A features modern blended wings, a high-visibility canopy, and a streamlined fuselage optimized for stability and high-G maneuvering. A digital fly-by-wire control system delivers precise handling and responsiveness, while maintenance-driven design places key components at accessible heights, reducing downtime and improving serviceability across the aircraft.

The T-7A incorporates an advanced "glass cockpit" with a large-area digital display, reconfigurable avionics, and an integrated head-up display designed to replicate 5th-generation fighter environments. The aircraft supports embedded training, enabling simulated threats, weapons, and advanced flight scenarios without external pods. The T-7A delivers powerful thrust through its GE F404 engine, providing rapid acceleration, shorter takeoff distances, and improved climb rates over legacy trainers. The aircraft's open-architecture systems allow rapid software updates and capability growth, supporting evolving Air Force training needs.

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Background

The Red Hawk was selected in September 2018 under the T-X Program to replace the long-serving T-38 Talon as the United States Air Force's advanced jet trainer. On 14 September 2023, the USAF began developmental testing the Red Hawk at Edwards, Air Force Base, CA.

As of 2025, the program remains in pre-operational status: delivery of serial-production Red Hawks has begun, with "Initial Operating Capability" (IOC) scheduled for summer of 2027.

The name "Red Hawk" honors the legacy of the WWII Tuskegee Airmen, evoking the red-tailed paint scheme associated with their historic aircraft. Similarly, the first AETC squadron to receive the T-7A is the 99th Flying Training Squadron which traces its heritage to the 99th Pursuit Squadron, the first squadron of the Tuskegee Airmen.

In addition to the aircraft, the Red Hawk Program has a full training system including ground-based simulators and associated support equipment — everything needed to train future fighter and bomber pilots in both live and simulated environments. Because it was designed from the ground up as a modern, digital-era jet trainer, T-7A brings capabilities that will prepare students for many aspects of frontline 4th- and 5th-generation fighters — including simulated air-to-air / air-to-ground training, high-G and high-angle-of-attack maneuvering, night operations and embedded mission systems.

Once fully fielded, the T-7A training system is intended to produce the next generation of fighter and bomber pilots, as well as weapons system operators — providing a modern, cost-effective, safe and high-fidelity bridge between initial training and advanced combat aircraft.



General Characteristics:

Primary Function: Advanced jet pilot trainer

Builder: Boeing / Saab

Power Plant: One General Electric F404-GE-103 afterburning turbofan

Thrust: 12,000 lbs (mil power)

Thrust (max): 17,600–18,000 lbs (afterburner)

Length: 46 ft

Height: 13.7 ft

Wingspan: 30.6 ft

Speed: 550KCAS / Mach .95

Ceiling: 31,000 ft

Gross Weight: 21,000 lbs

Range: 990 nmi

Armament: None (weapons simulated via embedded training)

Unit Cost: \$19,000,000 (2025 USD)

Crew: Two, student and instructor

Date Deployed: 5 December 2025

Planned Inventory: Active force, 351; ANG, 0; Reserve, 0

(Current as of December 2025)