

OA-X Demo: Sierra Nevada Training USAF Pilots To Fly A-29

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U.S. Air Force pilots will test the A-29, Scorpion Jet and AT-6 light attack/observation aircraft at Holloman AFB, New Mexico, as part of the OA-X capability assessment: Sierra Nevada Corp.

Sierra Nevada Corporation (SNC) is beginning to train U.S. Air Force pilots to fly the A-29 "Super Tucano" for the service's upcoming OA-X light attack/observation aircraft appraisal. The A-29 is built by SNC and Embraer in Jacksonville, Florida. The Air Force already has certified the A-29 through foreign military sales programs with Afghanistan and Lebanon, and it has qualified pilots providing U.S.-based aircrew and maintainer training through the 81st Fighter Sqdn. at Moody AFB, Georgia.

But aircraft participating in the OA-X initiative must be flown by U.S. government pilots who are previously unfamiliar with the aircraft, not contractors. Those aircrews will put the A-29 through its paces in a series of demonstrations taking place at Holloman AFB, New Mexico, starting on July 31.

In a June 29 interview, SNC's Taco Gilbert, senior vice president of the company's intelligence, surveillance and reconnaissance (ISR) business area, said SNC will begin training the two government pilots and two weapons officers on July 7.

The company is upgrading one spare Super Tucano with U.S.-standard datalinks (Link 16), communications gear and avionics to be interoperable with other Air Force aircraft during the demonstration period, which runs for 4-6 weeks.

Aircraft intended for the Afghan and Lebanese air forces are uniquely configured to comply with U.S. export rules, such as the International Traffic in Arms Regulations, or ITAR. In contrast, an aircraft meant for the U.S. military should carry the most advanced equipment, sensors and weapons available.

The upcoming OA-X demonstration has generated significant buzz within the Air Force, the Pentagon and on Capitol Hill, and the SNC/Embraer industry team wants to bring its best possible aircraft configuration to Holloman for scoring.

The OA-X demonstration hasn't even begun, and already the Senate Armed Services Committee has moved to authorize \$1.2 billion for a new Air Force-owned light attack/observation fleet.

Meanwhile, the House's version of the bill includes language expressing support for the OA-X initiative along with a requirement to report the findings to Congress.

SNC's A-29 was invited to participate along with rivals Textron AirLand Scorpion Jet and Textron Beechcraft AT-6 Wolverine.

Other potential candidates have either decided not to participate, such as Lockheed and Boeing, or their aircraft don't qualify based on the Air Force's specifications.

Doubts have been raised about whether this experiment will ever amount to anything, or disappear like past OA-X efforts.

The initiative is run by the Air Force's Strategic Development Planning and Experimentation Office as a capability assessment of non-developmental light attack platforms.

Gilbert is "cautiously optimistic" about the potential of this experiment transitioning into a "Phase 2" assessment in an operational environment, and then potentially becoming an acquisition program for the Air Force.

Phase 1 will evaluate the A-29, Scorpion and AT-6's performance and suitability for missions such as light air support and armed observation. Government pilots will fly the aircraft to level the playing field.

"A fair and thorough evaluation will favor the A-29," Gilbert says. "The harsher the evaluation, the more the A-29 will shine."

SNC says OA-X is not about replacing the high-end capabilities of the Fairchild Republic A-10 "Warthog" or Lockheed Martin F-35 Lightning II. OA-X, Gilbert says, is about finding low-cost, highly capable alternatives for keeping fighter pilots proficient and trained at home and conducting routine counterinsurgency operations overseas without breaking the budget.

Modern fighter aircraft cost anywhere from \$30,000 to \$60,000 per flight hour to operate, whereas an OA-X aircraft would cost a few thousand dollars or less per flight hour. The A-10, which has been saved from retirement multiple times by Congress, costs about \$17,000 per hour to fly, Gilbert says.

Because of the extraordinary cost of operating modern, single-seat stealth aircraft such as the Lockheed F-22 and F-35, airframe hours are a precious commodity. This can reduce the number of flight hours available for training and proficiency, and instructors often fly alongside students in a second aircraft. At the end of 2016, the service said it was short 1,555 pilots, including 1,211 fighter pilots.

"They don't have enough cockpits to train those fledgling aviators when they come out of training," Gilbert says. "In years past, they were hoping to get 300 hr. of flying per year just for basic maturation of fighter pilot skills. Those kinds of hours are difficult to sustain in these [modern fighter] aircraft."

Gilbert says it is important for the Defense Department and Congress to understand the purpose of OA-X, because misconstruing the initiative could kill it. SNC says it is about sparing the airframe life of high-end fighters like the A-10, F-22 and F-35 while also lowering the cost of performing counterinsurgency missions in low-threat regions.

A legislative amendment put forward by Congressman Mike Coffman (R-Colo.) during the House Armed Services Committee budget markup in June encourages the Air Force to submit a supplemental funding request and acquisition plan to Congress for an OA-X fleet if the service secretary decides to expeditiously procure a light attack/observation fleet.

The stipulation should be that the OA-X fleet "complement the existing force structure, reduce costs and improve pilot training and proficiency," the legislative amendment states.

Although headquartered in Sparks, Nevada, SNC's center of excellence for aircraft modification work is in Coffman's congressional district, Centennial, Colorado. Centennial is also the headquarters for Freedom Aircraft Ventures, SNC's joint venture with Turkish Aerospace Industries competing for the Air Force's \$16 billion T-X trainer competition.

Brazil's Embraer teamed with SNC to successfully offer the A-29 for the Air Force's Light Air Support program, which has already equipped the Afghan Air Force with 20 aircraft, with potential for another four turboprops.

The aircraft are built in Jacksonville before being sent to Moody to support training. They then move to Kabul, Afghanistan.

In November 2015, SNC received a \$172 million contract to equip the Lebanese Air Force with six aircraft. Gilbert says five of those six aircraft have been delivered to Moody.

Gilbert says production has been slowed down as orders run dry. But there are several potential customers waiting in the wings, such as Nigeria, which could finalize a deal soon.

The Philippines recently selected the Super Tucano as its future light attack aircraft through a direct commercial sale with Embraer. Those aircraft would likely be built in Brazil.

Air Force Chief of Staff Gen. David Goldfein and lawmakers such as Sen. John McCain (R-Ariz.) have previously said the number of OA-X aircraft required could be up to 300. Such a large order would dwarf any combination of foreign military sales contracts, and additional aircraft could be sought by Air Force Special Operations Command for certain roles.

Despite its Brazilian heritage as the EMB-314 Super Tucano, Gilbert says the A-29 is a U.S.-made aircraft built to American standards and the program employs a considerable number of people domestically.

SNC says key features of the EMB-314/A-29 include its sizable landing gear, which provides greater ground clearance for loading, maintenance and landings on rough airstrips.

The U.S.-built version has ballistic protection for the aircrew and the PT6 engine's oil cooler has been relocated for protection. The bowed cockpit and tandem stadium seating provide excellent visibility, and the sensor turret is mounted forward of the wings to prevent obstruction when the aircraft banks left or right.

The U.S. military first showed interest in the EMB-314 for Imminent Fury, a U.S. Navy-sponsored joint capability technology demonstration. The initiative was launched in response to Navy Seals being pinned down by the Taliban in Afghanistan without air support, an incident immortalized in the 2013 movie Lone Survivor.

The plan never got off the ground, and was followed up by the Air Force's Light Attack/Armed Reconnaissance (LAAR) program, which also explored the EMB-314 before shrinking in scope and becoming an arms program for Afghanistan.

The service has been reluctant to adopt light attack turboprops for counterinsurgency, instead prioritizing complex fighters for future conflicts. If OA-X does move forward, the service may institutionally favor a jet-powered aircraft over a turboprop.

"We see the A-29 as a fighter aircraft, no different than the A-10, F-15, and F-16," Gilbert says. "But what is the mission of the airplane? The mission should dictate what the airframe should look like, not some preconceived notion.

"A high-performance jet aircraft moves very, very fast, and that provides survivability in a high-threat environment. But that's a bit of a detriment for counterinsurgency operations if you need to slow down for that target acquisition."