

In The Thunderbolt's Shadow

InFlight

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By the end of the war in Viet Nam, it was clear that slower, piston-engine aircraft were very successful as ground-attack aircraft – more so than their supersonic jet counterparts. This was due to piston engine airplanes ability to loiter over the target area, carry very heavy loads, operate from rough airfields, absorb a lot of punishment, and fly slow enough to deliver their ordinance with accuracy.



Northrop YA-9 rests at the March Air Reserve Base air museum. Note the weapons pylons and the placement of the engines. (Scott Schwartz)

If the reader thinks that the foregoing describes the Douglas Skyraider, he or she is right. Although other propeller-driven types served well during the Viet Nam conflict, the Skyraider was virtually unmatched in the ground-support role.

Nevertheless, age, losses, and evolving technology eventually caught up with the Skyraider, and by the late 1960's, the U.S. Air Force was looking for a replacement for it.

March 1967 saw the Air Force request design submissions from aircraft manufacturers, in connection with project "A-X" ("Attack Experimental"). Two years later, one Pierre Sprey was tasked (by the Secretary of the Air Force, no less) with writing the exact specifications for the new aircraft. Sprey actually talked to Skyraider pilots in order to find out what they thought

the “perfect” ground attack airplane should be like. Naturally, the ideal aircraft should all of the Skyraider’s attributes. However, heavy cannon firepower (which was lacking in previous aircraft) was also on the wish list.

All of the foregoing was incorporated into the new specifications. However, by 1970, Air Force leaders had become alarmed by the threat posed by Soviet armor.

Inspired by Hans –Ulrich Udel’s experiences flying cannon-equipped Stuka dive-bombers against Soviet tanks during World War Two (Udel’s book, *Stuka Pilot*, was required reading for members of the A-X team), the Air Force decided that the A-X should be designed around the 30 mm GAU Avenger Gatling gun. While the cannons on Udel’s Stuka were essentially artillery pieces that were slung under the Stuka’s wings, the 30 mm Gatling gun was designed for aircraft and, in its final form, could fire 3,900 rounds per minute!

That the new A-X wound up being produced as the Fairchild A-10 is history. What may not generally be known, though, is the fact that the Air Force selected two companies to build prototypes. One, of course, was Fairchild, with the aforementioned A-10. The other was Northrop, which built two YA-9 prototypes to compete with the (Y)A-10.

Looking somewhat like a scaled-up version of Cessna’s A-37 Dragonfly, the YA-9 was meant to carry nearly the entire ordinance then in use by the USAF, on twelve pylons under its wings. Designed to spend most of its time in close proximity to enemy guns, the YA-9 featured aluminum armor that was one and a quarter to two and a half inches thick in places, and back-up systems supported all of its flight control systems.

The YA-9’s first flight took place in May of 1972, with the competition “fly-off” between the YA-9 and the YA-10 taking place from October through December of that same year.

Ironically, the 30 mm Gatling gun around which these airplanes were designed, was not available at the time of the flight tests. So, a 20 mm “Vulcan” cannon was used in each airplane for the tests.

Both airplanes performed similarly with regard to gunnery and ordinance delivery. Still, the Air Force chose the A-10; both YA-9 prototypes were transferred to the NASA Dryden Research Center and then retired permanently. Both YA-9’s are on static display at the March Air Reserve Base and Castle Air Museums, respectively.

Looking at the YA-9, one notices that its engines are mounted within the fuselage, and that the airplane has a single vertical stabilizer. The engines on the A-10 are mounted on pylons at the rear of its fuselage – reducing their vulnerability to ground fire, as well as foreign-object ingestion. Perhaps these items were factors in the Air Force’s decision.

Although the YA-9 has largely faded into the mists of history, the Soviet Su-25 attack aircraft bears a striking resemblance to the YA-9. Imitation is the sincerest form of flattery.