

# SAAB 37 Viggen

## The Bird of Many Feathers

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**S**weden is an aeronautically unique country. After WW II, the military realized that it needed better equipment to protect the nation, so beginning in 1946, the Air Force became one of the world's largest operators of the most state-of-the-art fighter available, the P-51 Mustang. However, while dotting over what were probably the most pristine Mustangs in existence, the Swedes started the first of many programs to develop their own jet trainers and fighters that would fit their fairly unusual needs. They are a very proud, nationalistic country and want to be self-dependent when it comes to their protection. Even their infantry rifle, the AK5, is their interpretation of the FN FNC modified to their needs and environment.

Saab (Svenska Aeroplan Aktie Bolag, Swedish Aircraft Factory) had been building aircraft since 1938, but branched out into commercial aircraft after the war and began building a successful line of automobiles. In the 1950s, the company gained experience in building a series of jet trainers and unique fighters including, the well-known, and well-respected Draken. The Saab 37 Viggen, although initially envisioned as a ground attack machine to replace the Saab Lanser, quickly took over the Draken's role as a fighter/interceptor.



Although a Mach 2.0 interceptor / ground attack machine, the SAAB Viggen has shortfield capabilities that allow it to utilize roads and highways as runways. It was taken out of service in 2005.

The country has several requirements for its aircraft that are dictated by how Swedes see combat happening in their area with its near-artic environment. Among other things, their aircraft are usually designed to operate from specially prepared highways and roads, giving them much basing flexibility. Therefore, even though during the design phases they were talking about a Mach 2.1 fighter, that had to have extremely good slow-speed handling and landing characteristics. In fact, some sources say the Viggen can land in 4,500 feet, an unheard of number for most supersonic jets. The articulated, twin landing gear wheels are the result of wanting an aircraft that can handle uneven terrain well, and the canard helps in its slow speed regime as well as in maneuverability.

The Viggen first flew in 1967 and was put into service four years later. Production totaled 329, and it continued to serve the Swedish Air Force (no other countries operated it) until late 2005. By that time, various versions of it had been developed to better handle specific roles, including reconnaissance, air superiority, marine patrols and ground attack.

Today, only one version still flies, a 1977 AJS37. It served its entire military life at Soderhamn and, after being released to civil registry, was restored and operated by the Swedish Air Force Historic Flight—which although it appears to be a section of the Swedish Air Force, functions as a civil association developed to find, restore, and maintain military aircraft in flying condition. The Viggen was left in its natural aluminum finish, as were the initial airplanes when introduced into service. After that they wore a distinctive camouflage scheme. †



Only a few fighters have combined a delta wing with a canard. The airplane that replaced the Viggen, the SAAB Griphen, uses a similar layout.



Designed before glass cockpits became the standard, the Viggen still used a lot of analog steam gauges.

It's interesting to note that the leading edge of the delta wing is not a continuous straight line.



In case of a hydraulic failure, the RAT (ram air turbine) is deployed to restore power.



The canard is equipped with large movable surfaces that aid in maneuverability and slow speed control.



The tandem-wheel landing gear arrangement allows the Viggen to operate on very uneven surfaces.