Black Team

Formation 'arrow' low-level flight of no less than sixteen Hunters from the 111 Sq. aerobatic team.

HAWKER HUNTER

The story of a thoroughbred

Introduction

The most successful British jet fighter produced was without doubt the sleek and graceful Hawker Hunter. As usual for every new aircraft type it had its share of teething problems, but when these were all adequately solved the U.K. had at that time one of the best jet fighters available. It was built in large numbers and exported to many countries. As a military fighter the Hunter is now retired for many years but even today several airworthy Hunters are still present in the air-show circuit! With their easy maintenance and straightforward construction they'll hopefully continue to be the star at various air-shows in the coming years!

P.1052

The P.1052 was the first step towards the Hunter: swept wings but still a straight tail.

A step-by-step development from the Hawker Seahawk

Shortly after the war, Hawker produced for the Royal Navy the Hawker Seahawk jet fighter fitted with straight wings and a Rolls Royce Nene centrifugal jet engine. As first step towards the Hunter, the Seahawk was fitted with 35° swept wings as the Hawker P.1052. However it still had the same tail as the Seahawk. It flew for the first time in November 1948. Later, the second P.1052 was fitted with a new rear fuselage with a swept tail as the P.1083. It still had a Rolls Royce Nene which resulted in a relatively broad fuselage. Redesigned with the new axial flow Rolls Royce Avon jet engine and with a much sleeker fuselage, this would finally result in the P.1067, the Hunter prototype. Both P.1052 and P.1083 were unable to exceed the speed of sound in a dive. The Hunter could do this without problem! So, the Hunter was not a radical new design, but the result of a step-by-step further development of the first Hawker jet fighter, the Seahawk.

Early test flying and development

For replacement of the Gloster Meteor both Vickers Armstrong (Supermarine) and Hawker developed a fast-climbing jet fighter with trans-sonic capability that resulted finally in the Swift and the Hunter. The Royal Air Force clearly betted on two horses at that time and both types finally entered production.

The Hawker P.1067 design, following Specification F.3/48 (later replaced by Spec. F.43/46) was submitted to the Air Ministry to meet this specification. This was awarded on 14 March 1951 by a contract for the construction of three prototypes. These three aircraft received the R.A.F. serial numbers WB188, WB195 and WB202. As already discussed the P.1067 had its pedigree in two steps from the Seahawk. Also the competing Vickers Armstrong design, later known as the Swift, had a similar history when their straight wing Nene-powered Attacker naval jet fighter was fitted with swept wings and finally developed into a design with a Rolls Royce Avon engine; the same as for the P.1067.

Initially the Hawker design team, headed by

P.1081

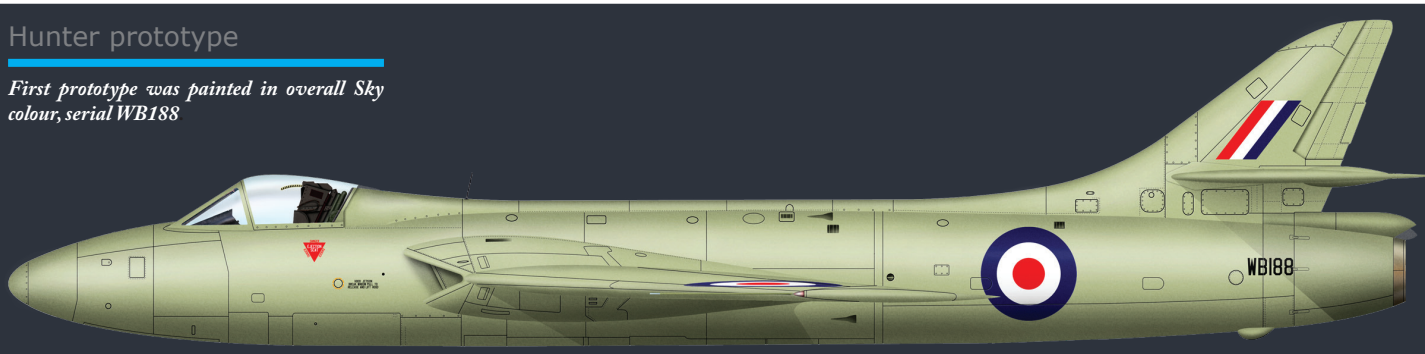
Last step before the Hunter: the P.1081 with both wings and tailplanes swept.

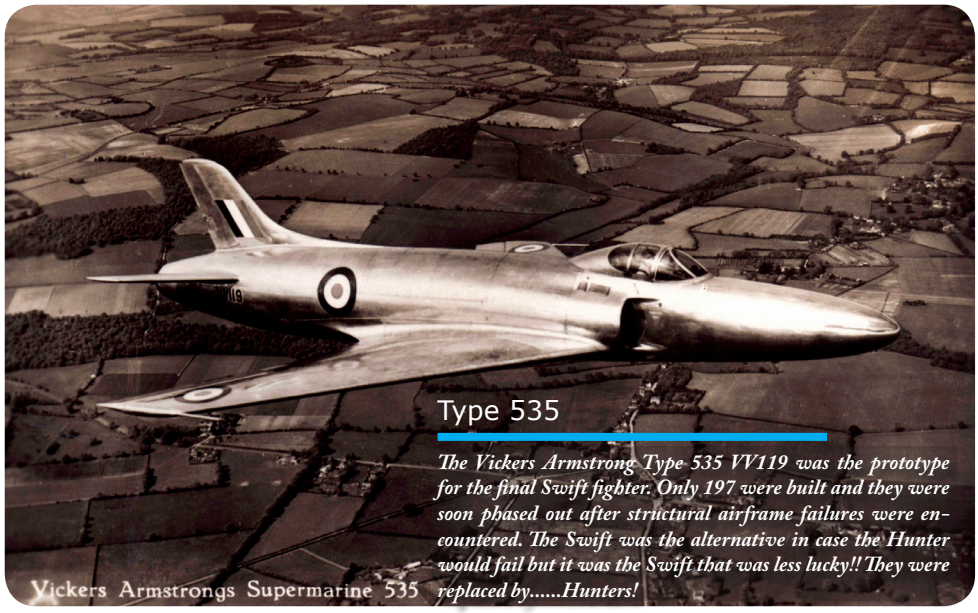
WB188

WB188 was the first P.1067 prototype for the Hunter. It was unarmed and without an air-brake.

Hunter prototype

First prototype was painted in overall Sky colour, serial WB188





Type 535

The Vickers Armstrong Type 535 VV119 was the prototype for the final Swift fighter. Only 197 were built and they were soon phased out after structural airframe failures were encountered. The Swift was the alternative in case the Hunter would fail but it was the Swift that was less lucky!! They were replaced by.....Hunters!

Sidney Camm, proposed for the new jet fighter a nose air intake, a 40° swept wing and a high tail with an armament of four 20 mm cannons, After wind tunnel tests of various configurations a low tail was selected in combination with a wing with 35° sweep and wing root air intakes of the same shape as the preceding P.1083. As armament the new 30mm Aden cannon was selected. Meanwhile, the construction of the first prototype WB188 was already started by end 1949. It made its first flight on July 20th 1951 with Hawker's chief test pilot Neville Duke at the controls. At this stage it did not yet carry any armament. WB195 was armed with four Aden 30 mm guns. It made its first flight on May 5th 1952. Both WB188 and WB195 were fitted with the new Rolls-Royce Avon jet engine. The third P.1087 prototype was fitted with an Armstrong Siddeley Sapphire turbojet as a 'fail safe' in case the Avon engine would run into great problems. It made its first flight on November 30th 1952 carrying full gun armament.

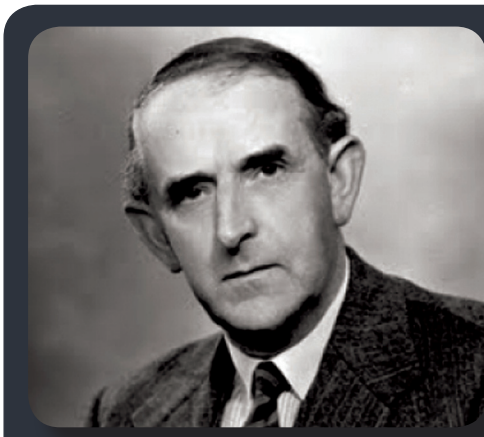
The flight tests with WB188 showed that the new fighter had such high flight performances that it was later prepared to establish a new world speed record. For this purpose a higher rated Avon with afterburner was fitted. Also the nose was better streamlined ending in a sharp point. Sprayed in an all-over bright red colour it set an absolute world speed record of 1171 km/h on September 7th 1953, flown by Neville Duke. On September 19th of the same year, Duke also set a new world speed record

WB195

WB195, the second P.1067 prototype displayed at the Farnborough airshow in 1952. It was shown together with the Swift!

WB188

WB188 with pointed nose, rear side-mounted double airbrakes and an up-rated Avon engine with an afterburner as used for breaking the world speed record. In this form it is referred to as the Hunter Mk.3.



Sidney Camm

Sir Sydney Camm, CBE, FRAeS (5 August 1893 – 12 March 1966) was a British aeronautical engineer who contributed to many Hawker aircraft designs, from the biplanes of the 1920s to jet fighters. One particularly notable aircraft he designed was the Hawker Hurricane fighter.

Camm grew up in a large family at Windsor. He started his first design activities at the Windsor Model Aeroplane Club and followed a carpenter's apprentice course. Later he joined the Martinside aircraft company as a draughtsman. In 1923 he joined Hawker Aircraft Company at Kingston-Upon-Thames where his qualities were soon recognized. Already two years later he became Chief Engineer. He was active as an engineer at Hawker, later Hawker Siddeley, until his retirement. Camm was also active at the Royal Aeronautical Society. He died in 1966 at the age of 72.

WB202

A beautiful in flight photo of the third Sapphire powered Hunter prototype WB202.