A-12 Blackbird

A-12 #06932 in flight. (Lockheed Photo)

The A-12 is the forerunner of the SR-71 and has nearly the same shape and dimensions as its replacement. Designed to replace the U-2, the A-12 flew higher and four times as fast to outrun enemy defenses and gather intelligence. The A-12 is primarily an over flight vehicle unlike the SR-71. Its major advantages in capabilities to the SR-71 include its higher-resolution photography and its ability to go marginally faster (Mach 3.3) than the SR-71. However, the SR-71 was chosen as successor to the A-12 due to its side-looking radar and cameras, allowing it to gather important reconnaissance data without penetrating enemy airspace.

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A-12 Specifications

Manufacturer: Lockheed Aircraft Corporation
Construction: Titanium Monococque with some super-high-temperature plastics.
Width: 55 feet, 7 inches
Length: 102 feet, 3 inches
Height: 18 feet, 6 inches
Landing Weight: 52,000 pounds
Maximum Speed: Mach 3.3
Maximum Ceiling: Above 75,000 feet
Powerplant: 2 Pratt & Whitney JT11D-20A (J58) with 32,500 pounds of thrust. (Excluding #06927)

A-12 Timeline:

24 December 1957: First J58 engine run.
21 April 1958: First mention of ARCHANGEL in Kelly Johnson's dairy.
December 1958: CIA requests funding for a Mach 3+ reconnaissance aircraft.
29 August 1959: Lockheed and Convair each propose a plan for a Mach 3+ reconnaissance aircraft.
14 September 1959: CIA awards first ARCHANGEL research contract to Lockheed.
26 January 1960: CIA orders twelve A-12 aircraft.
February 1960: Lockheed begins the search for 24 pilots for the A-12.
1 May 1960: Francis Gary Powers is shot down in a U-2 over the Soviet Union.
26 February 1962: First A-12 leaves Skunk Works in Burbank for Groom Lake by truck.
25 April 1962: First flight of the prototype A-12 (#06924) with Lockheed test pilot Lou Schalk.

30 April 1962: First "official" flight of A-12 (#06924) with Lockheed test pilot Lou Schalk.
2 May 1962: A-12 goes supersonic for first time during second test flight.
30 July 1962: J58 completes pre-flight testing.
5 October 1962: A-12 flies with J75 (in left nacelle) and J58 (in right nacelle) engines.
15 January 1963: A-12 first flight with two J58 engines.
24 May 1963: First A-12 crashes (#06926) near Wendover, UT.
20 July 1963: First A-12 flight over Mach 3.
November 1963: A-12 reaches design speed and altitude.
3 February 1964: A-12 cruises at Mach 3.2 and 83,000 feet for 10 minutes.
June 1964: Final A-12 (#06939) delivered to Groom Lake.
27 January 1965: A-12 flown for one hour and 40 minutes above Mach 3.1 for a distance of 3,000 miles.
28 December 1966: Decision is made to conclude A-12 operations by 1 June 1968.
22 May 1967: First A-12 (#06937) flown to Kadena AB by CIA pilot Mel Vojovodich.
29 May 1967: BLACK SHIELD unit declared operational at Kadena AB.
31 May 1967: First A-12 (#06937) operational mission over North Vietnam lasted 3 hours, 39 minutes.
3 November 1967: A-12 and SR-71 conduct a reconnaissance fly-off. Results were questionable.
23 January 1968: First A-12 overflight of North Korea during Pueblo incident with CIA pilot Frank Murray.
8 May 1968: Last A-12 operational mission flown.
5 June 1968: Last A-12 (#06932) to crash, lost in the South China Sea.

A-12 Development and Operations:

The development of the A-12 began back in the mid 1950s when the CIA decided that it would be best to replace the U-2. They desired an aircraft that would travel much faster and higher to avoid enemy defenses. Lockheed, the developer of the U-2 was also given the contract to develop this supersonic aircraft after a competition with Convair. Funded by the CIA, the project was called ARCHANGEL. The Skunk Works, a division of the Lockheed Aircraft Corporation went through twelve design proposals before they reached their final design, the A-12.

On 26 January 1960, the CIA ordered twelve A-12 aircraft. The next month, Lockheed began to search for 24 pilots for the A-12. Soon after in May of 1960, Francis Gary Powers was shot down in a U-2 over the Soviet Union. This event resulted in the United States and the Soviet Union signing an agreement not to fly manned vehicles over the Soviet Union again, a treaty that was undermined even before the SR-71 was built.

Research and development continued for a couple years before the first A-12 was completed and taken from Burbank to the Groom Lake test facility on 26 February 1962. A few months later, the A-12 made its first flight on April 25 with Lockheed test pilot Lou Schalk. During this flight, there were a few technical problems with the aircraft so the aircraft did not make its official first flight until 30 April 1962. After this event, a few days later, the aircraft went supersonic for the very first time and reached Mach 1.1 during the second test flight.

The A-12 was primarily an over-flight vehicle that was configured to fly over a target at a very high speed and high altitude. It got all of the coverage that it could and then made it back to the base. Now that the United States signed the treaty with the Soviet Union, the A-12 could never fly over the target that it was designed for. Therefore, the United States Air Force needed something more, the SR-71. The SR-71 was configured to use cameras that were for peripheral coverage. The aircraft did not need to go into enemy airspace. On 13 June 1962, the SR-71 mock-up was reviewed by the Air Force. A month later, the J58, the turbojet engine that is used in the SR-71 and A-12 completed its pre-flight testing. At this point in time, the A-12 still was going through flight-testing. When the A-12 made its first flight, it was with two J75 engines since Pratt & Whittney did not have the powerful J58 completed. On 5 October 1962, with the J58 testing complete, the A-12 flew with a J75 in the left nacelle and the new J58 on the right nacelle.

Early in 1963, the A-12 made its first flight with two of the J58 engines. During this year, the program experienced its first Blackbird loss when an A-12 crashed near Wendover, Utah on May 24th. Also, the aircraft made its first flight at Mach 3.2, the speed that the aircraft was intended to fly at in November. Due to a political motivation brought on by Barry Goldwater during the upcoming election, President Johnson announced the existence of the Blackbird on 29 February 1964. In June of 1964, the last A-12 was delivered to the Groom Lake test facility.

Two years later on 28 December 1966, the decision is made to terminate A-12 operations by 1 June 1968. The BoB (Bureau of the Budget) decided that it would be too costly to have both the SR-71 and the A-12 programs at the same time because both aircraft are very similar and do similar tasks. In May of 1967, A-12s were flown to Kadena Air Base on Okinawa, Japan and BLACK SHIELD unit was declared operational. Near the end of May in 1967 was the first flight of the A-12 in a combat

mission over North Vietnam, which lasted three hours and thirty-nine minutes. In November of 1967, the A-12 and the SR-71 conducted a reconnaissance fly-off to decide which aircraft was superior and worthy to keep. The final choice was the SR-71 but it is still debatable that the A-12 is superior.

In February of 1968, Lockheed was ordered to destroy all tooling used to create the Blackbirds. Also during this year, the first SR-71 arrived at Kadena to replace the A-12s and it also flew its first operational mission on March 21st. May 8th saw the last operational mission of an A-12, which was over North Korea. After this, all A-12s were sent back to Palmdale to be put into storage for several decades before going to museums around the United States.