

= Grumman XSBF =

The Grumman XSBF , also known by the company designation G @-@ 14 , was an American biplane scout bomber developed by Grumman Aircraft for the United States Navy during the 1930s . Derived from Grumman 's successful " Fifi " fighter , the aircraft was developed at a time when the biplane was giving way to the monoplane . In competition against other aircraft it proved to possess inferior performance in its intended role , and did not enter production . The sole prototype went on to serve as a liaison aircraft , as well as being used in experiments by NACA , before being destroyed in a crash in 1939 .

= = Design and development = =

In late 1934 , the U.S. Navy 's Bureau of Aeronautics (BuAer) issued a specification for new scout bomber and torpedo bomber designs . Eight companies submitted 10 designs in response , evenly split between monoplanes and biplanes . Grumman , having successfully provided the FF and F2F fighters to the Navy , along with the SF scout , submitted an advanced development of the SF @-@ 2 in response to the specification 's request for a 5 @, @ 000 lb (2 @, @ 300 kg) aircraft capable of carrying a 500 lb (230 kg) bomb . Given the model number G @-@ 14 by Grumman , the aircraft received the official designation XSBF @-@ 1 by the Navy , and a contract for a single prototype was issued in March 1935 .

The XSBF @-@ 1 was a two @-@ seat biplane , featuring an enclosed cockpit , a fuselage of all @-@ metal construction , and wings covered largely with fabric . Power was provided by a 650 hp (480 kW) Pratt & Whitney R @-@ 1535 Twin Wasp Junior air @-@ cooled radial engine driving with a variable @-@ pitch propeller . Armament was planned to be two .30 in (7 @. @ 62 mm) forward @-@ firing M1919 Browning machine guns , one of which could be replaced by a .50 in (12 @. @ 7 mm) M2 Browning ; the prototype carried only a single gun . A single .30 in weapon was fitted in the rear cockpit for defense , and one 500 lb (230 kg) bomb to be carried in a launching cradle under the fuselage . The arrestor hook was carried in a fully enclosed position , while flotation bags were fitted in the wings in case the aircraft was forced to ditch . The landing gear of the XSBF @-@ 1 was similar to that of the F3F fighter .

= = Operational history = =

The XSBF @-@ 1 ? piloted by test pilot Bud Gillies ? flew for the first time on December 24 , 1935 . Following initial testing , which found the aircraft to be reasonably faultless , the XSBF @-@ 1 was delivered to the U.S. Navy for evaluation in competition with two other biplanes submitted to the 1934 specification , the Great Lakes XB2G and the Curtiss XSBC @-@ 3 . Unusually for biplanes , all three types possessed retractable landing gear . The evaluation showed that the design from Curtiss was superior to the Grumman and Great Lakes designs , and an order was placed for the Curtiss type , designated SBC @-@ 3 Helldiver in service , in August 1936 .

With the competition lost , the development of the XSBF @-@ 1 came to an end ; the sole prototype was assigned to Naval Air Station Anacostia , where it had been tested , for use as a liaison aircraft and hack . In addition , the XSBF was used by the National Advisory Committee for Aeronautics ' Langley Research Laboratory as part of the facility 's work on aeronautical research . During its time at Anacostia , the aircraft was involved in three accidents , one each in 1937 , 1938 and 1939 ; after the first two accidents , it was repaired . The third accident ? on May 25 , 1939 ? resulted in the death of the pilot ; the XSBF @-@ 1 was no longer considered worth returning to flight status , and the aircraft was officially stricken from the Navy inventory in July 1939 .

The SBF @-@ 1 designation , unusually , was re @-@ used by the Navy during World War II , assigned to SB2C Helldivers produced under license by Fairchild Aircraft .

= = Operators = =

United States
United States Navy

= = Specifications (XSBF @-@ 1) = =

Data from

General characteristics

Crew : 2 (pilot and observer)

Length : 25 ft 9 in (7 @. @ 85 m)

Upper wingspan : 34 ft 6 in (10 @. @ 52 m)

Lower wingspan : 31 ft 6 in (9 @. @ 60 m)

Height : 11 ft 3 in (3 @. @ 43 m)

Wing area : 310 sq ft (29 m²)

Airfoil : Clark CHY

Empty weight : 3 @, @ 395 lb (1 @, @ 540 kg)

Gross weight : 5 @, @ 002 lb (2 @, @ 269 kg)

Fuel capacity : 130 US gal (490 l)

Powerplant : 1 × Pratt & Whitney R @-@ 1535 @-@ 72 Twin Wasp Junior radial engine , 650 hp (480 kW)

Propellers : 2 @-@ bladed Hamilton Standard variable @-@ pitch

Performance

Maximum speed : 215 mph (346 km / h ; 187 kn)

Stall speed : 67 mph (58 kn ; 108 km / h)

Range : 525 mi (456 nmi ; 845 km)

Combat range : 688 mi (598 nmi ; 1 @, @ 107 km)

Service ceiling : 26 @, @ 000 ft (7 @, @ 925 m)

Armament

Guns :

1 × .30 in (7 @. @ 62 mm) machine gun in cowling

1 × .30 in machine gun in rear cockpit

Bombs : Up to 500 pounds (230 kg)