

# HELLDIVER

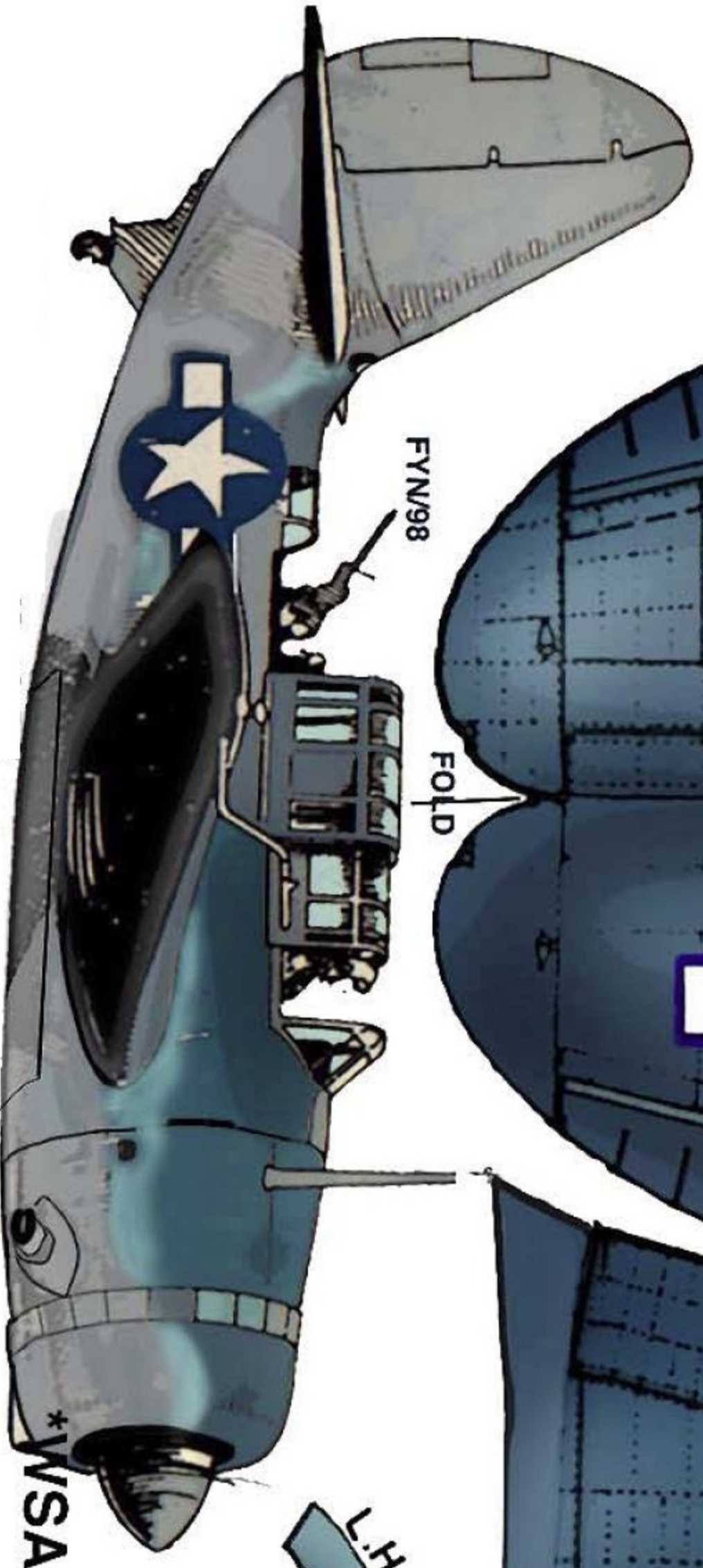
CURVE HERE

CURTISS SB2C

SHEET 1

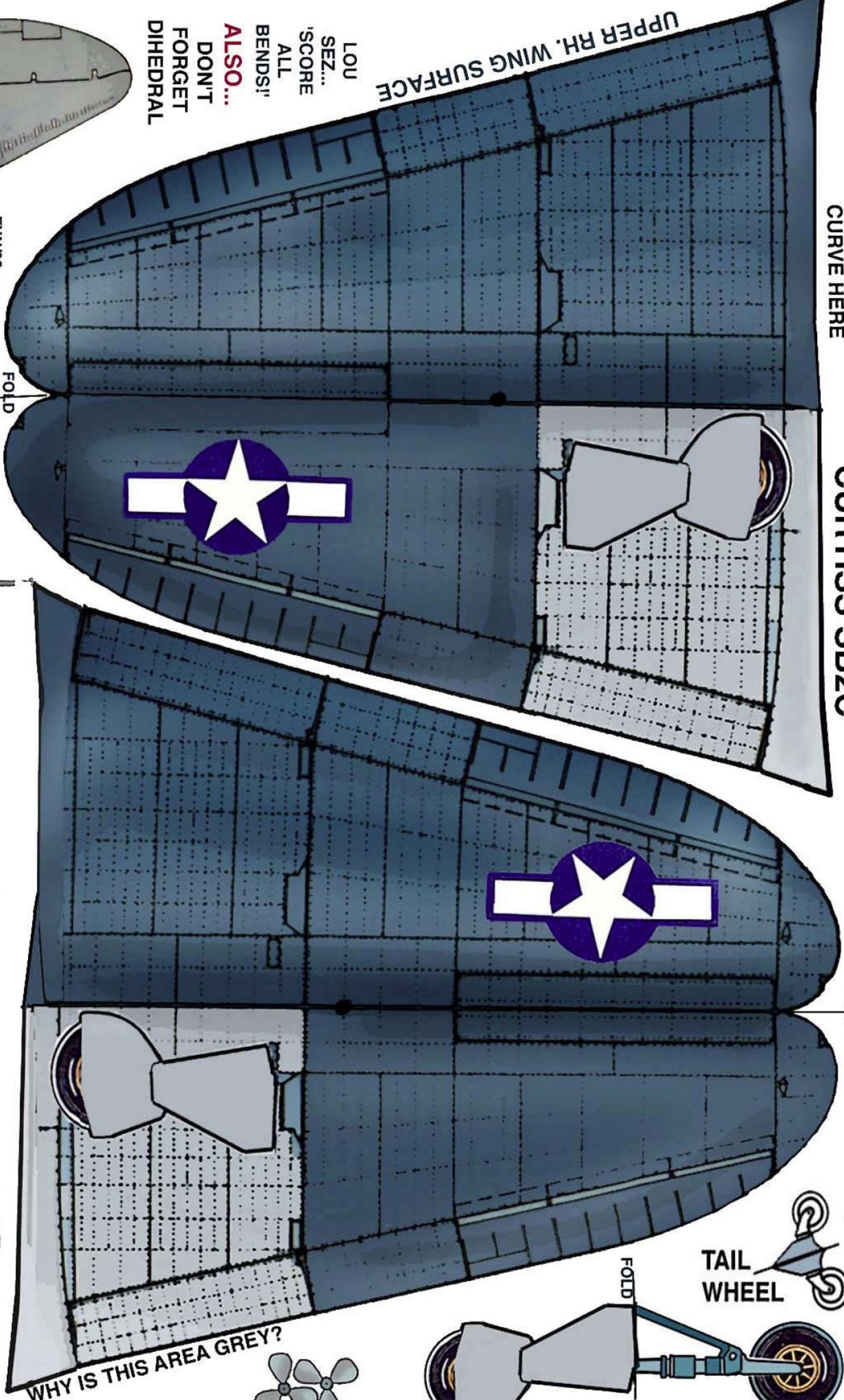
UPPER RH. WING SURFACE

LOU  
SEZ...  
'SCORE  
ALL  
BENDS!  
**ALSO...**  
DON'T  
FORGET  
DIHEDRAL



FY/N/98

FOLD



WING  
FAIRINGS

L.H.

\*WSAM\* 72%

CURVE

FOLD

TAIL  
WHEEL

FOLD

LANDING GEAR  
STIFFEN WITH TOOTHPICK

WAR HEAD

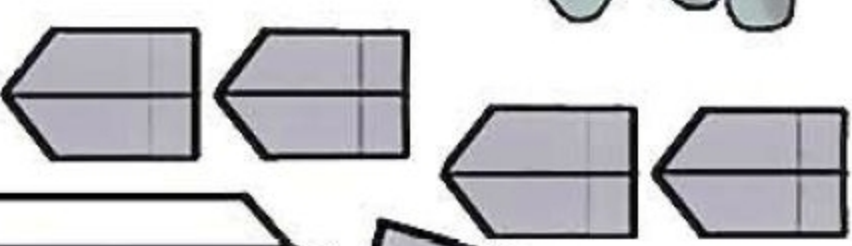
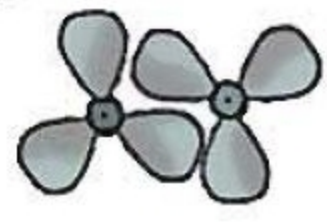
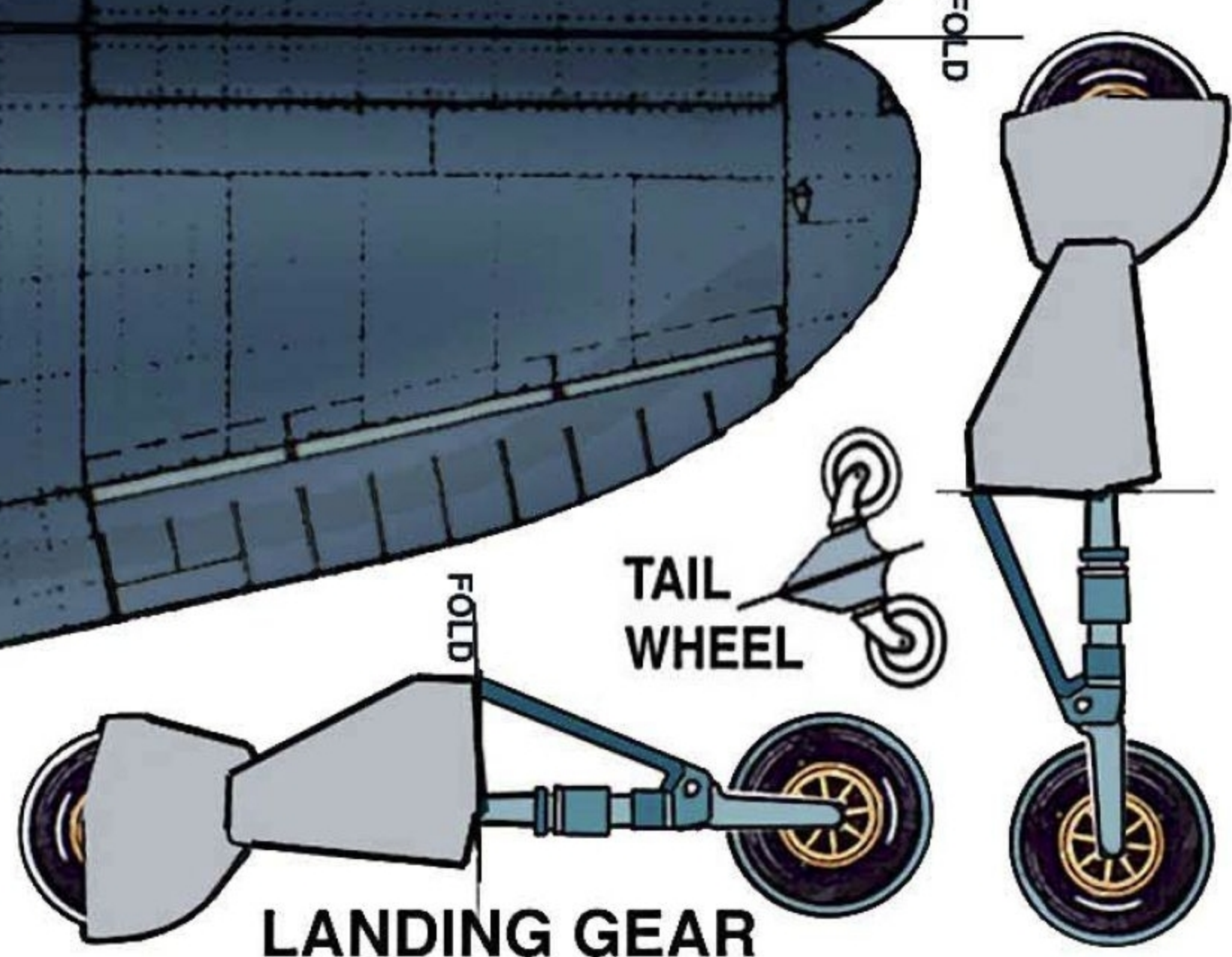
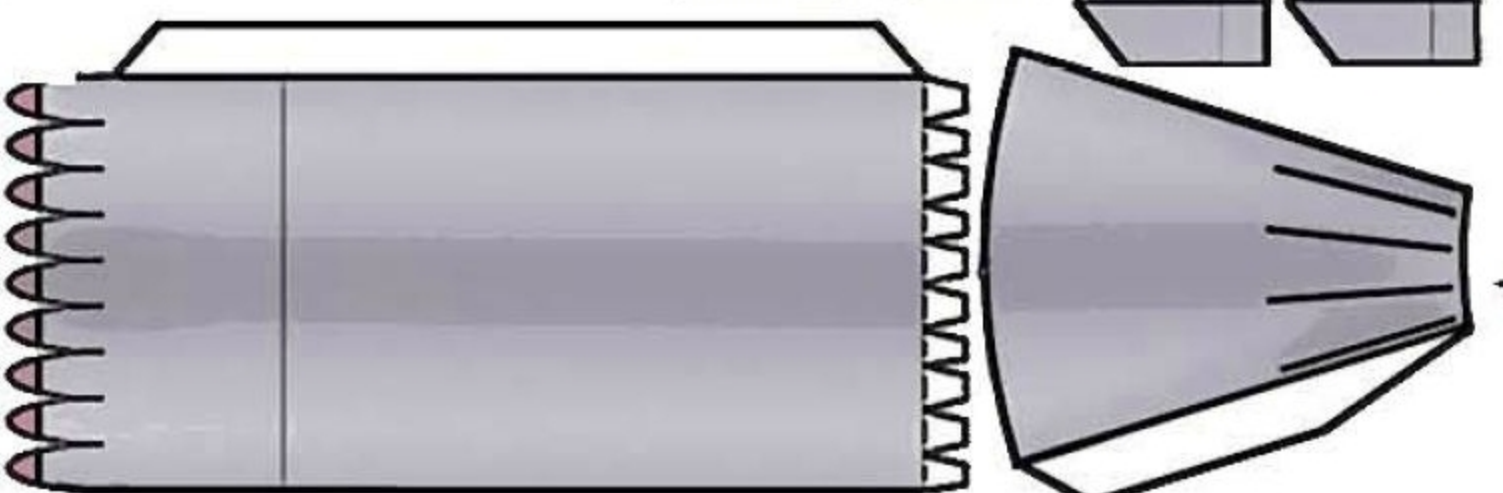
AERIAL TORPEDO

PROPELLER  
(6 BLADES  
CONTRA-ROTATING)

STEERING  
VANES

WHY IS THIS AREA GREY?

GLUE ABUNDANTLY  
AND FORM NOSE

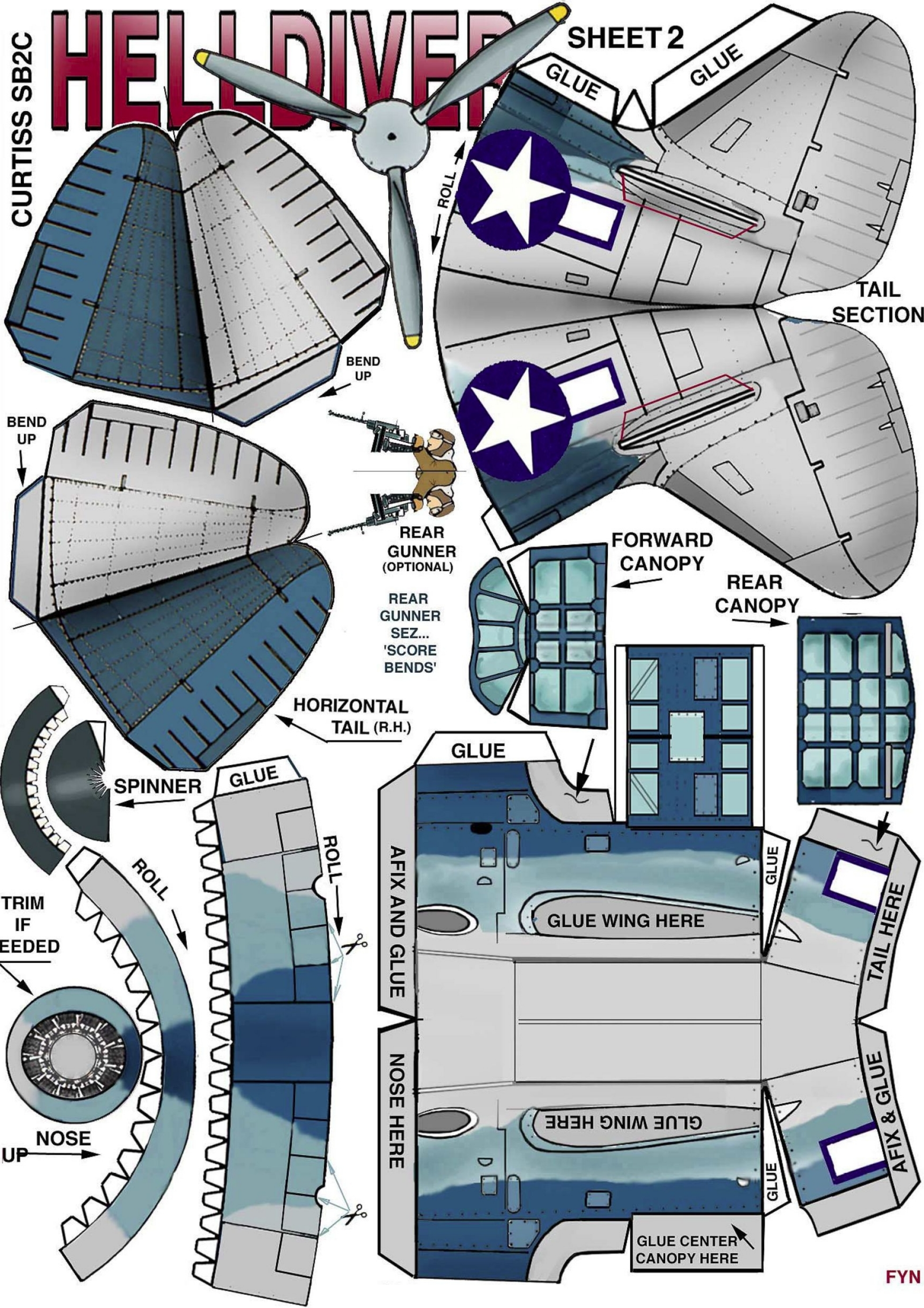




CURTISS SB2C

# HELLDIVER

SHEET 2



GLUE

GLUE

ROLL

TAIL SECTION

BEND UP

BEND UP

REAR GUNNER (OPTIONAL)

REAR GUNNER SEZ... 'SCORE BENDS'

FORWARD CANOPY

REAR CANOPY

HORIZONTAL TAIL (R.H.)

SPINNER

GLUE

GLUE

TRIM IF NEEDED

ROLL

ROLL

AFIX AND GLUE

GLUE WING HERE

GLUE

TAIL HERE

NOSE UP

NOSE HERE

GLUE WING HERE

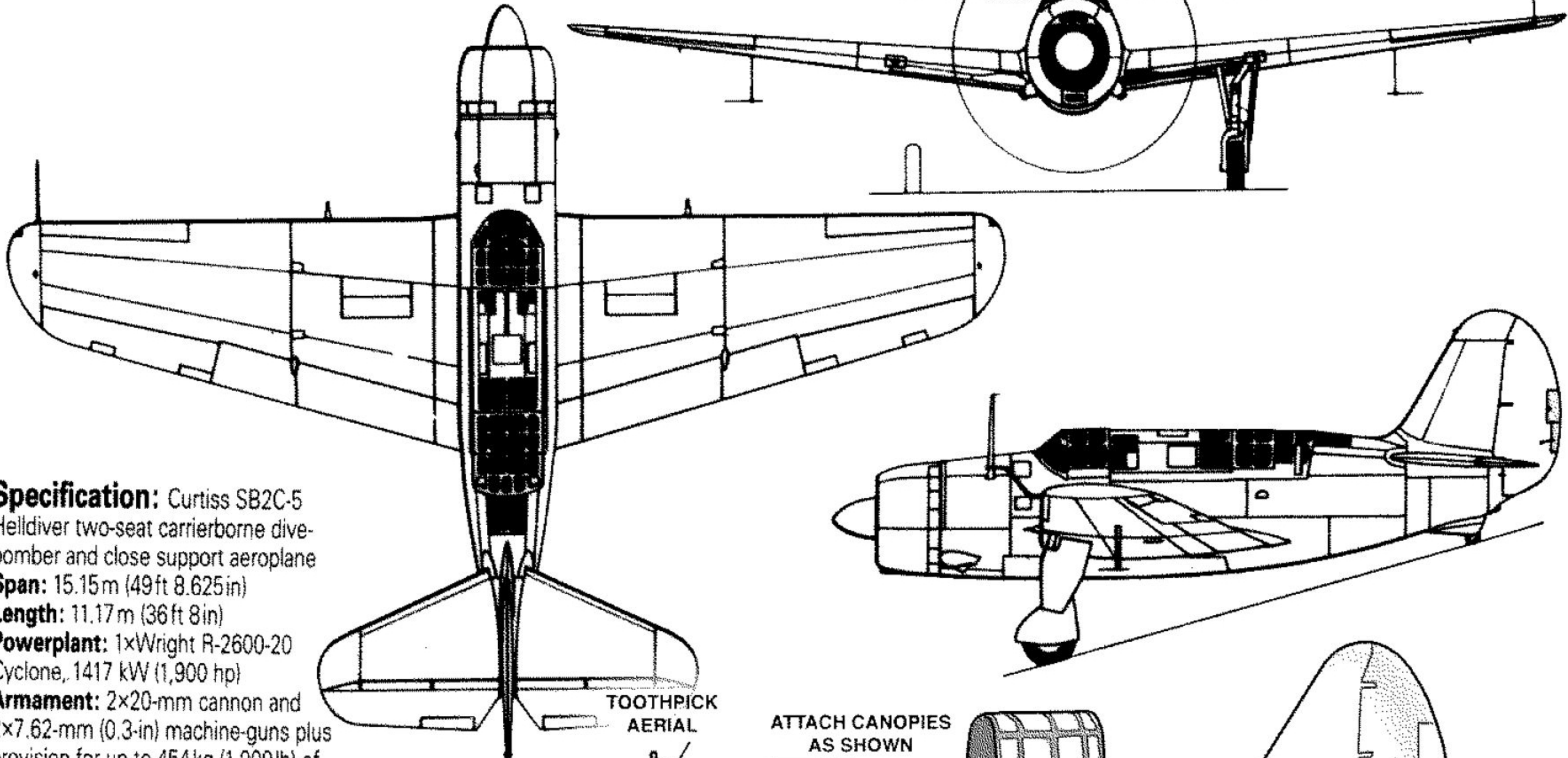
GLUE

AFIX & GLUE

GLUE CENTER CANOPY HERE



# CURTISS SB2 HELLDIVER



**Specification:** Curtiss SB2C-5 Helldiver two-seat carrierborne dive-bomber and close support aeroplane

**Span:** 15.15m (49ft 8.625in)

**Length:** 11.17m (36ft 8in)

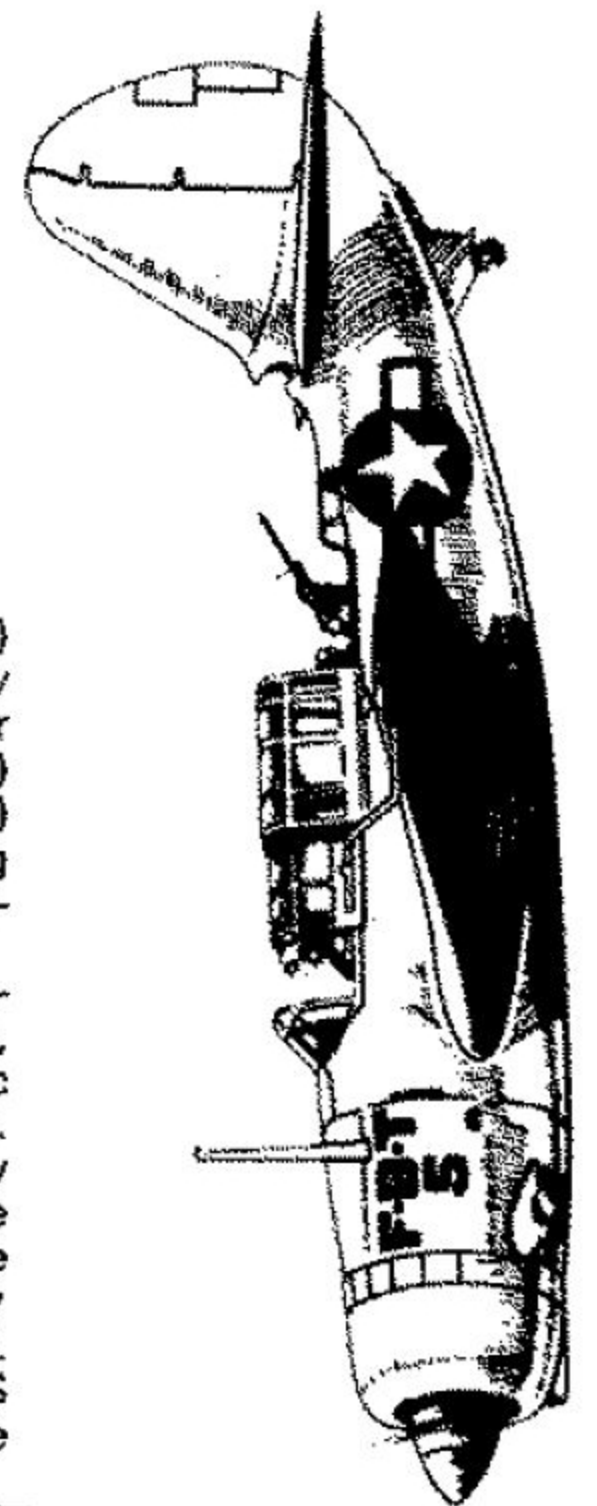
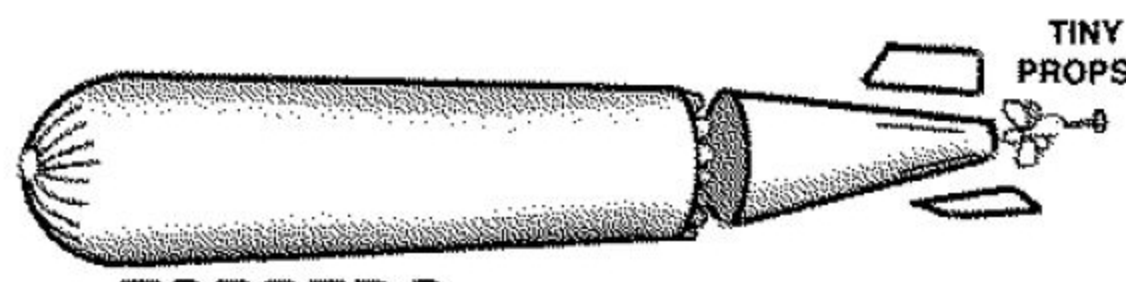
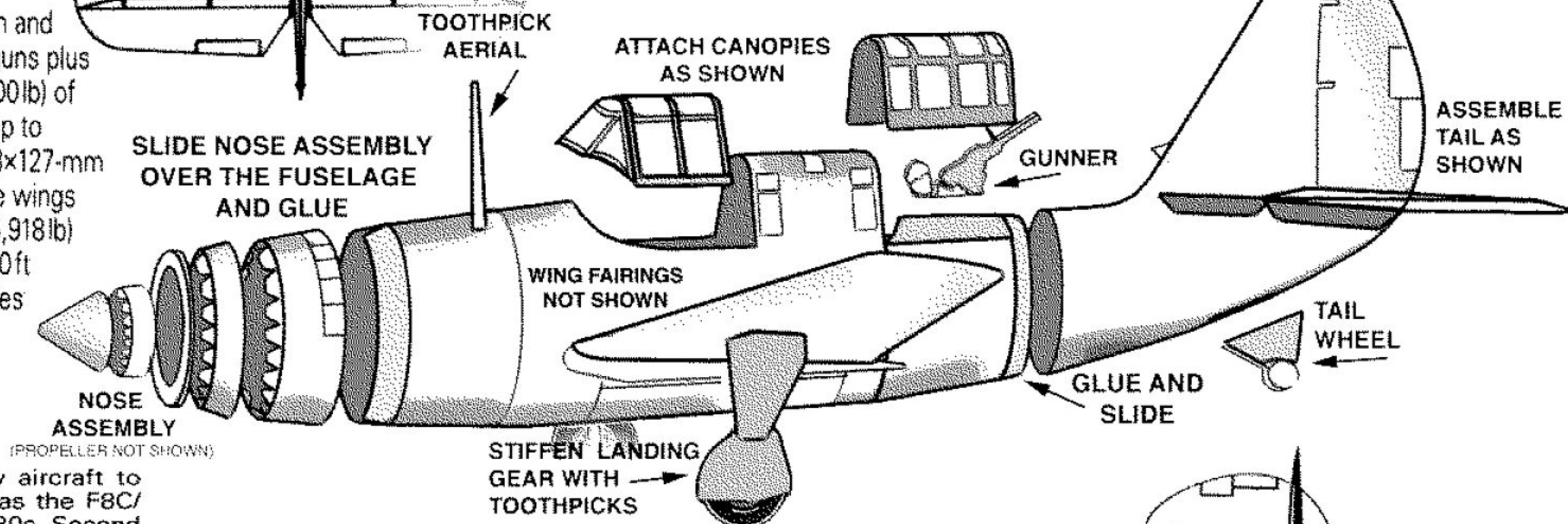
**Powerplant:** 1xWright R-2600-20 Cyclone, 1417 kW (1,900 hp)

**Armament:** 2x20-mm cannon and 2x7.62-mm (0.3-in) machine-guns plus provision for up to 454 kg (1,000lb) of bombs carried internally and up to 454 kg (1,000lb) of bombs or 8x127-mm (5-in) rockets carried under the wings

**Max T/O weight:** 7220 kg (15,918lb)

**Max speed:** 260mph at 16,100ft

**Operational range:** 1,805 miles



First Curtiss-built US Navy aircraft to bear the name Helldiver was the F8C/O2C biplane of the early 1930s. Second in line was the SBC Helldiver of the late 1930s, the last combat biplane to be built for the US services. Last and most famous of the line was the **SB2C Helldiver** of the early 1940s: this was the final combat aeroplane built by Curtiss for the US Marine Corps/US Navy, and the most extensively built of all US Navy dive-bombers.

In 1938 the US Navy began the process of procuring a new scout-bomber, to replace the SBC Helldiver which was then still in production. From the proposals received, Brewster and Curtiss were awarded contracts for prototypes of their contenders, the former being designated XSB2A-1 and entering production as the SB2A Buccaneer. The **Curtiss Model 84** prototype, designated **XSB2C-1** (1758), flew for the first time on 18 December 1940, but was destroyed in a flying accident in early January 1941. Fortunately, the US Navy had great faith in this design (to the extent that large scale production had been authorised on 29 November 1940), but it was not until 18 months later, in June 1942, that the first production **SB2C-1** was flown. This extended development period resulted mainly from a US Army Air Corps order for 900 **A-25A Shrike** aircraft in April 1941. Generally similar to the SB2C-1, this **Model 84** caused delay as a result of the need to ensure compatibility of design and equipment to satisfy both the US Navy and US Army. In the final analysis only a few of the A-25As entered US Army service; the majority were re-assigned to the US Marine Corps under the designation **SB2C-1A**.

Production SB2C-1s began to enter service with US Navy Squadron VS-9 in December 1942, but further protracted delays in finalising details of the best combat configuration prevented their initial operational employment until late 1943.

In configuration the SB2C was a low-wing cantilever monoplane largely of all-metal construction, the outer panels of the wings folding upwards for carrier stowage. The trailing-edge flaps were perforated and of split type so that they could be used also as dive-brakes, and wingtip leading-edge slats, of approximately the same span as the ailerons, were deployed automatically as the landing gear was lowered to ensure the ailerons remained fully effective at low speeds. Retractable wide-track landing included a semi-retractable steerable tailwheel. Arrestor gear and catapult launching spools were standard, but this latter equipment and wing-folding capability was deleted from the A-25A version produced for the US Army. Powerplant of the prototype and SB2C-1s

consisted of a 1268-kW (1,700-hp) Wright R-2600-8 Cyclone 14 twin-row radial engine. Armament comprised four wing-mounted 12.7-mm (0.5-in) machine-guns, two 7.62-mm (0.3-in) guns in the rear cockpit, and up to 454 kg (1,000 lb) of bombs carried in an under-fuselage bomb bay.

It is not surprising that, with production totalling more than 7,000 examples, there were several variants of the basic design, details of which are given below. Only 26 of this total were used by any other service during World War II, for the type was of such great value in the Pacific theatre that the US Navy absorbed almost the entire production. Many continued in service with the US Navy in early postwar years, and some were eventually sold to other nations.

**Type:** two-seat carrier based scout/bomber  
**Powerplant:** one 1417-kW (1,900-hp) Wright R-2600-20 Cyclone 14 radial piston engine  
**Performance:** maximum speed 475 km/h (295 mph) at 5090 m (16,700 ft); cruising speed 254 km/h (158 mph); service ceiling 8870 m (29,100 ft); range 1875 km (1,165 miles)

**Weights:** empty 4784 kg (10,547 lb); maximum take-off 7537 kg (16,616 lb)  
**Dimensions:** span 15.16 m (49 ft 9 in); length 11.18 m (36 ft 8 in); height 4.01 m (13 ft 2 in); wing area 39.20 m<sup>2</sup> (422.0 sq ft)  
**Armament:** two wing-mounted 20-mm cannon and two 7.62-mm (0.3-in) machine-guns in rear cockpit, plus up to 907 kg (2,000 lb) of bombs in fuselage bay and on underwing racks