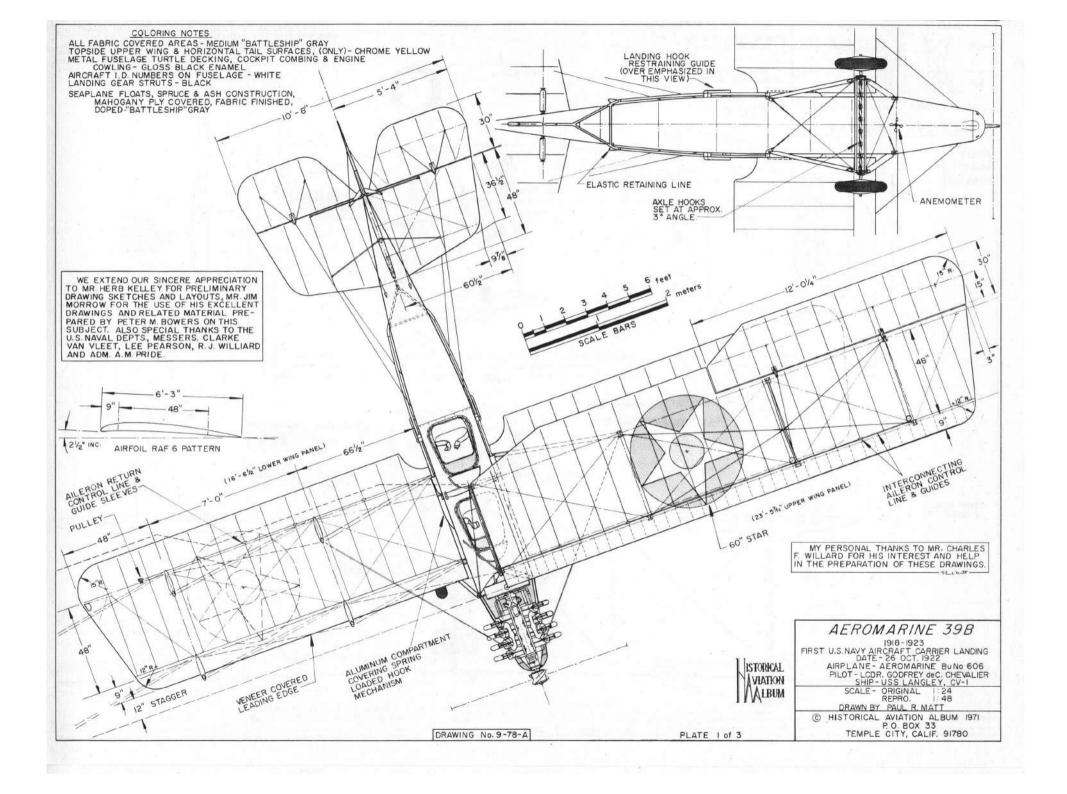


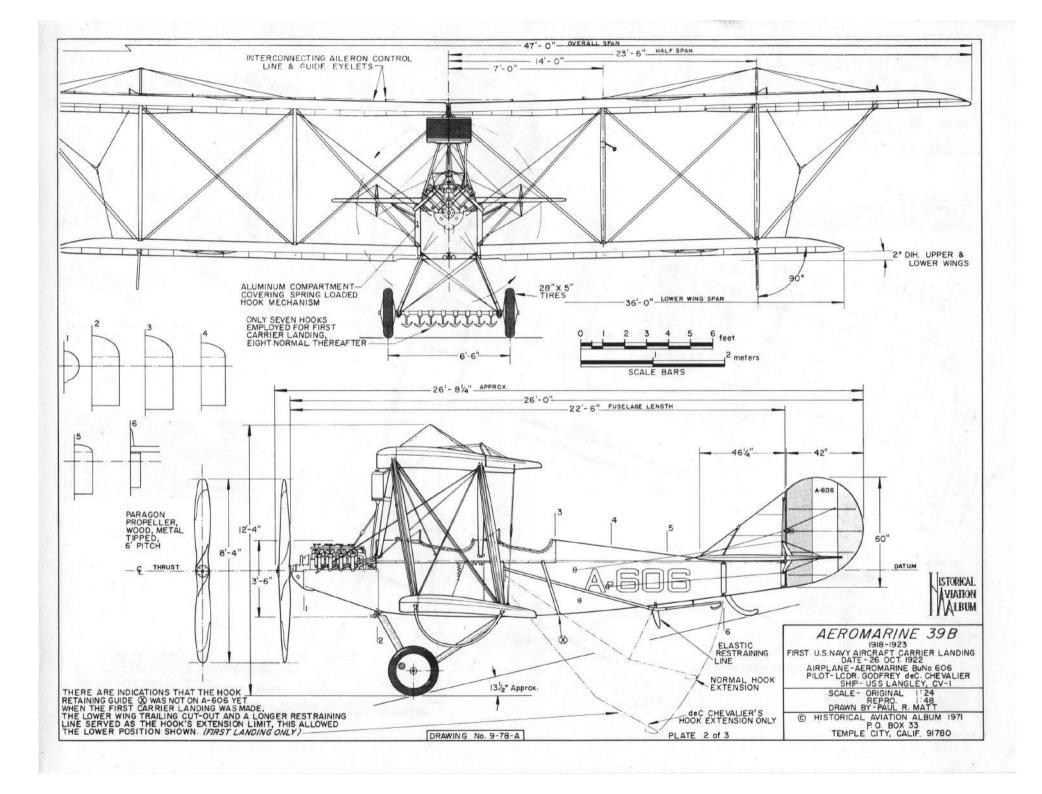
BELL P-39Q

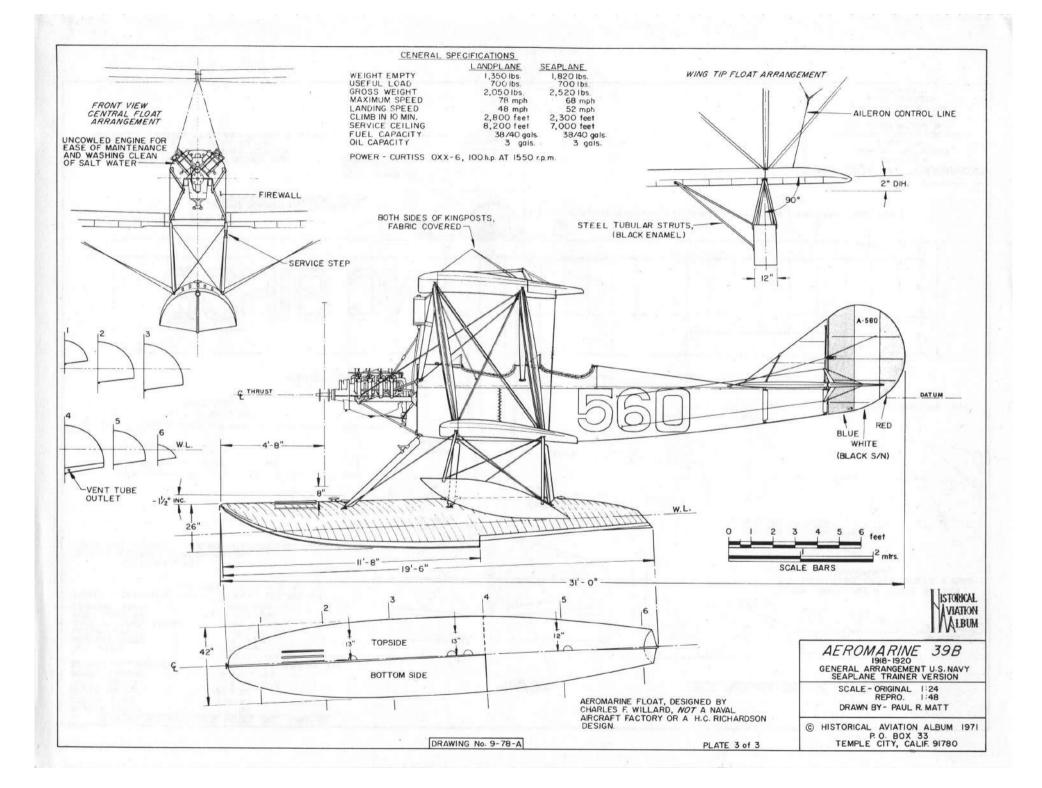
# This CD-ROM contains the following Paul Matt 3-view drawings and photos: (CD-ROM also contains contents files in the following formats: TXT, DOC)

AEROMARINE 39B	BERKMANS "SPECIAL SCOUT"		
<b>AERONCA 7AC</b>			
AERONCA C-2	BERLINER-JOYCE OJ-2	CONSOLIDATED PBY-5A	
AERONCA C-3 "COLLEGIAN"	BERLINER-JOYCE XF3J-1	CURTISS "CARRIER PIGEON"	
AERONCA C-3 "MASTER"	<b>BOEING 307</b>	CURTISS "1st MILITARY"	
AERONCA K	<b>BOEING F3B-1</b>	CURTISS A-3B	
AERONCA LB	<b>BOEING XF7B-1</b>	CURTISS AT-9	
ALCOR C.6	<b>BRESTER F2A-3</b>	CURTISS B-2	
ANDERSON AG-14	CESSNA 120/140	CURTISS B-20	
BEECHCRAFT	CESSNA C-37	CURTISS 1912	
D-18S	CESSNA T-50	"F BOAT"	

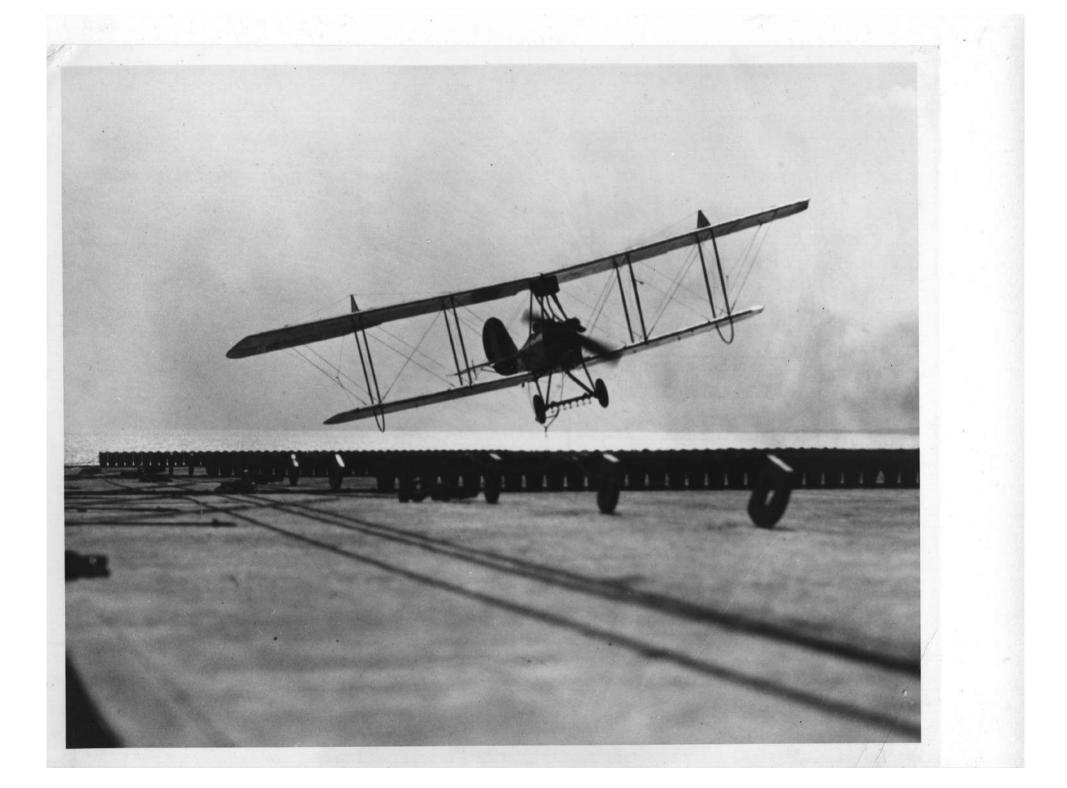
**CURTISS F9C-2** 



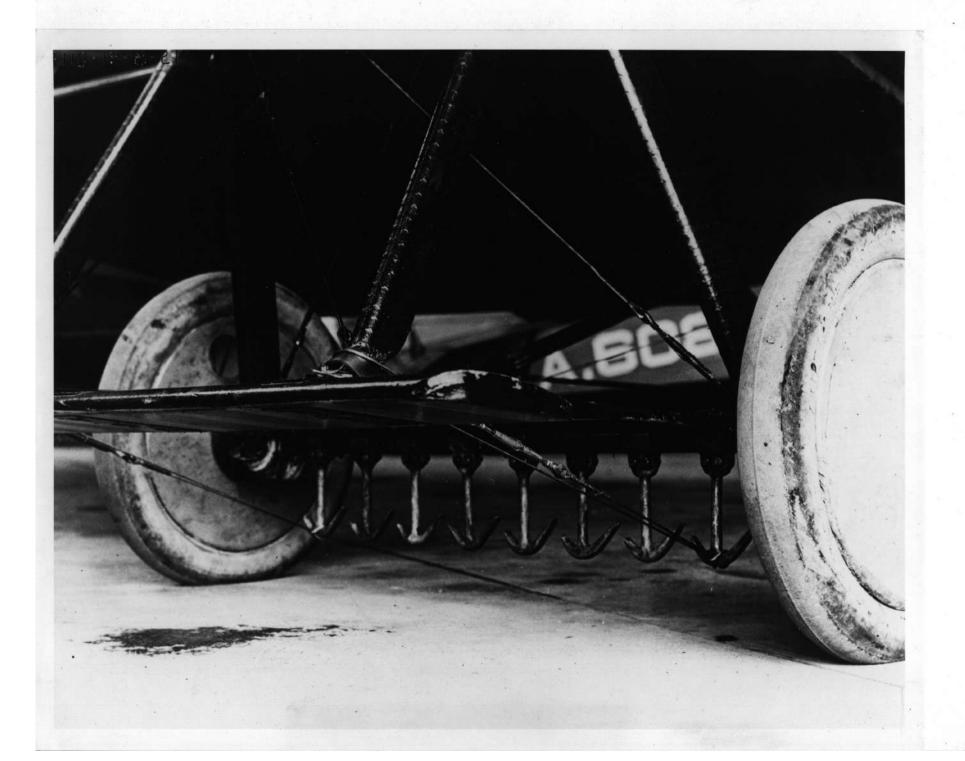


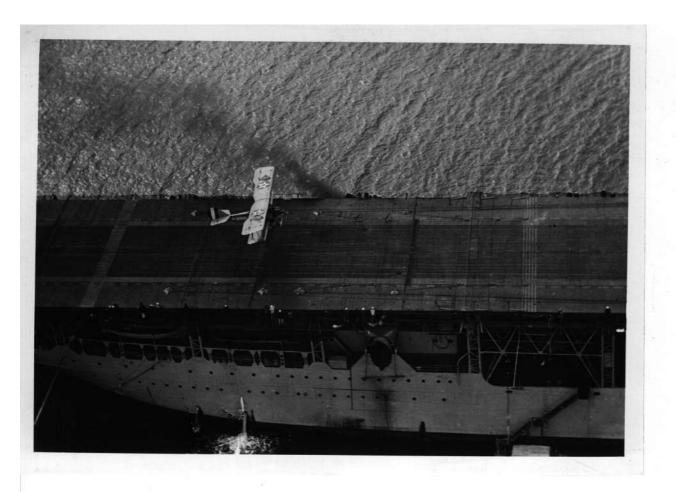


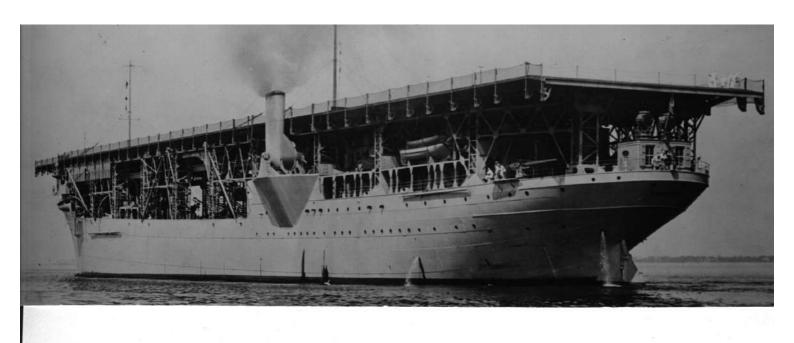


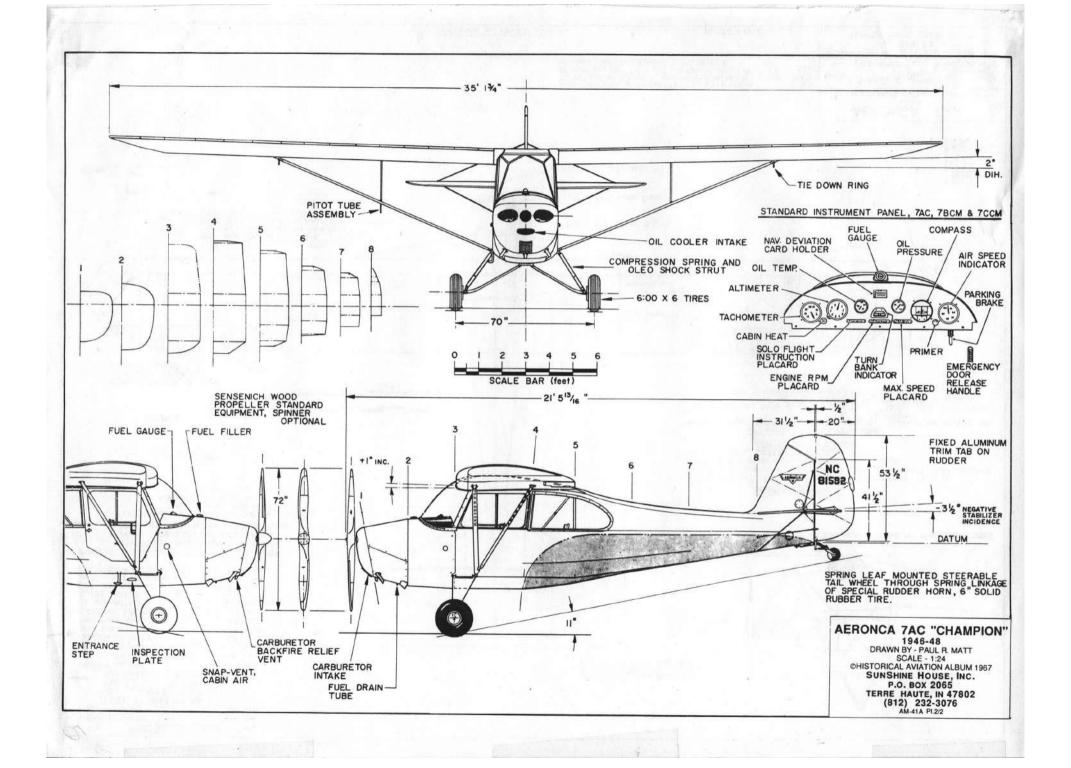


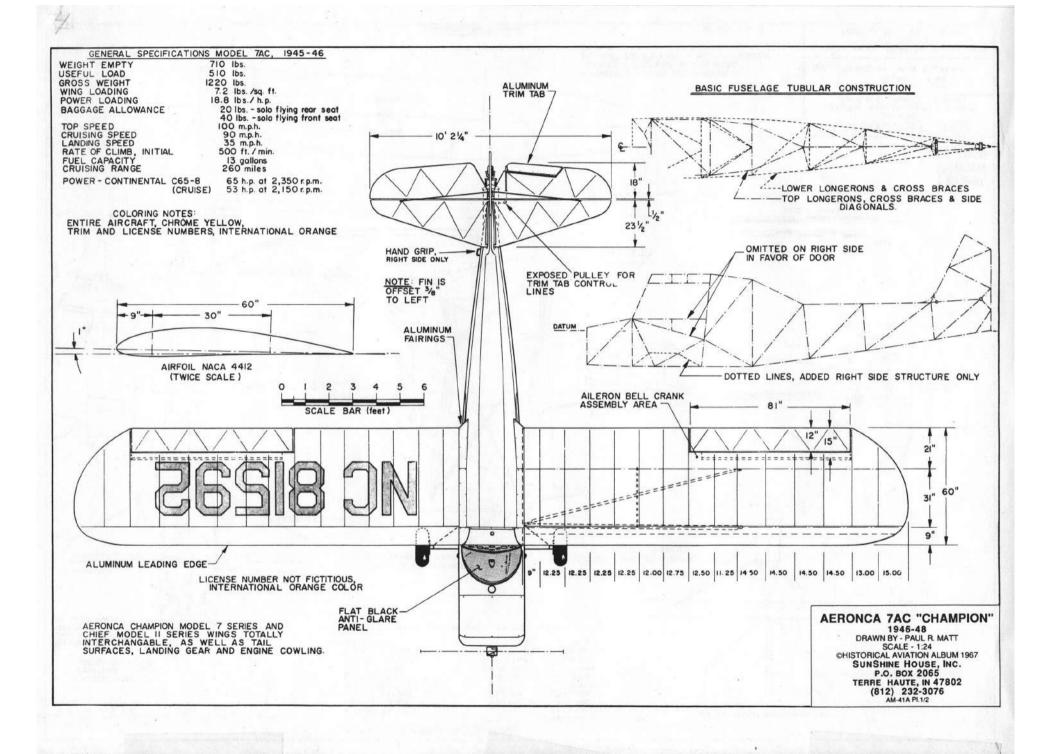














### General Specifications for Aeronca 7AC

Wing Span	35' 1 3/4"
Chord	
Wing Area	
Airfoil	
Overall Length	21' 6"
Overall Height	
Empty Weight	
Useful Load	
Wing Loading	
Power Loading	
High Speed	
Cruising Speed	90 mph
Landing Speed	
Rate of Climb Initial	500 ft./min.
Fuel Capacity	
Cruising Range	
Baggage Allowance flying	
	40 lbs. — solo flying from front seat
Absolute Ceiling	
Take Off Run	

#### Facts on the Aeronca 7AC

April 29	1944	7AC experimental completed to become NC39556
May January	1944 approx. 1945	First Flight Flight Tested for CAA approval
Test Pilot: October 18	1945	Louis E. Wehrung Received ATC #759 Last 7AC, S/N 7190 was built
April 12 June	1948 1954	Champ rights sold to Champion Aircraft Corporation of St. Paul, MI

	Year	" D III	0ta
Models	Built	# Built	Comments
7AC	1945	7,200	A65 Continental
7BCM	1947	509	(L-16A) M for Military C-85 Injected Continental engine
7CCM	1948	225	(L-16B) M for Military C-90 Injected Continental Dorsal Fin
7DC	1948	168	C-85 Continental engine, Dorsal Fin
7EC	1949	96	C-98 Continental with electric system, Dorsal Fin
Total Buil	lt	8,198	+00-€ 40+0+00 40 40 40 40 40 40 40 40 40 40 40 40 4

#### **Coloring Notes**

Entire Aircraft — Chrome Yellow Trim and License Numbers — International Orange

#### **AERONCA CHAMPION**

During the closing months of World War II a great many aircraft manufacturers turned to the design and construction of a trainer type airplane in anticipation of an overwhelming grass-roots move to "Mr. Averageman" taking wings. For the most part this dream of grandeur never materialized. The majority of the light, two-place postwar offerings were cleaned up versions of pre-war types. While these aircraft were well accepted, none quite received the immediate attention and high praise of the Aeronca Champion.

It was early in 1944 when the chief engineer, Raymond Hermes working for the Aeronautical Corporation of America in Middletown, OH, put his slide rule to work and laid out the preliminary drawings for what would become known as the Model 7 series Champion. The new design was nothing extraordinary or radical. While the basic configuration followed the pre-war TA series of popular tandem trainers and the military 0-58 Defender counterparts produced during the war, the Champion was a completely new design and incorporated a number of welcome features.

Following the war, the conventional gear was still the most acceptable even though as far as the manufacturers were concerned, it was to be the final days of the tail draggers. One of the biggest drawbacks with the tailwheel configuration has been forward visibility when the aircraft is on the ground. This is especially true with the tandem seating arrangement.

Good visibility was not the only attribute the Champion had for its brisk but brief postwar market. The large one-piece autotype door, the large and sensitive elevator trim tab and combination oleo-spring shock absorbing system of the main landing gear were also big plus features.

The fuselage was of welded steel tubing, faired with plywood formers and wood stringers. The basic tubular framework was triangular in shape aft of the cabin area. The wing consisted of two wood spars and metal ribs with an aluminum sheet leading edge. Tail surfaces were metal tube construction and the entire aircraft fabric covered. Somewhat novel at the time was a brown sprayed-on flocking used for the cabin lining surface. This simple textured finish proved both durable and eye appealing and also served as sound proofing.

Power was supplied by the Continental A-65-8 engine rated 65 hp at 2,350 rpm take-off and emergency, 53 hp at 2,150 rpm cruise setting. This provided the Champion with an honest top speed of 100 mph, cruising speed of 83/90 mph and a stalling speed of 38 mph. On the normal fuel capacity of 14 gallons, a range of 270 miles could be obtained at cruise. This was excellent performance on such low horsepower. The Champ featured as standard



equipment a full complement of VFR instruments, dual mechanical wheel brakes in the front cockpit, a parking brake, wiring for navigation lights, fittings for radio installation, steerable tail-wheel, dual stick control, rudder pedals, throttle, carburetor controls and ignition switch. While the company recommended solo flying from the front seat, the plane was just as stable when soloing from the rear seat. It was also suggested that the student use the front seat during dual instruction and it was found that he learned the rudiments faster; a reverse of early policies and training procedures.

Initial rate of climb was 500 ft. per minute with the best climb being at 60 mph. The Champion was a thoroughly honest airplane; coordination of controls came easily and stalls were smooth with no tendency to fall off on a wing. Turns were natural right up to the near vertical bank where the plane seemed to help you in establishing the correct attitude to make the maneuver like an expert. Although the Champ could be put into a spin, it wanted to work itself around this maneuver and it took a bit of forcing to make it perform. This was even more prevalent on later models with the added dorsal fin.

The two prototypes Aeronca Model 7AC Champions, NC39556 and NC39557 were completed on April 19, 1944. A third and fourth machine, NC39562 and NC39632, joined the evaluation and sales force as demonstrators shortly thereafter. Chief test pilot, Louis E. Wehrung, took up 7AC No. 1 on its maiden flight at the Middletown Airport in May 1944 and the Champion took wings. The first three machines were international orange and chrome yellow in color. Number three sported a green and yellow scheme. These optional colors and a variance upon a design theme were to be offered to the public but, in the interest of maintaining a set production line and keeping costs low, only the familiar and attractive orange and yellow survived. Flight tests of the prototype for CAA approval were flown in January 1945. The ATC 759 was granted the Aeronca Model 7 series on October 18, 1945. Under this certificate the Champion was also eligible for operation on twin floats or with skis when flying from winter snows.

They called it the Aeronca Champion, the Champ, the Airknocker, the Sunday Putt Putt, but whatever the name, it was usually said with affection. For the model builder, the Aeronca Champion is a natural flyer for scale free light, U.C., R.C. or just as an attractive, part and close display model.

attractive, neat and clean display model.





## AERONCA: Champion,

CHAMPION For several years Aeronca has been a leader in the field of lightplane trainers. The *Champion* is one of the best of Aeronca's long line. A tandem ship, the two-place trainer is powered by 65-hp Continental, cruises at 90 mph. With a full load, it has a baggage capacity of 40

pounds. The Champion is CAA-approved for floats and skis. Because of the plane's sturdiness, its short take-off run and easy handling, it is used by many farmers and ranchers for quick checking of farm lands, cattle, etc., and for hurried trips to town for equipment parts, etc. Not a few sportsmen use Champions on floats to fly them to inland waterways for fishing, hunting. The Champion today sells for \$2475. A radio receiver calls for \$70 more.





Aeronca Champ

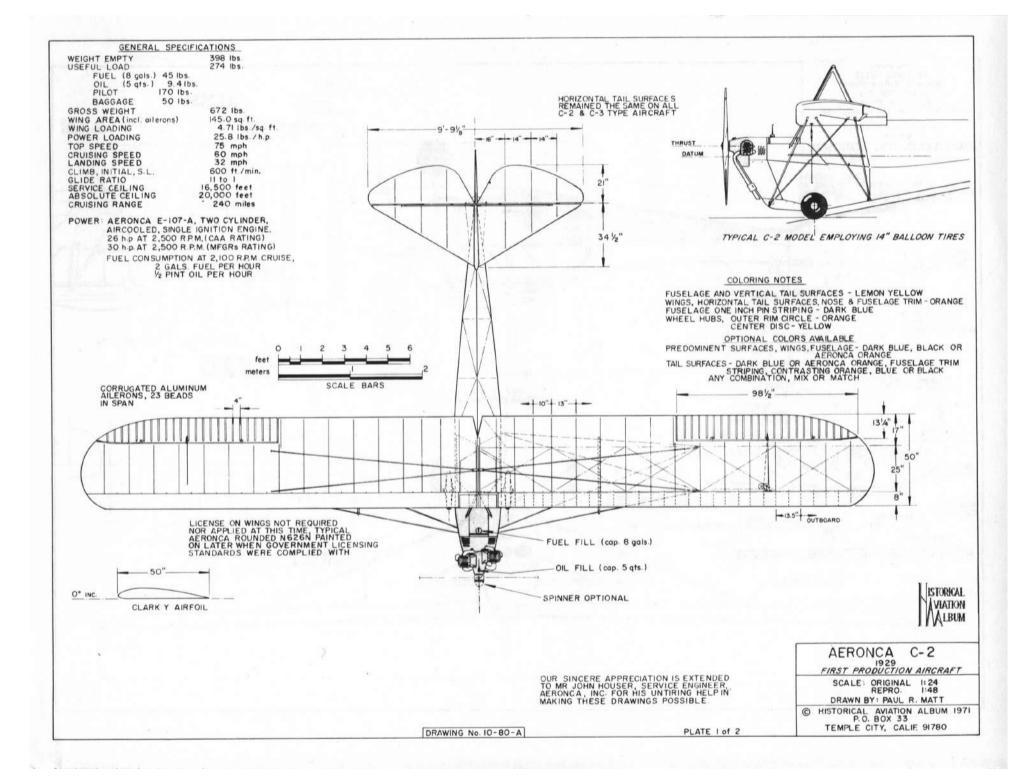


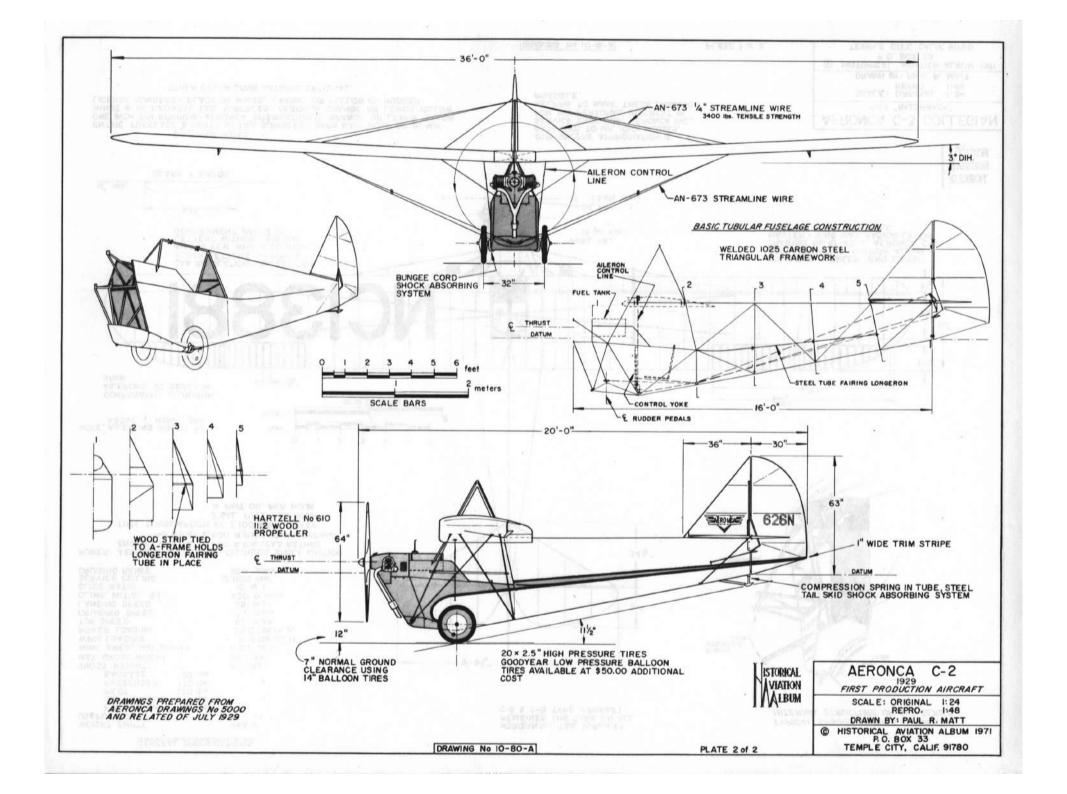


Aeronca Champ





















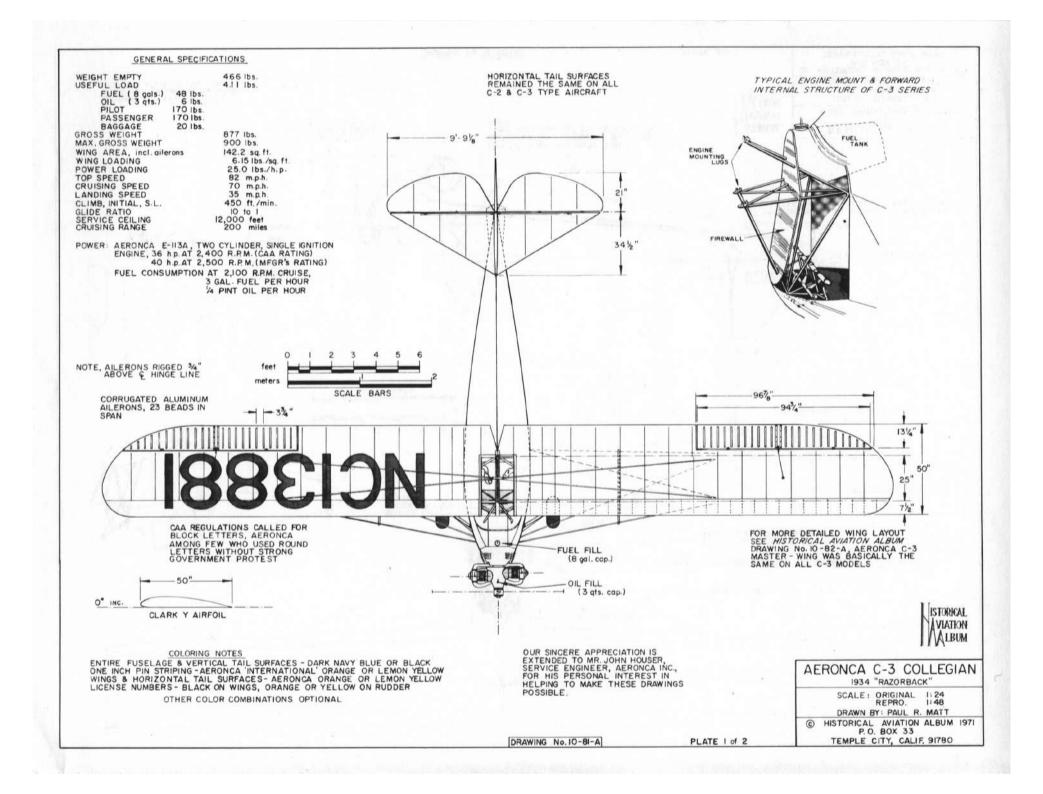


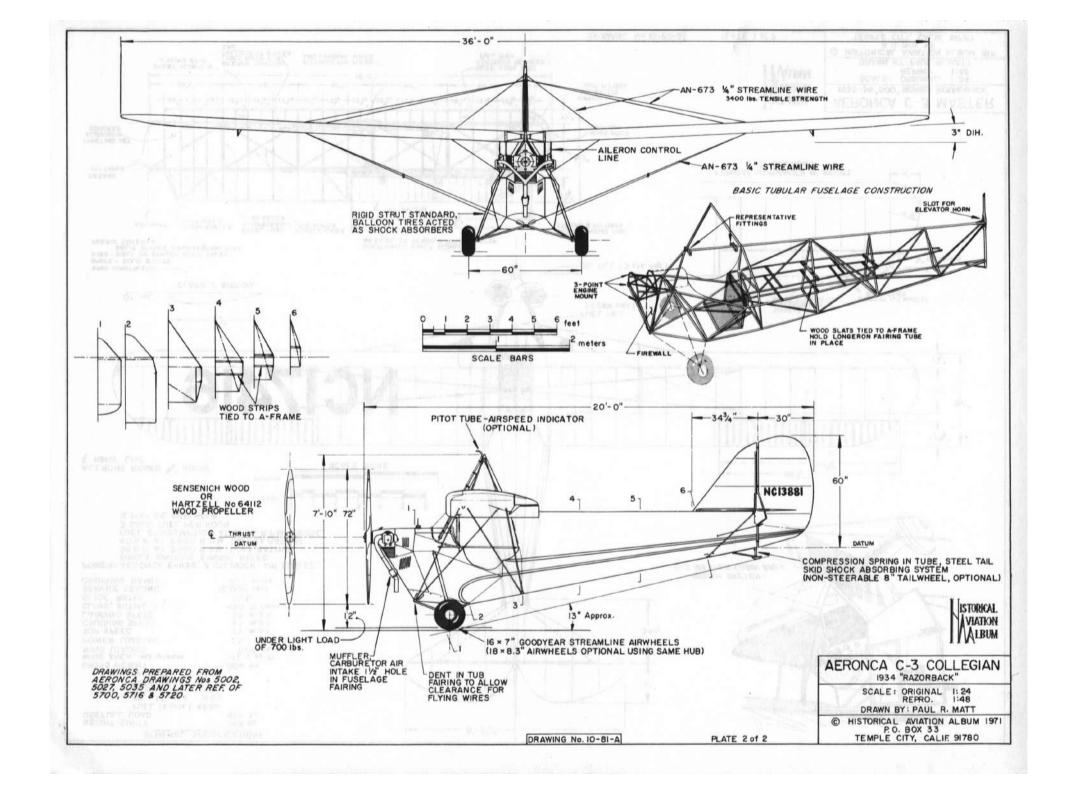








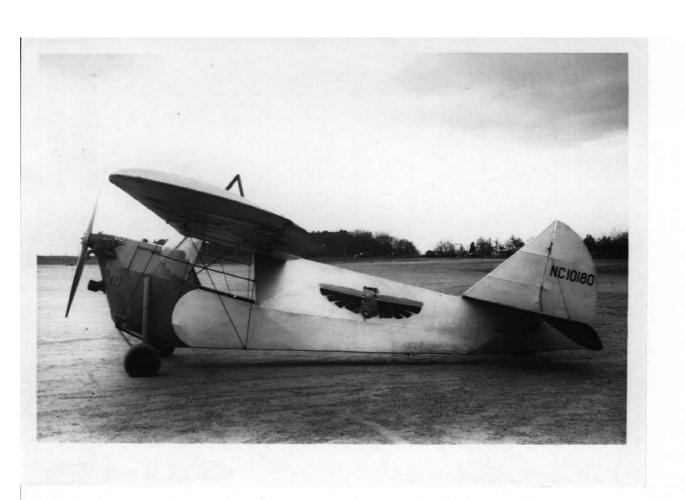






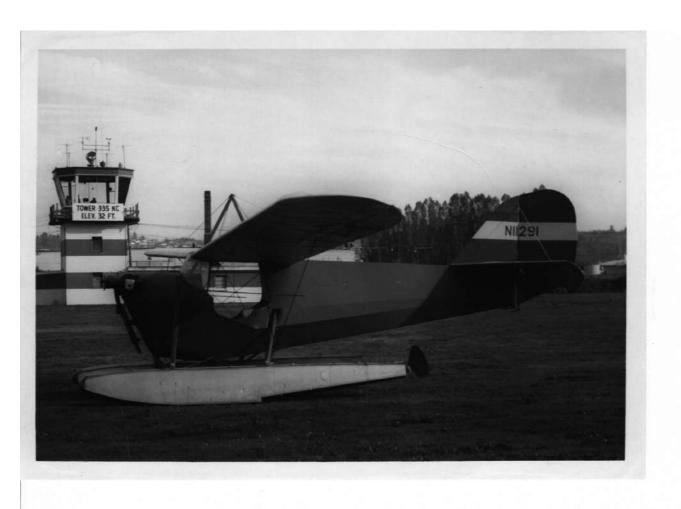






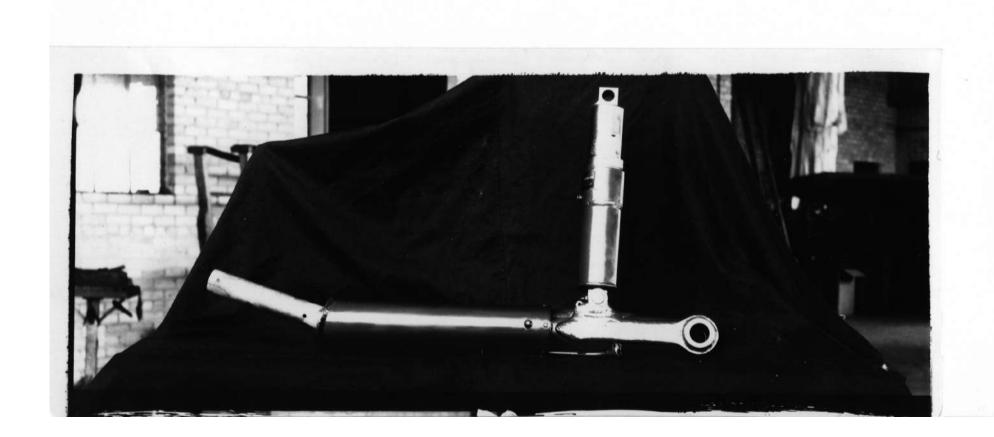


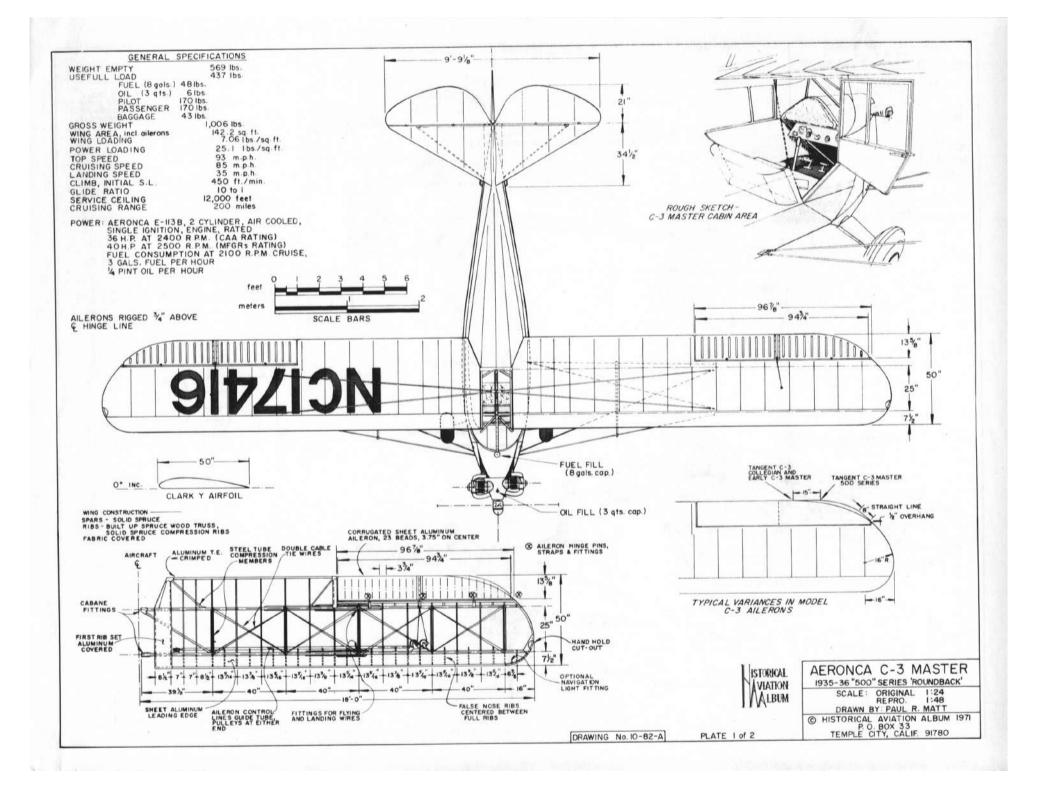


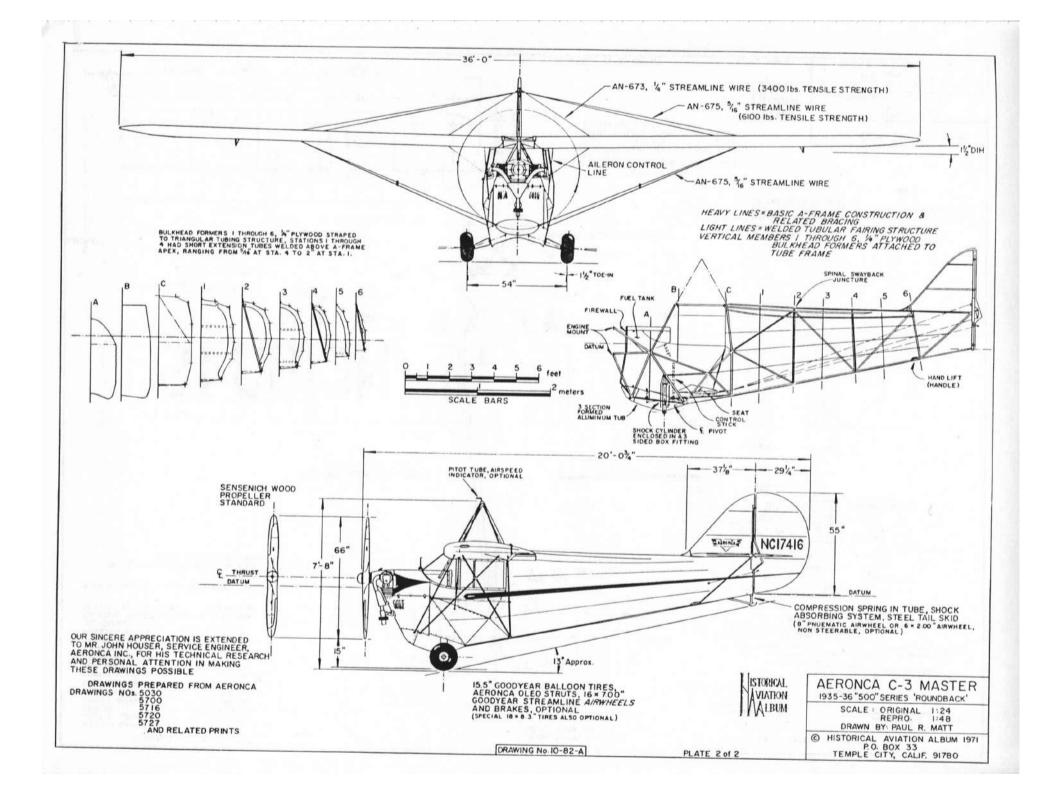








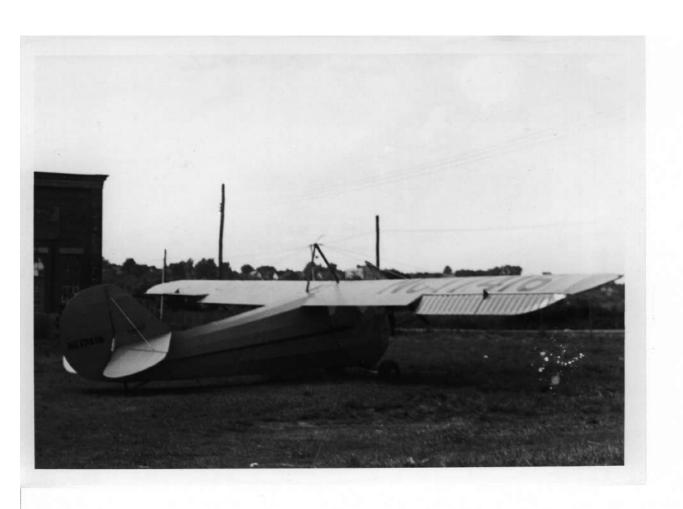




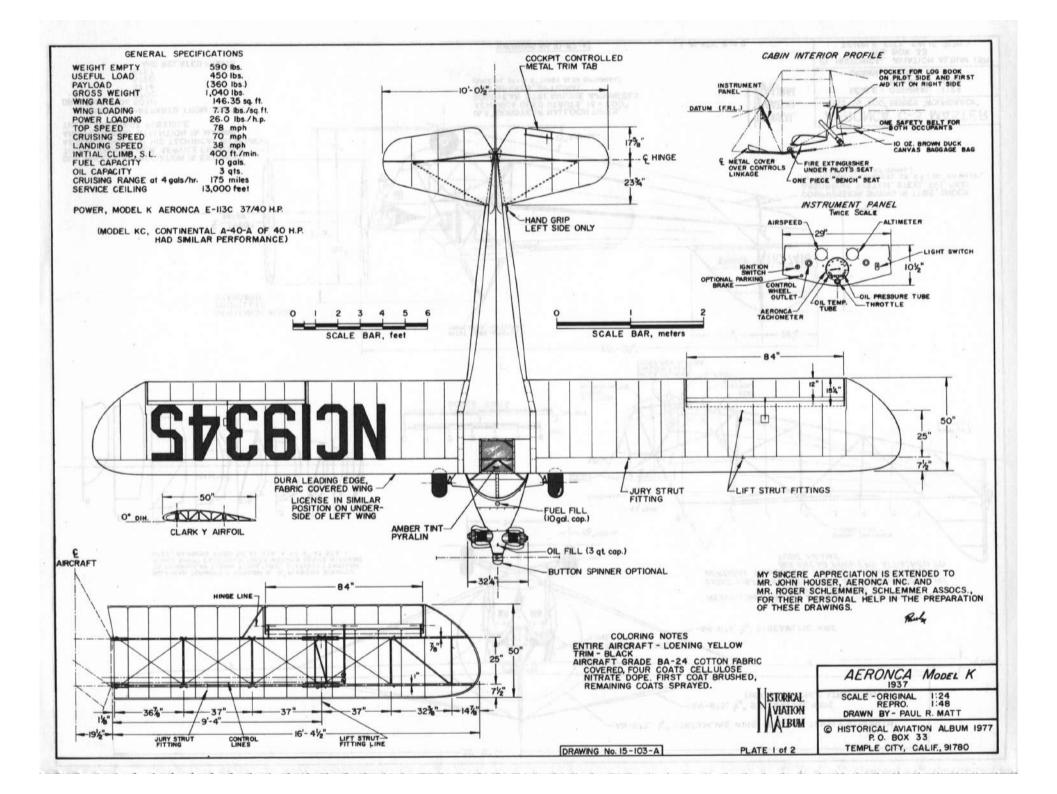


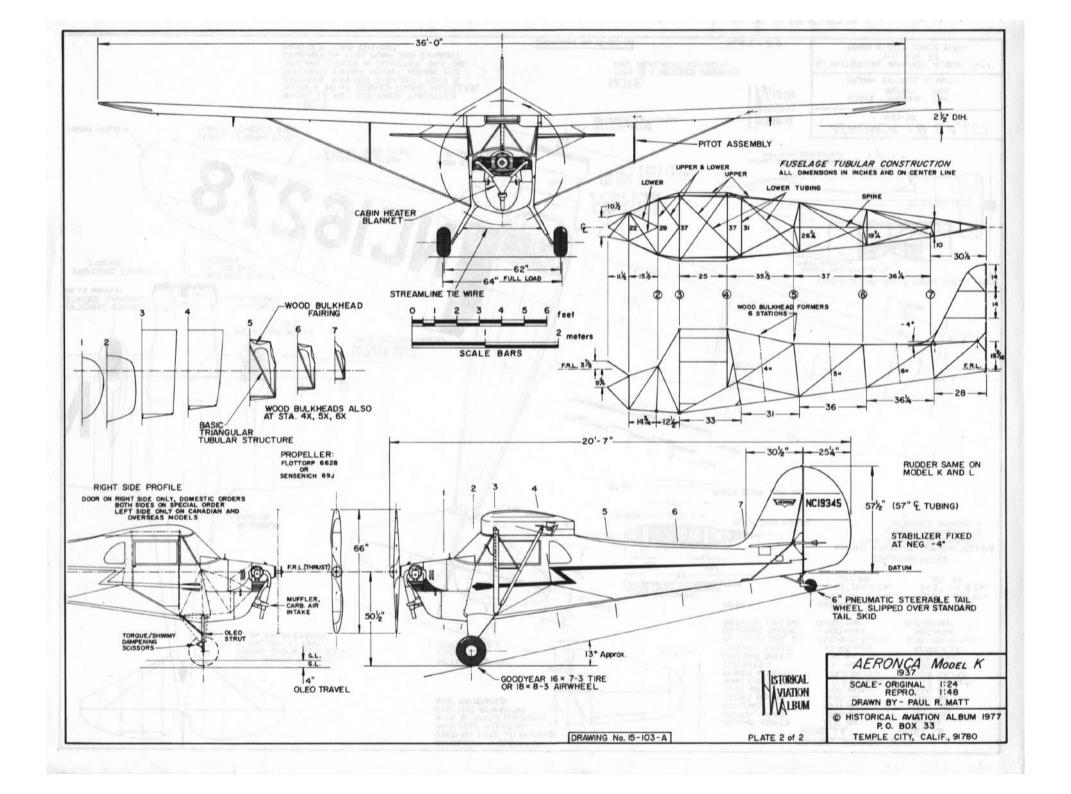


















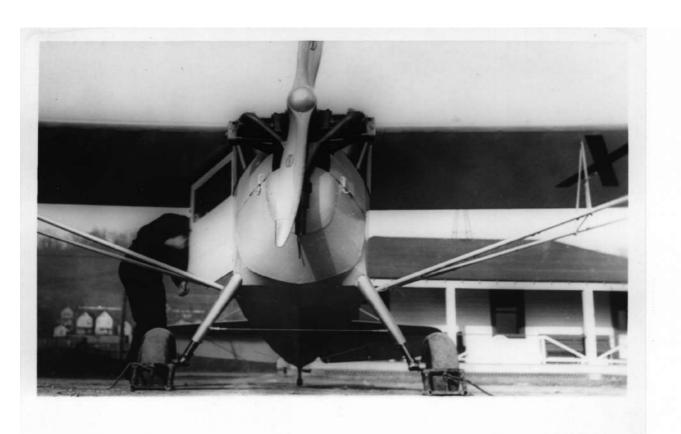










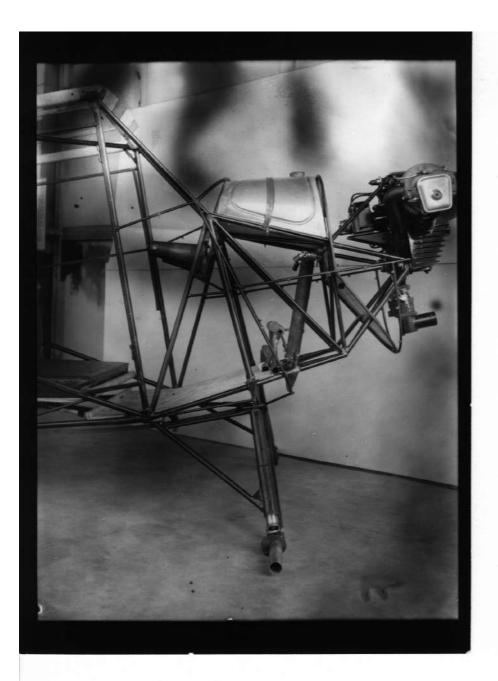


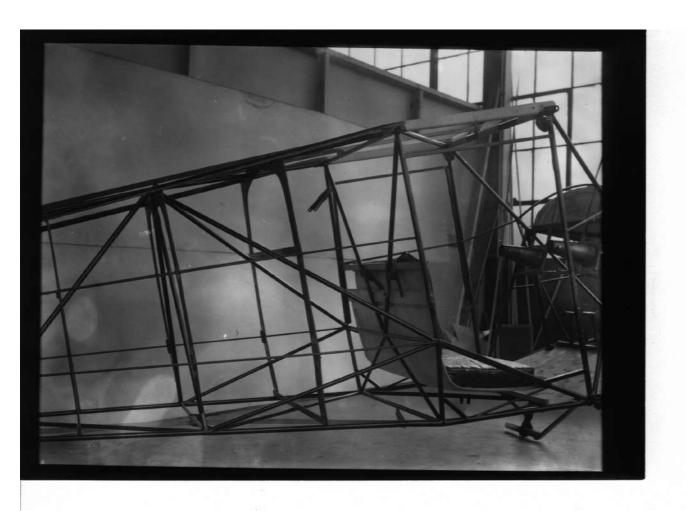




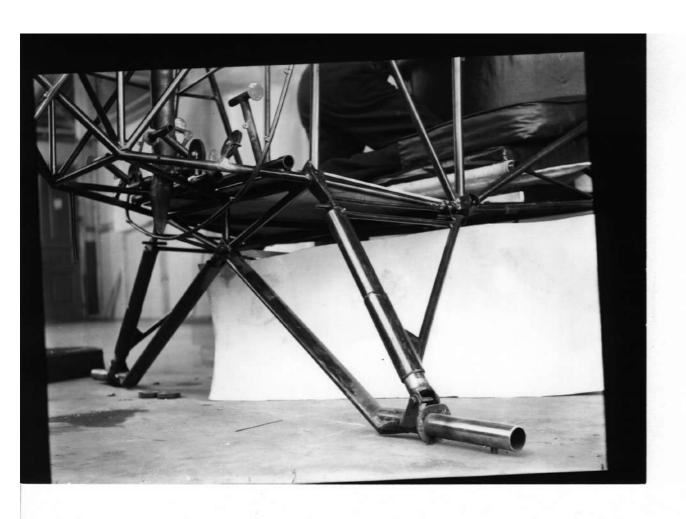


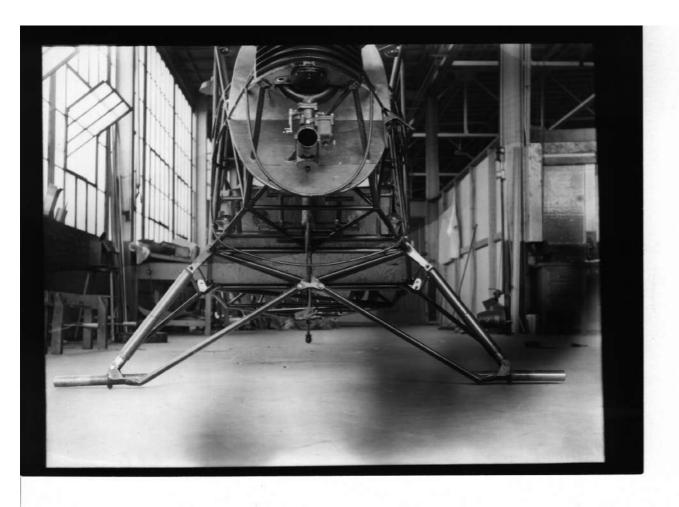


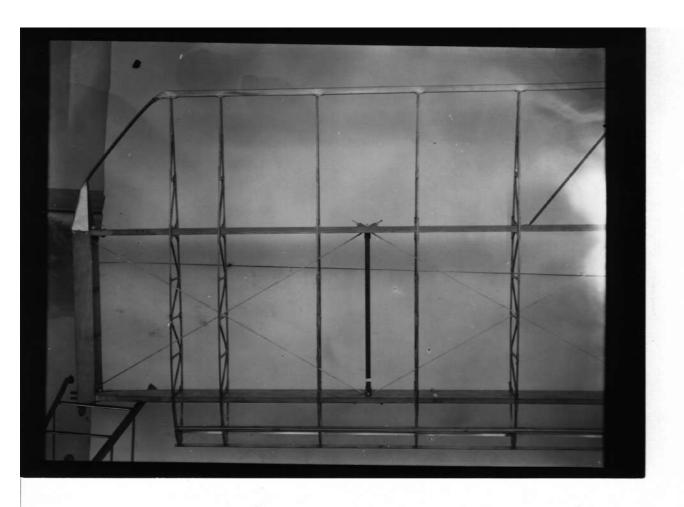


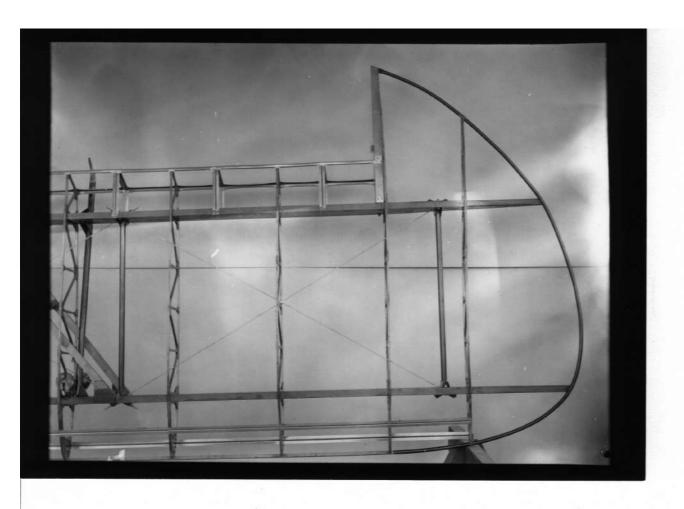


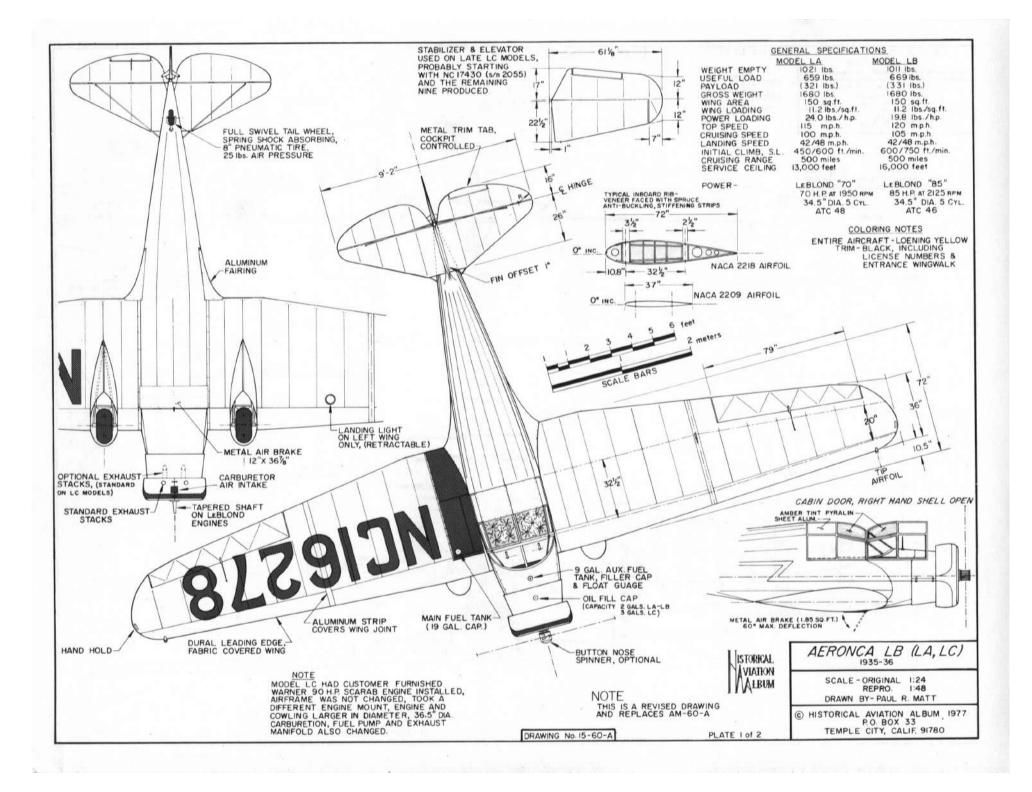


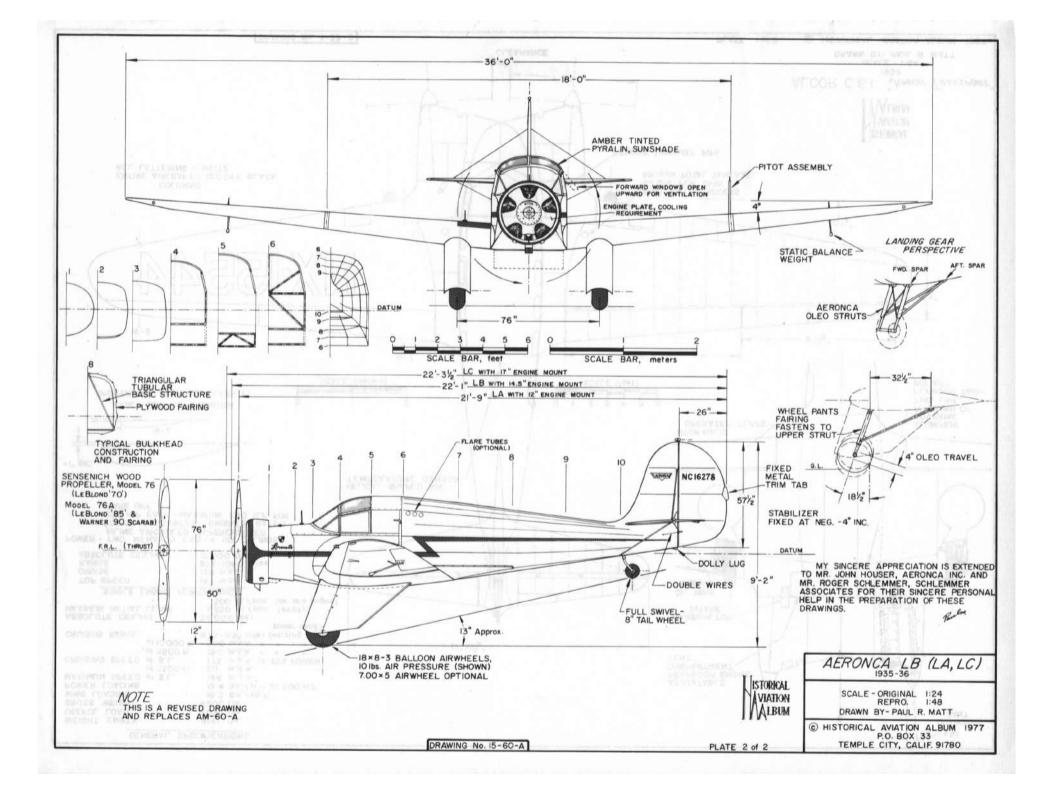








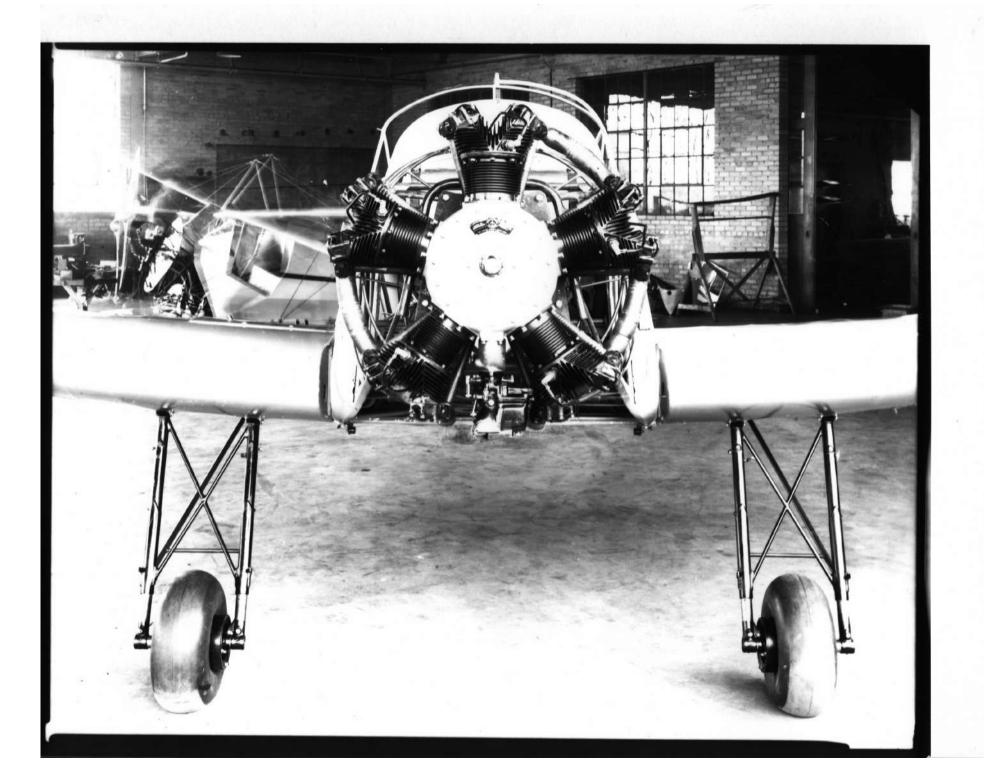


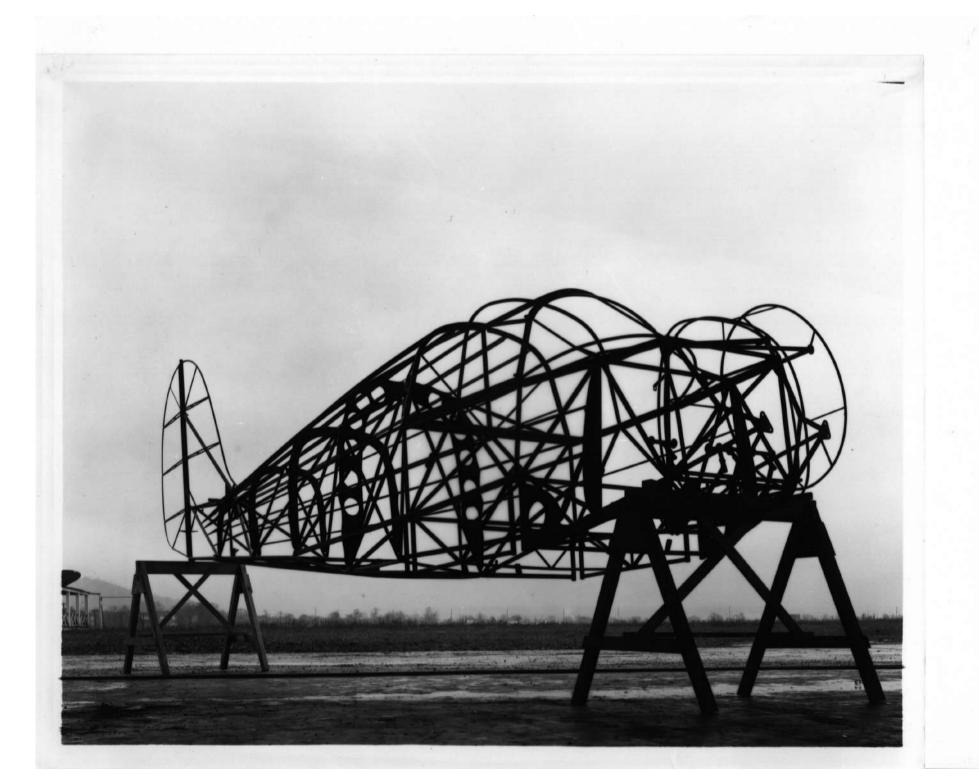


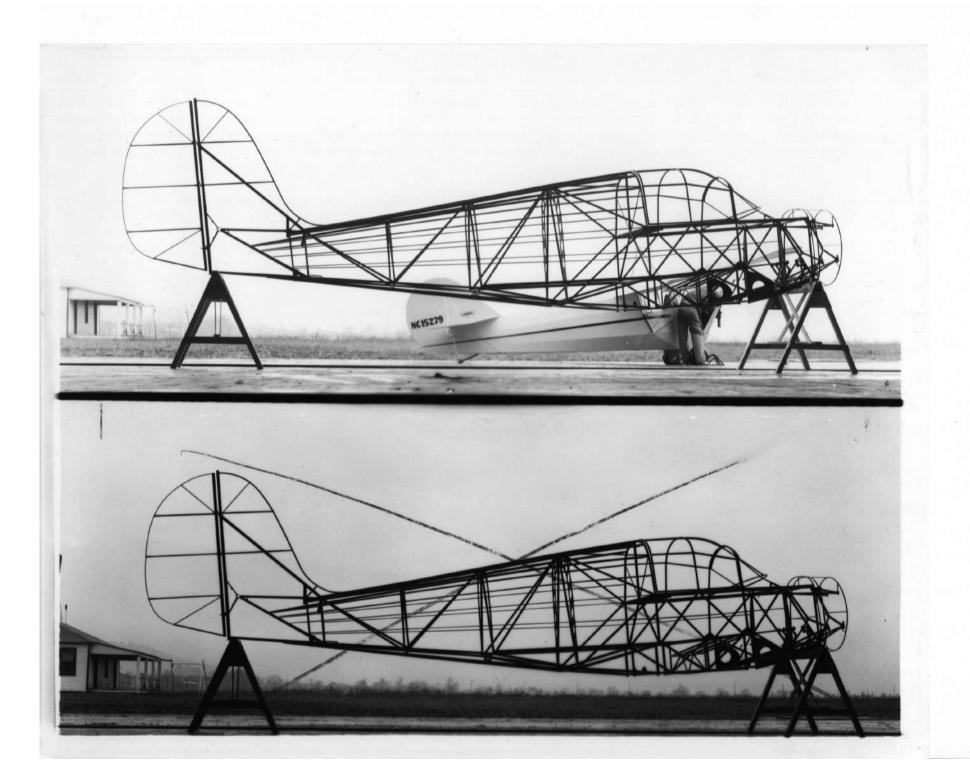


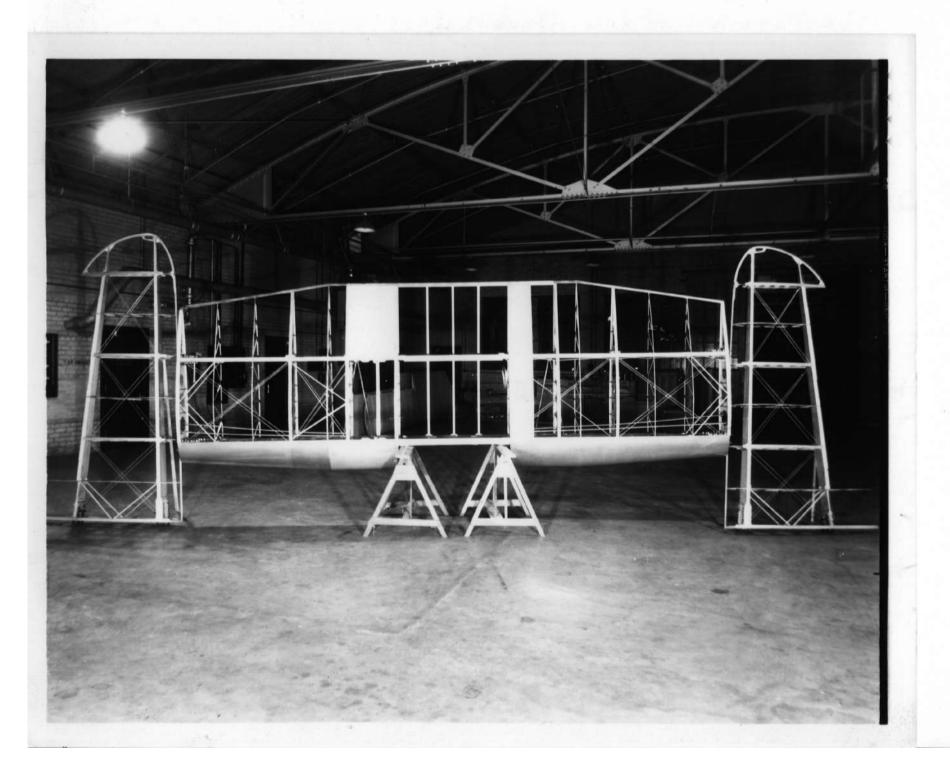












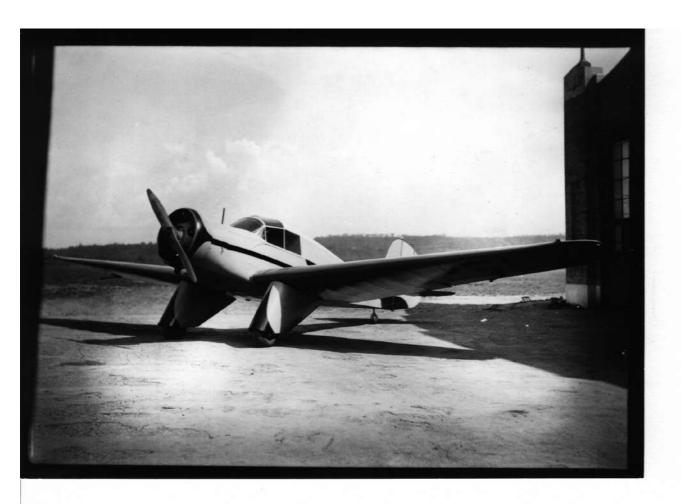






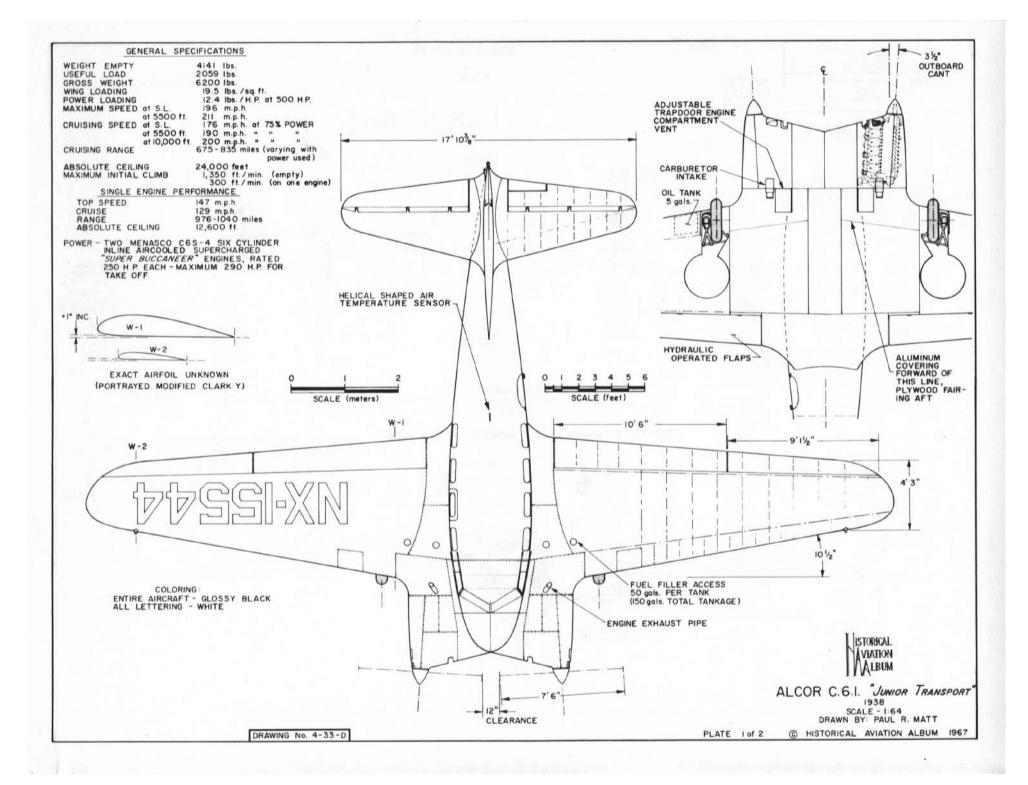


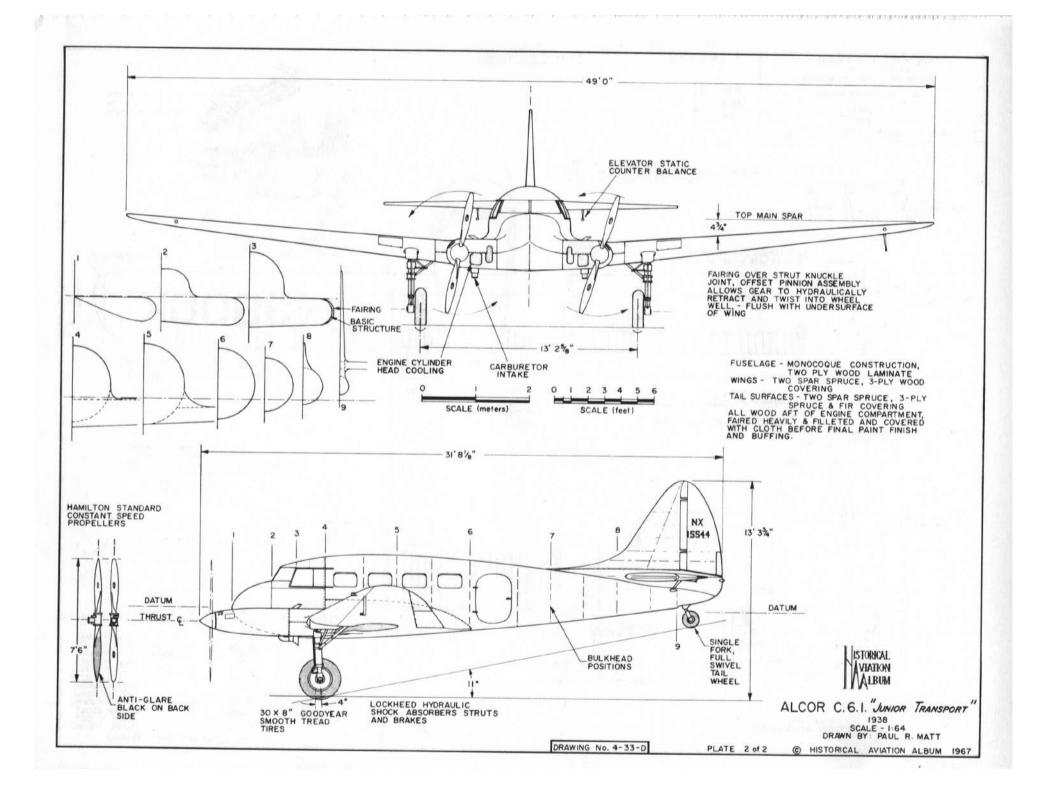










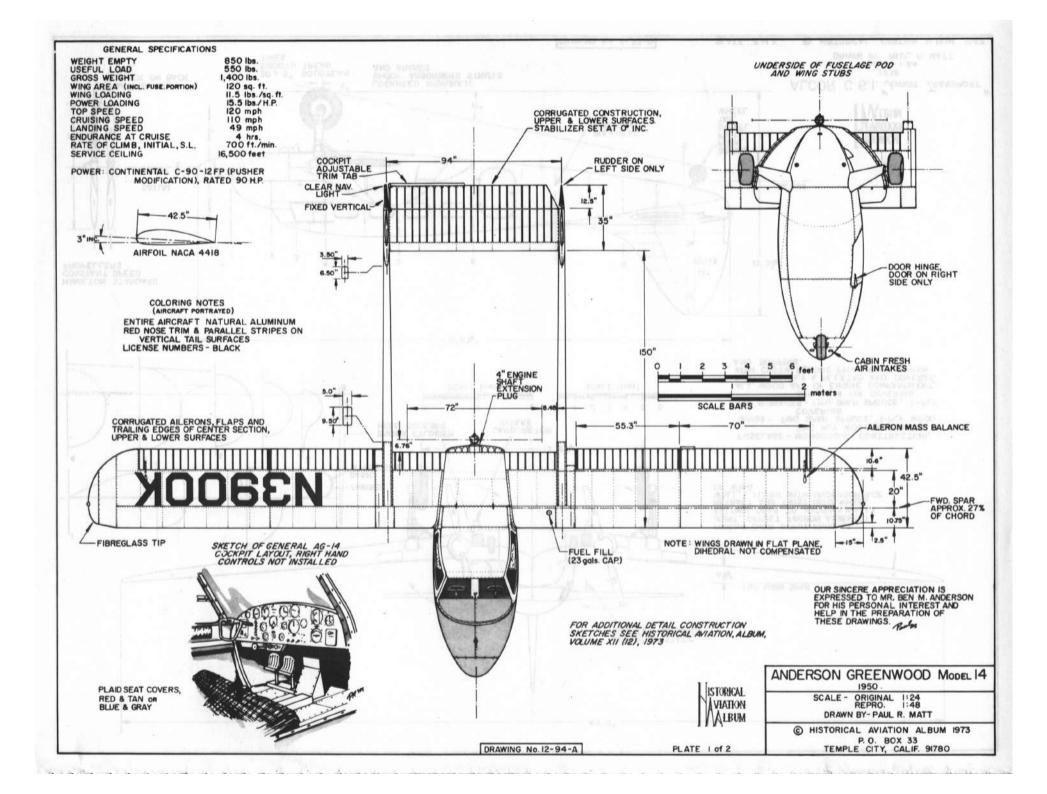


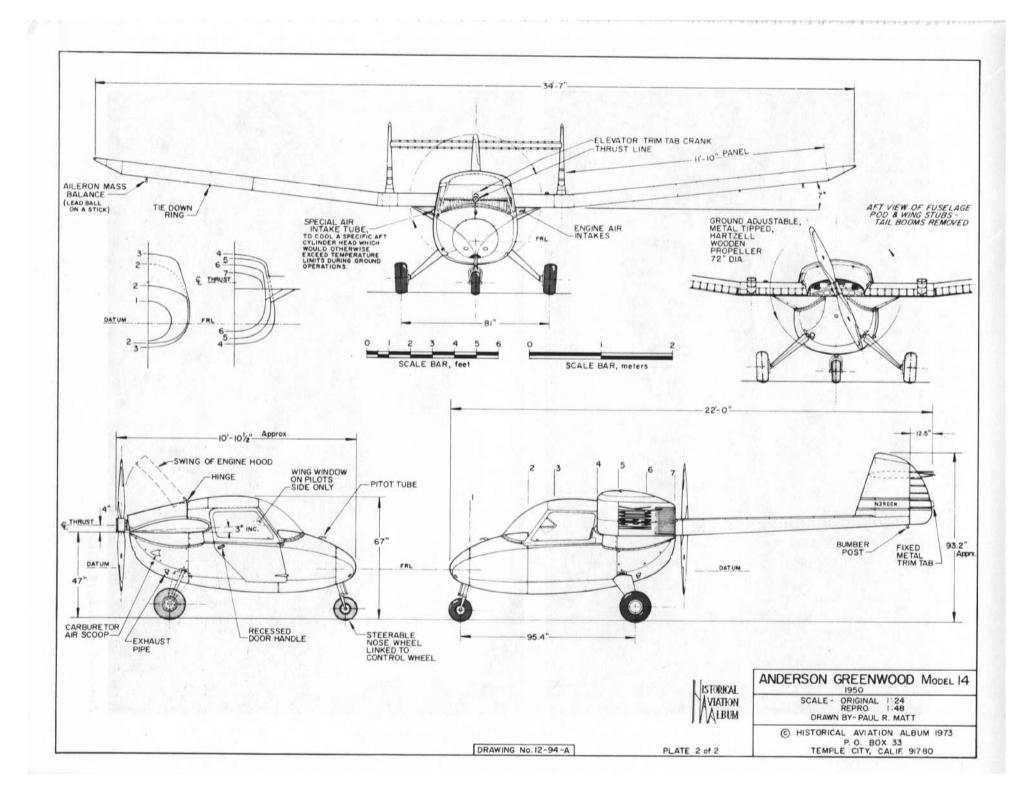
















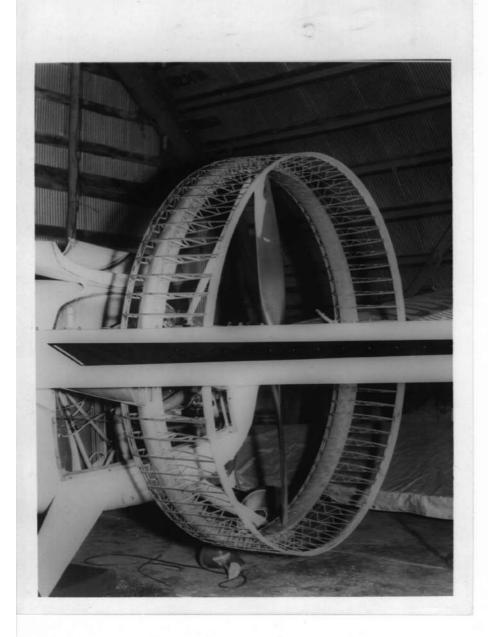




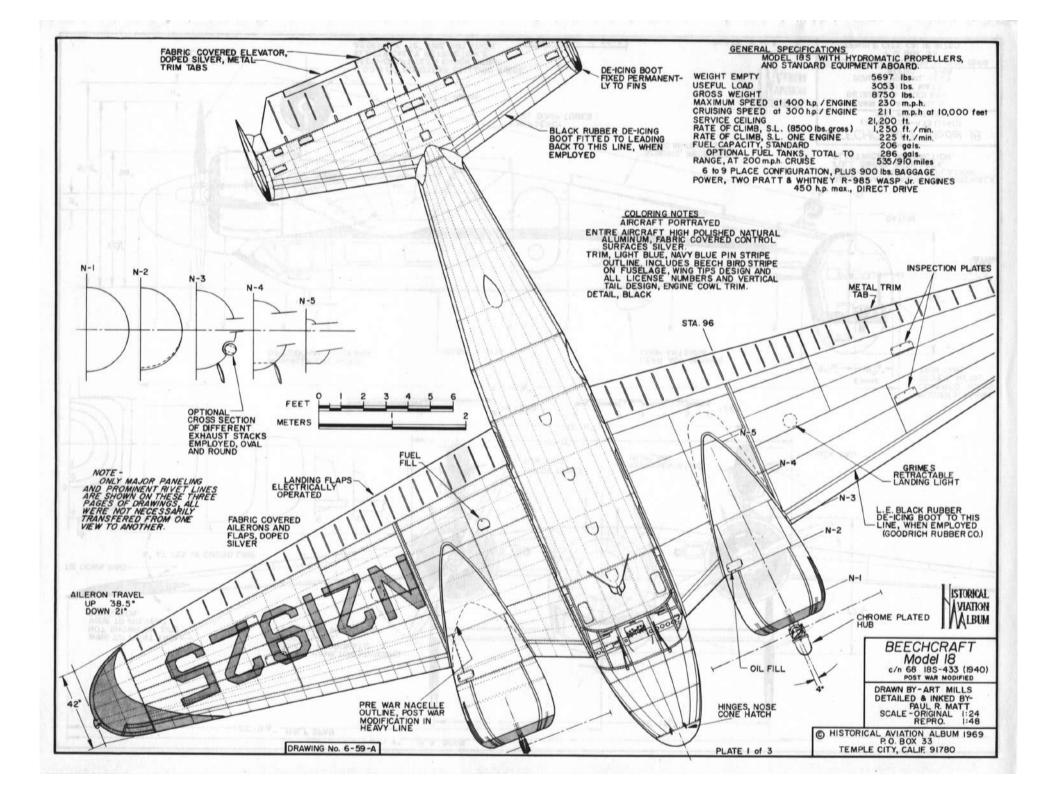


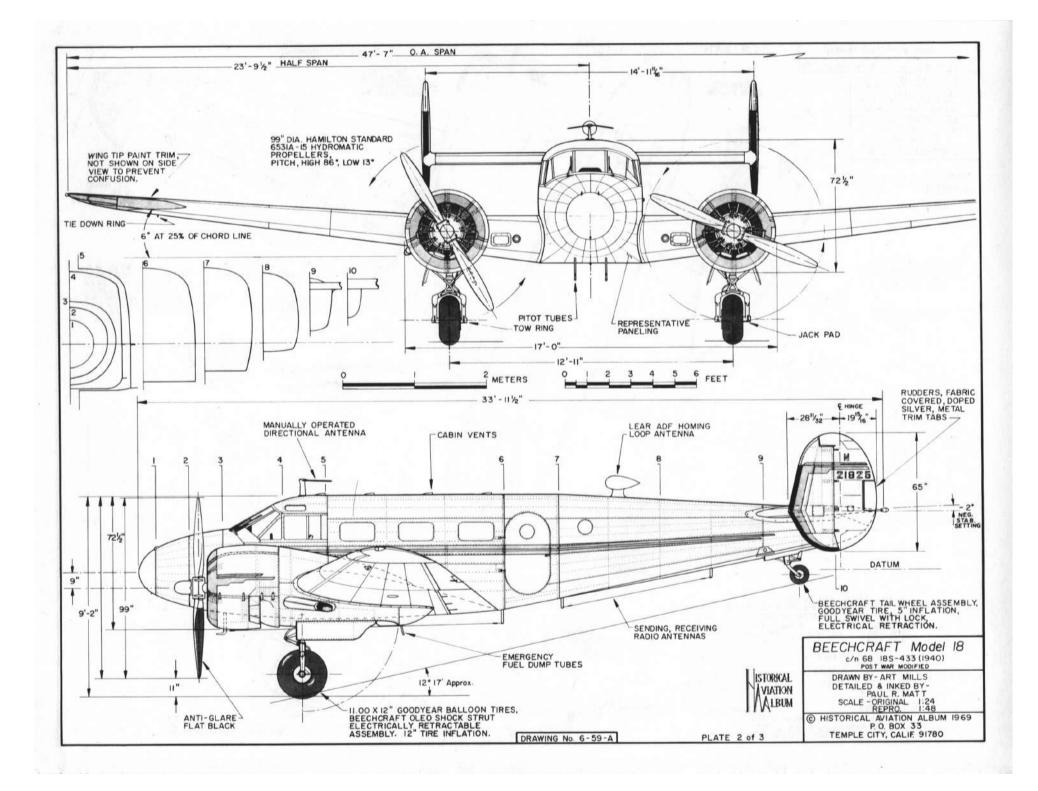


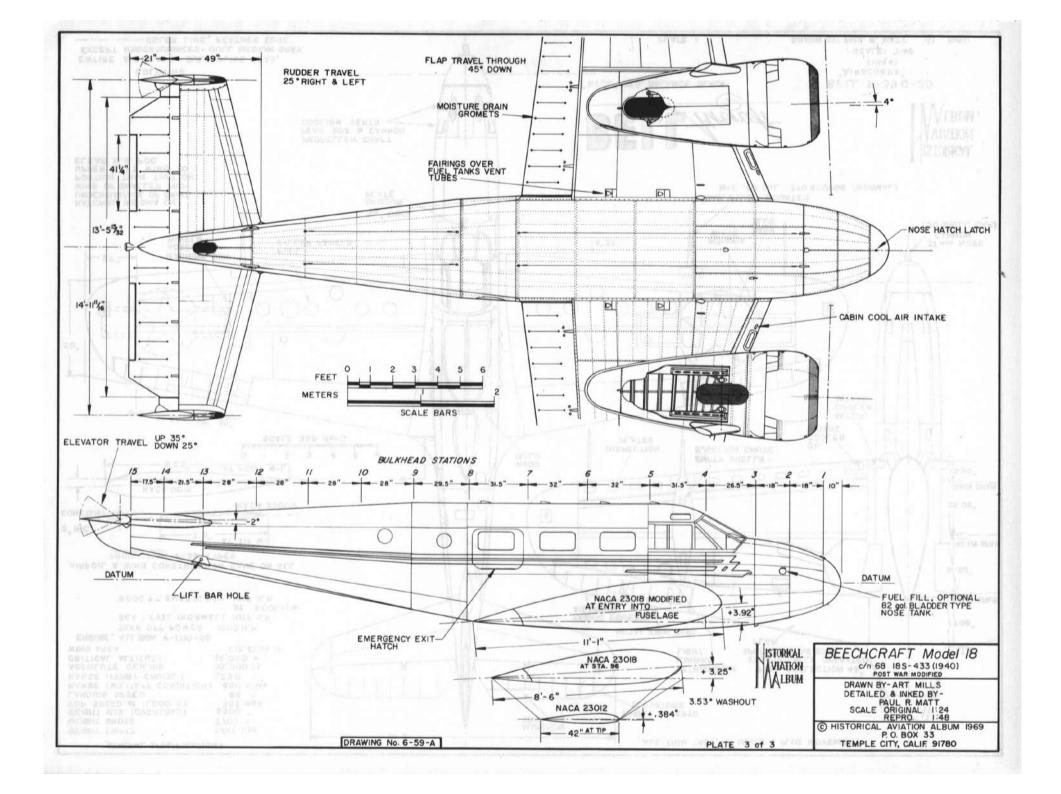


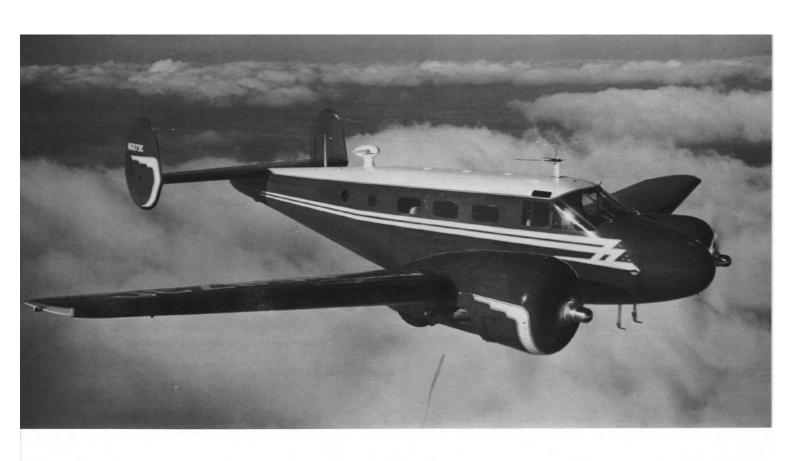














First Beech "peacetime" delivery was made in Oct. 1945 with the release of VC-45B, 43-35489 to Time, Inc. It became NC 44550 and was used to expedite war contracts held by the private company. It was Beech S/N 5862.



Beech 18A-318, the 27th model 18 built and sold on May 1, 1940, as seen still in active service at Vancouver, British Columbia in 1956.

Beautiful aircraft in a beautiful setting. A typical D-18S of the post WW II era in its high polished aluminum finish and dark blue "Beech Bird Stripe."





The first all new commercial Model 18 was D-18S, NC 44592, S/N A-1. It was retained by Beech as a demonstrator for several years before being sold. It received the first type certificate, No. 757, issued to any postwar aircraft.

All photos, except where noted, are through the courtesy of the Beech Aircraft Corporation.



Early AT-7 pilot proficiency trainer seen in early 1942 still carrying 1941 tail stripes and organizational numbers on fin, but serial number on fuselage.

Three AT-11s flying right echelon formation. They carry markings of the June 1942 to May 1943 period. Large numbers are training unit aircraft numbers.



Photo by William T. Larkins



Familiar on all fronts during WW II was the UC-45 in warpaint. C-45A through C-45Fs were war time products. Most were dull olive-drab in coloring.

C-45s returned to Beech factory after WW II were completely rebuilt and went back into service with the USAF as C-45G and -H models. So extensive was the re-work that they started life anew with flying hours recorded from Zero. Pictured is typical C-45G in USAF markings.



US NAVI

High forehead marked distinctive profile of the five Navy JRB-1s. They were used for in-flight radio control of target drones.



Personnel transport for U.S. Navy in the early 1940s is exemplified by the JRB-2. They were used in Embassy services abroad as well as at home.

Known to thousands of pilots, navigators, bombardiers, aerial gunners of WW II... the AT-11, Navigator. Nearly 90% of the Air Force service personnel received some phase of their training in the famed trainer.





Navy's version of the AT-11 was the SNB-1. The 320 built carried same basic equipment but Navy had power operated turret installed.





Cockpit and cabin interior of the original Beech 18. All succeeding civil versions varied little in general arrangement.

## BEECH MODEL 18 AIRPLANES DELIVERED ON GOVERNMENT CONTRACTS 1939-1945

Military Type	Date of First Delivery	Date of Last Delivery	Quantity Built	
F-2	Dec. 1939	Aug. 1945	56	
C-45	Mar. 1940	Aug. 1940	. 11	
C-45A	Mar. 1941	Jan. 1942	22	
C-45B	Jan. 1943	Apr. 1944	206	
C-45C	Jan. 1943	Jan. 1943	2	
C-45D	Dec. 1942	Jul. 1943	5	
C-45E	Jan. 1943	Aug. 1943	7	
C-45F	Mar. 1944	Aug. 1945	1153	
CQ-3BH	Aug. 1945	Aug. 1945	3	
AT-7	Feb. 1941	Jan. 1944	582	
AT-7A	Jul. 1942	Jul. 1942	1	
AT-7C	Oct. 1943	Sep. 1944	301	
JRB-2	May 1941	Sep. 1941	15	
JRB-3	Jan. 1944	Mar. 1944	19	
JRB-4	May 1944	Aug. 1945	324	
JRB-1	Oct. 1940	Sep. 1941	11	
SNB-1	Aug. 1942	Jul. 1943	320	
SNB-2	Jul. 1942	Nov. 1943	240	
SNB-2C	Oct. 1943	Oct. 1944	366	
AT-11	Sep. 1941	May 1944	1560_	
		TOTAL	5204	

Serial numbers for the post-war Model D18S and C18S airplanes (1945-1955) are A-1 through A-1031.



Orange and green check visibility markings on F-2, Oakland, California July 1941. Peter M. Bowers Collection



One of three C-45Fs modified in 1944 to target control CQ-3BHs. Extra aerials, 7/47.

Peter M. Bowers Collection



Sgt. W. Geimenhardt

Navy JRB-2 in orange and white training plane colors of the current era.



Beech C-45F in 1st Air Commando Group markings, Barrackpore, Calcutta, India, 1/45.

Peter M. Bowers Collection

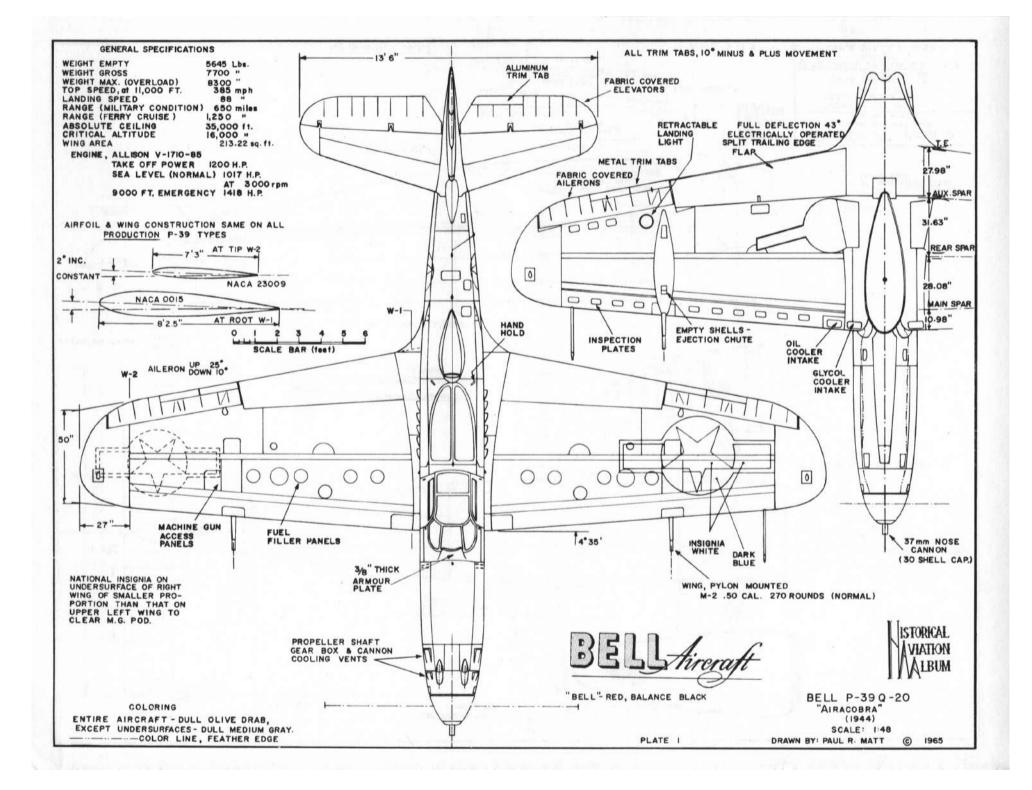


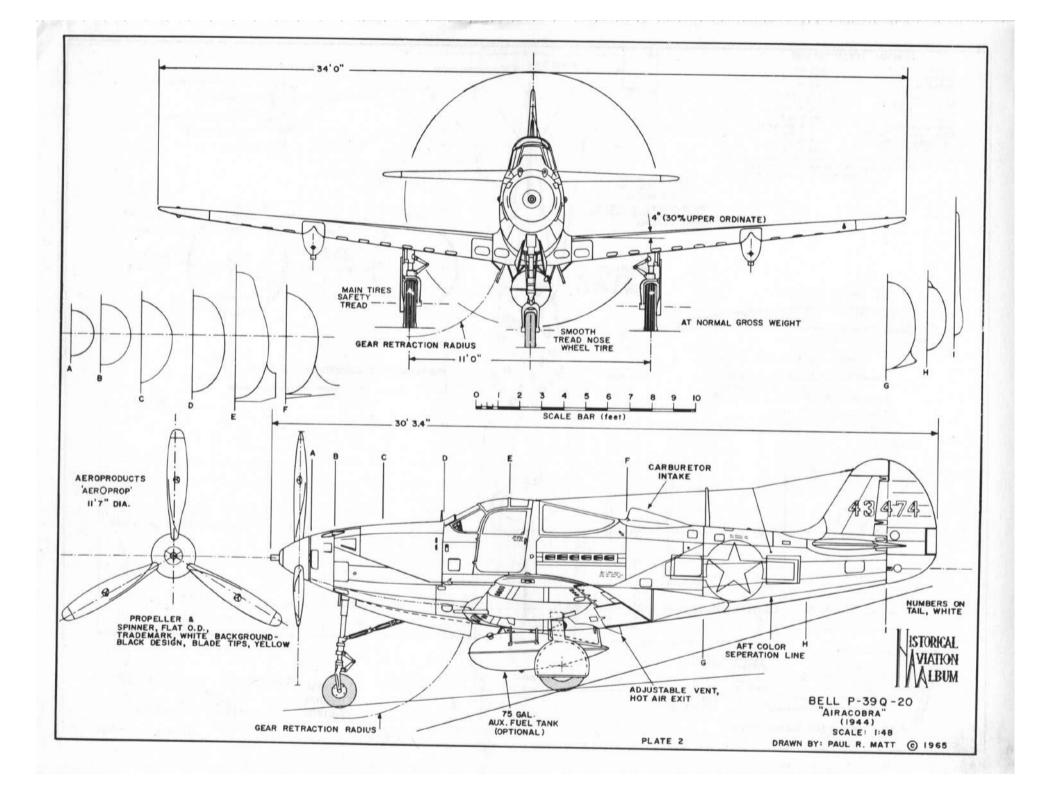
Beech Expeditor, a C-45 released to British. Calcutta, India. 9/45, S/N KJ 555.



Photo by W. T. Larkins

A TC-11 (AT-11 under Training Command Buzz — Letter redesignation of 1945-54). Eleven's were stricken from USAF roster in 1955.







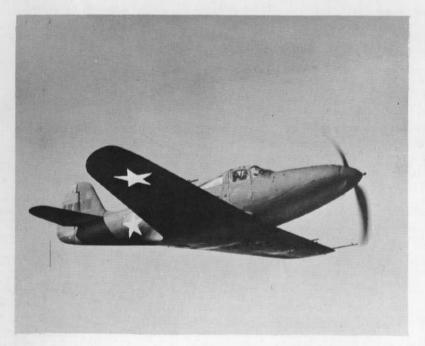


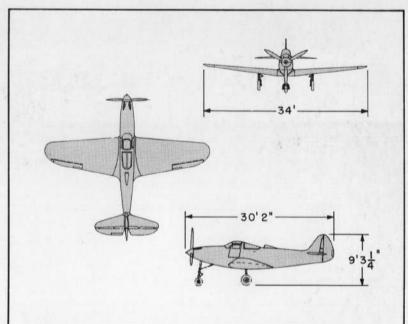










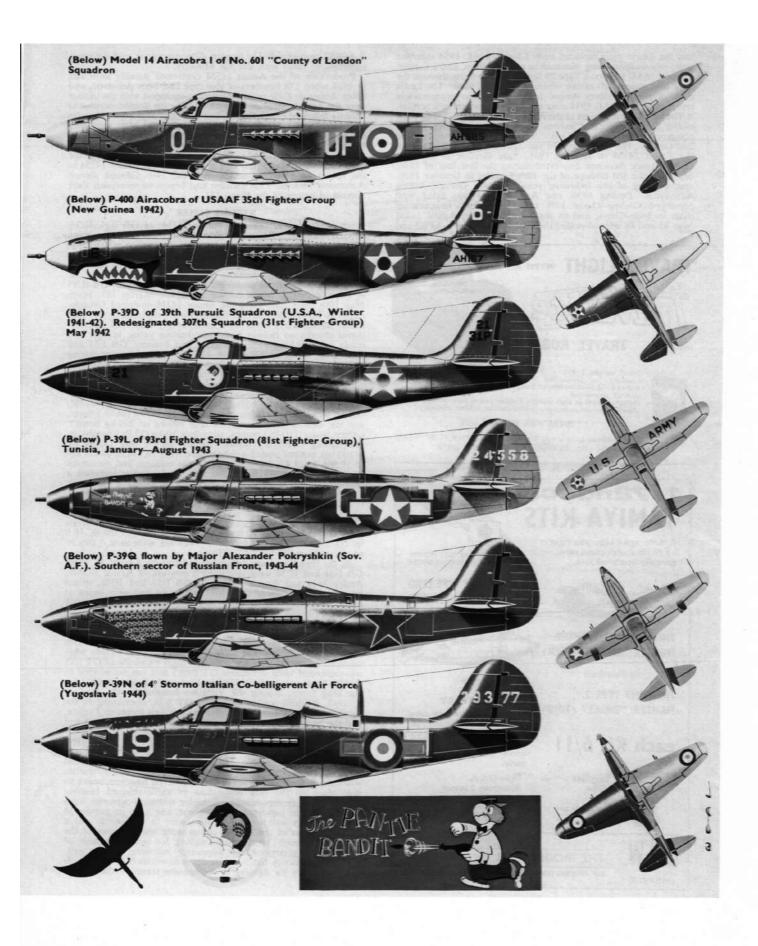


## Bell P-39 Airacobra

The Bell Airacobra was one of the most widely used fighter airplanes in World War II. The first American fighter to carry a cannon, it also packed two .50 caliber and four .30 caliber machine guns. Its speed was in the 400 mile an hour class and it could fight up to 33,000 feet. Installation of a cannon in the nose of the P-39 was made possible by placing the 1200 horsepower Allision engine behind the pilot. Nearly 10,000 Airacobras were built and saw service in the South Pacific, Africa and Europe.

BELL Sirerast CORPORATION
POST OFFICE BOX ONE - BUFFALO 5, NEW YORK

















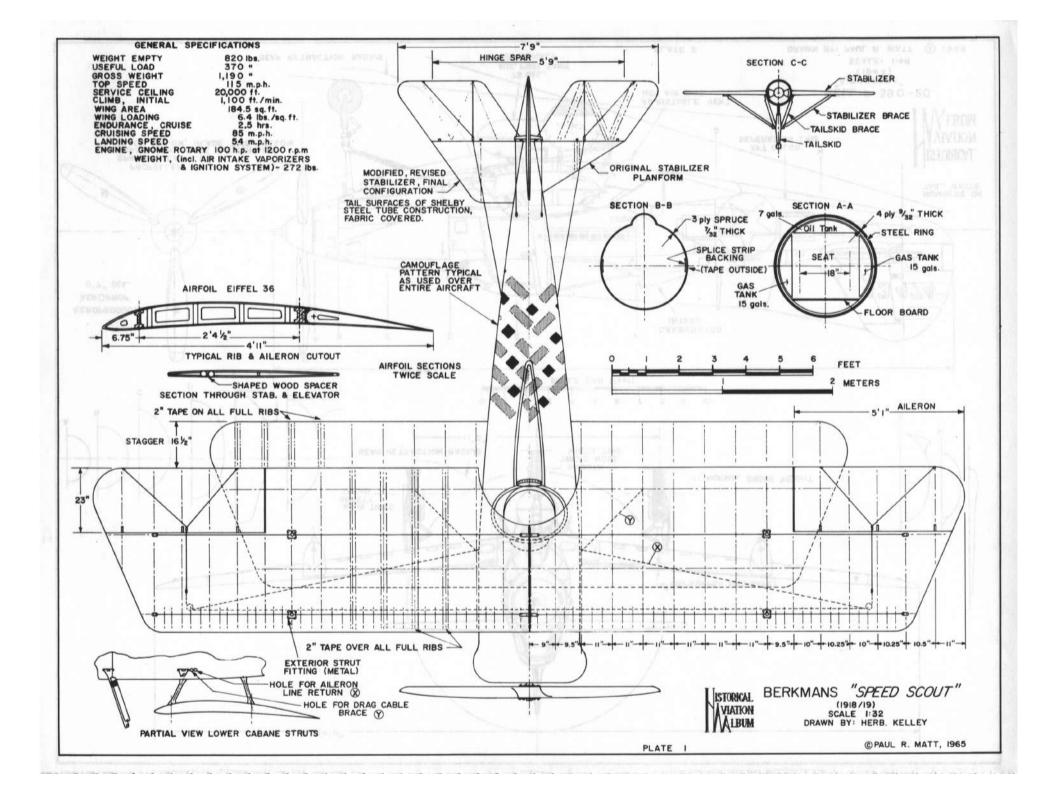


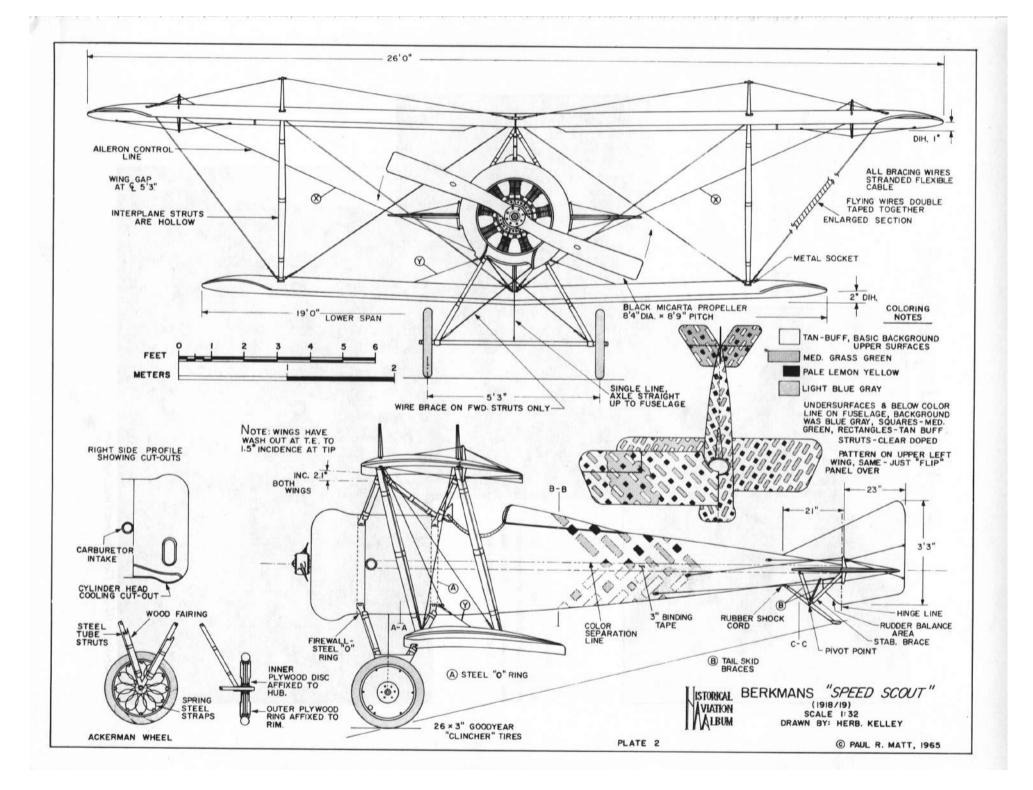


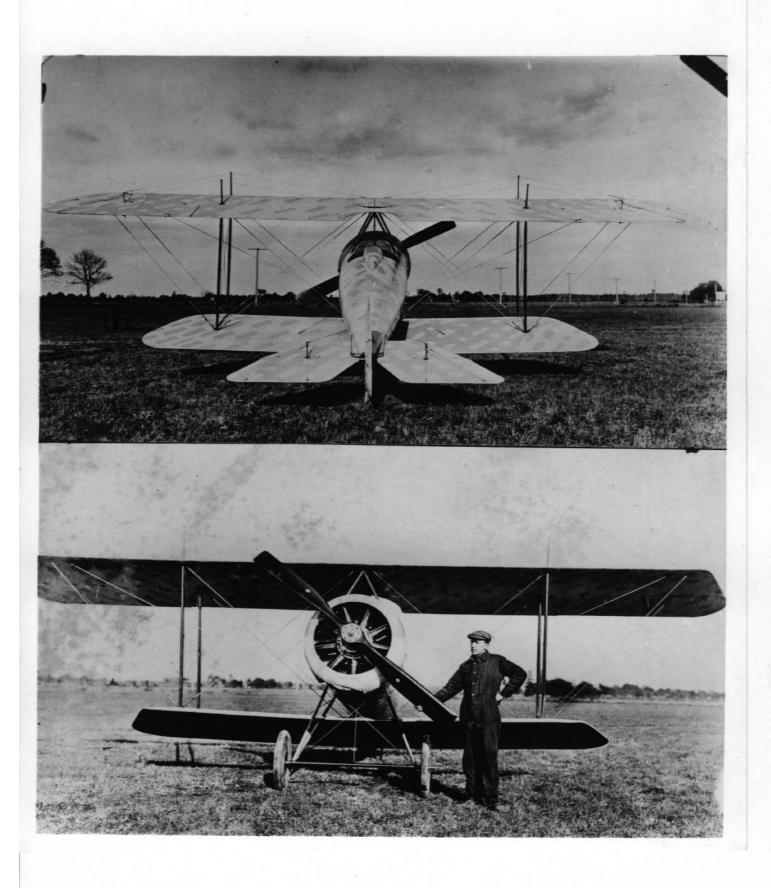


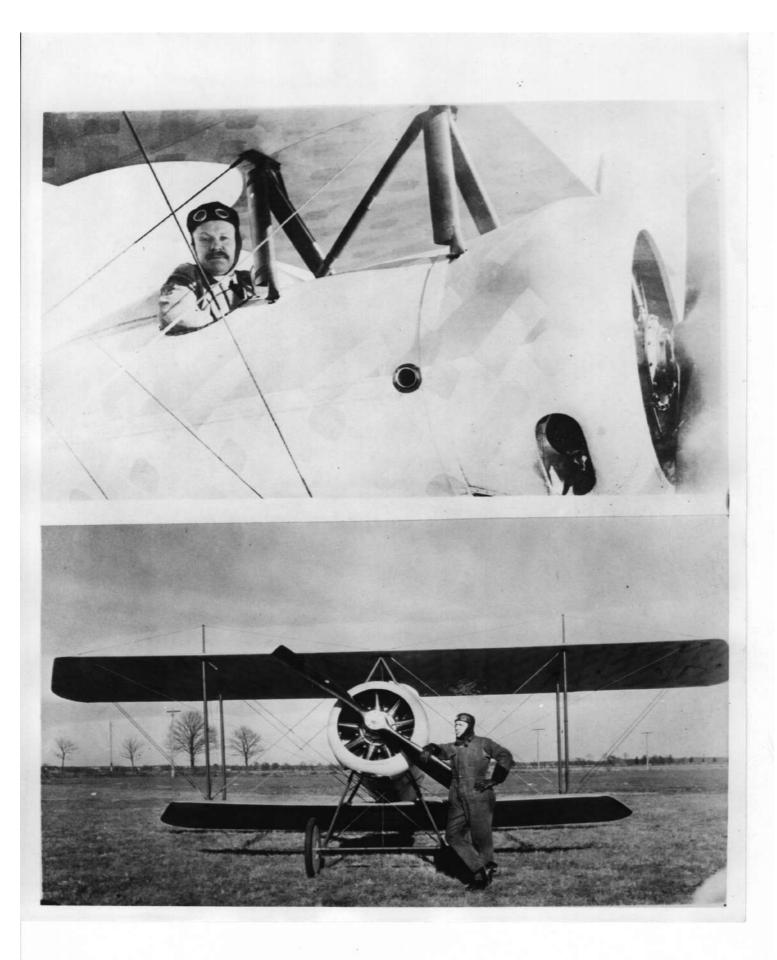




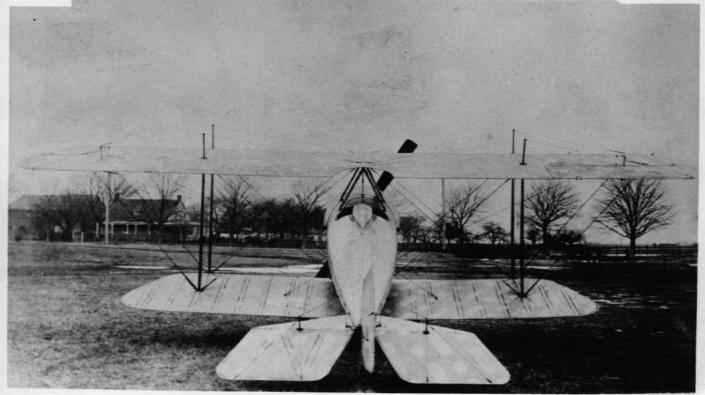


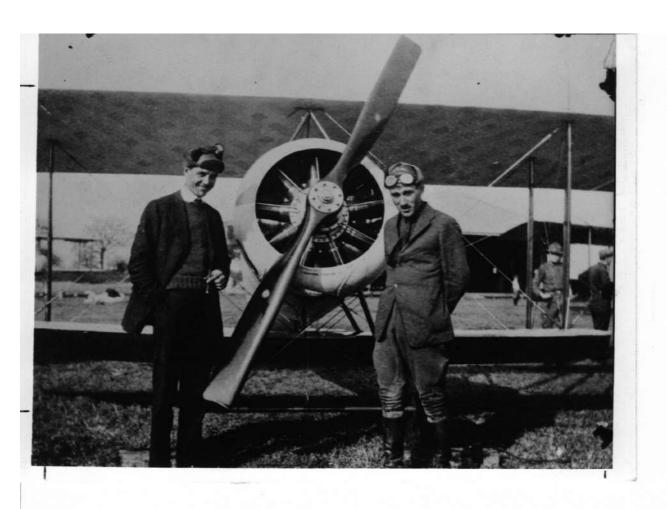




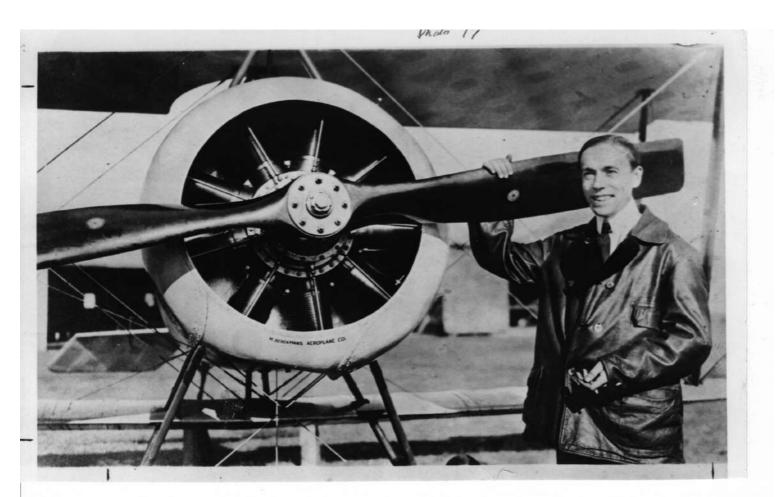




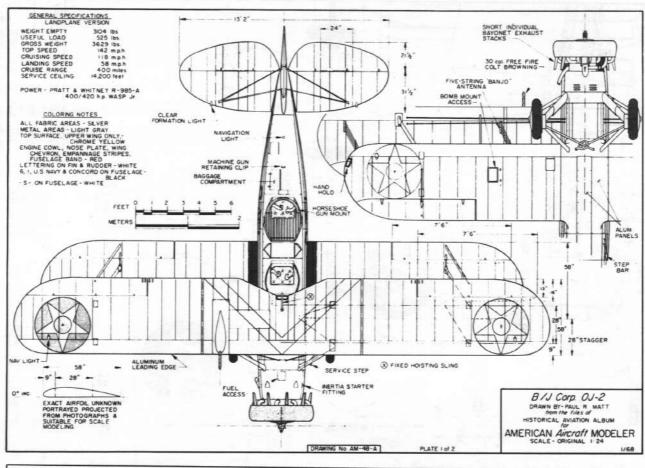


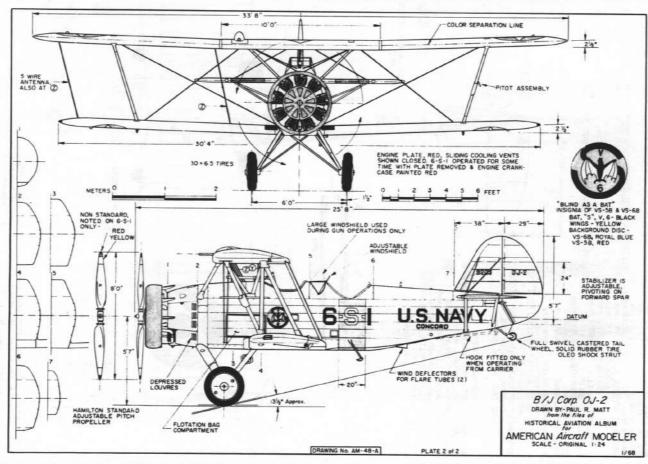










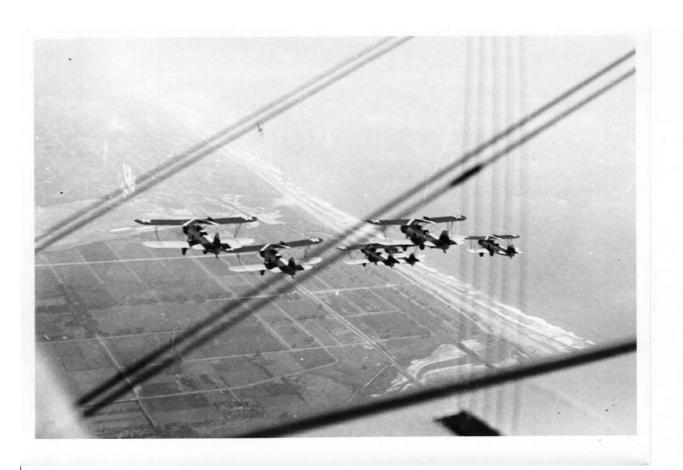


















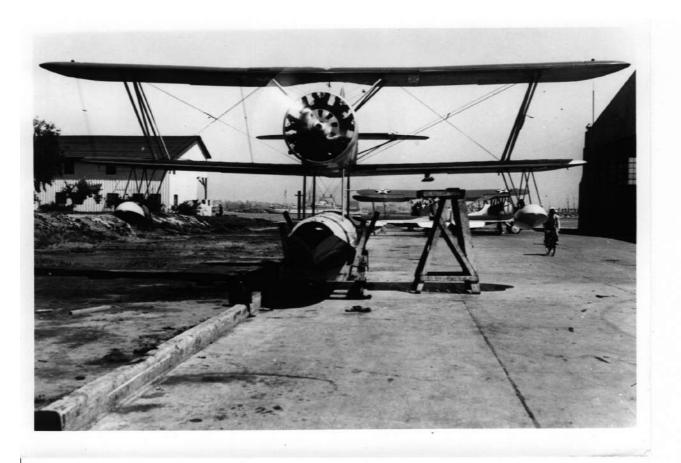










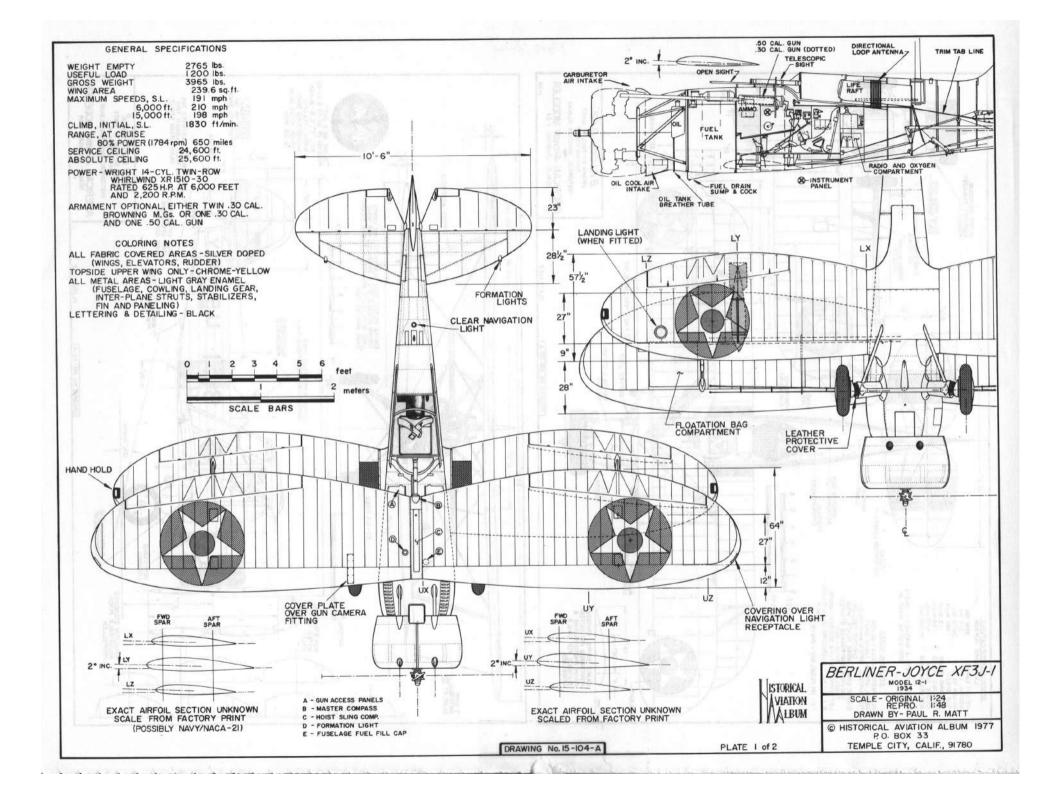


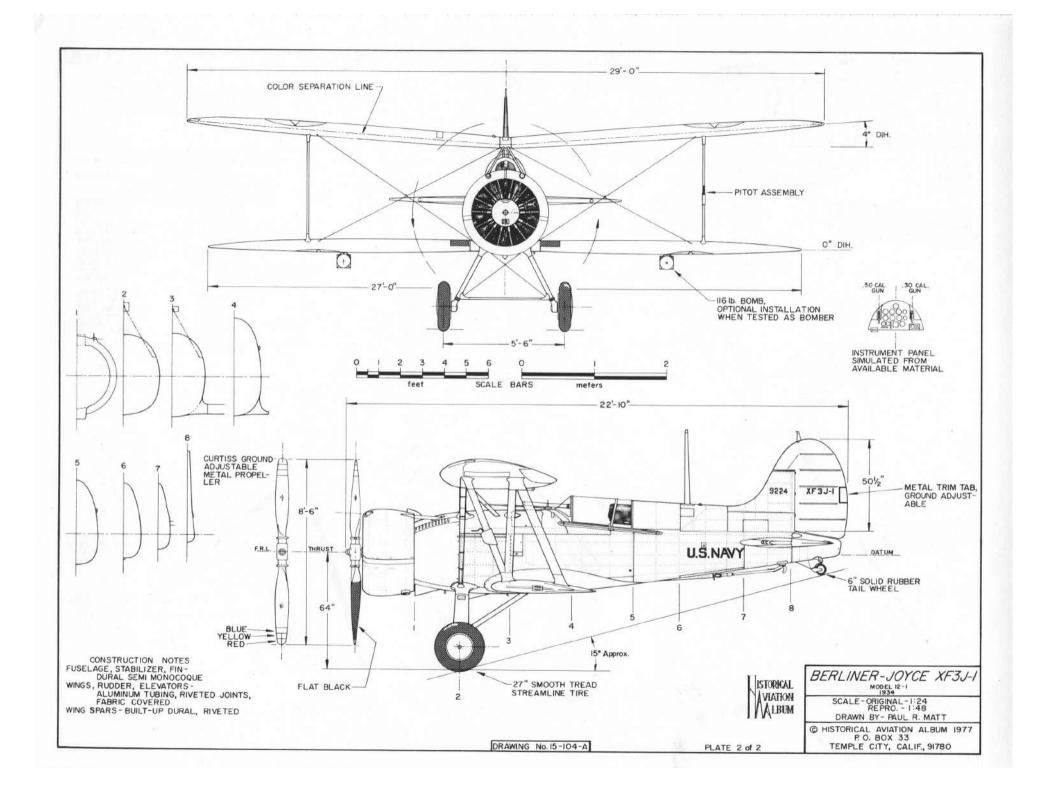










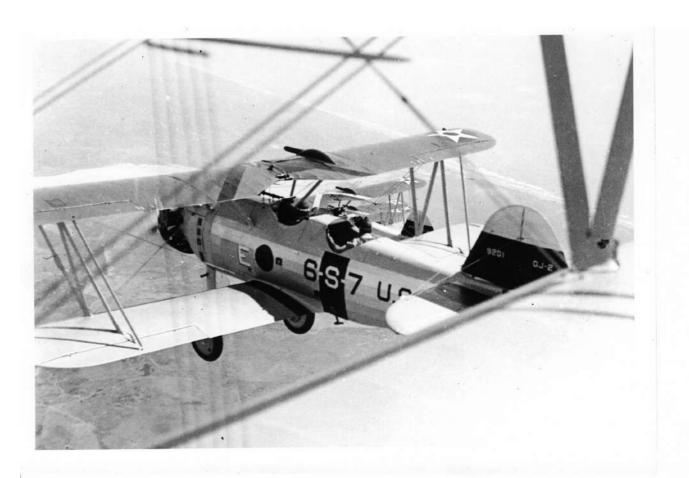
















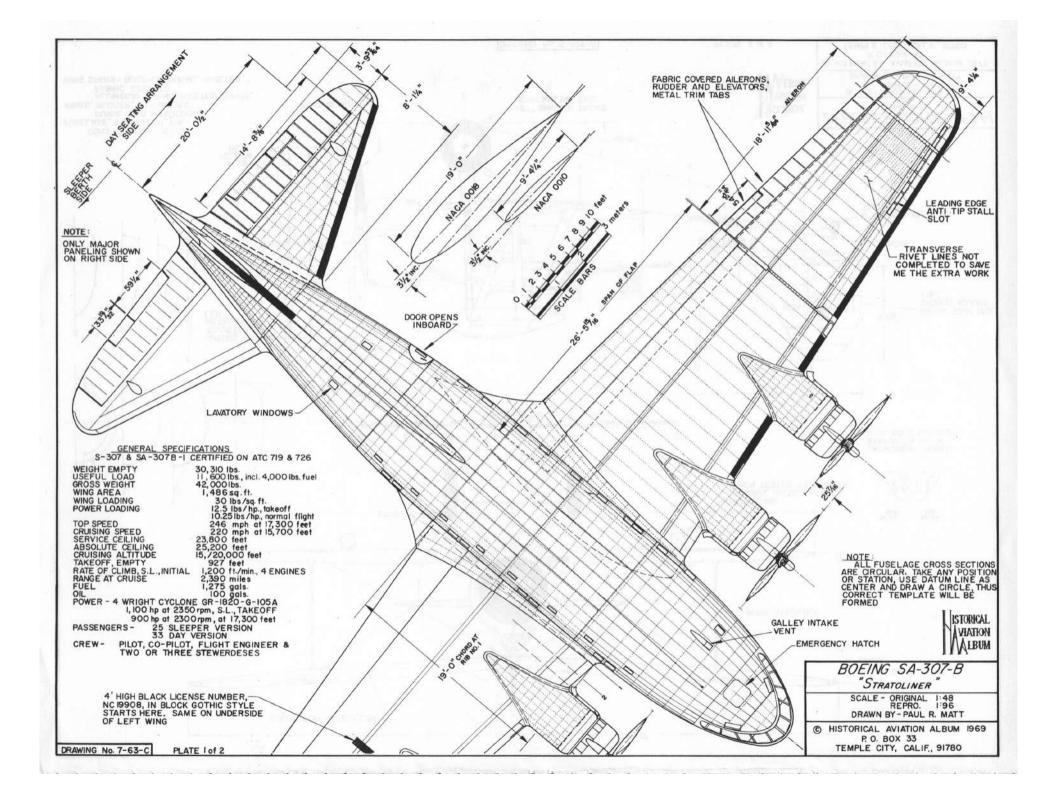


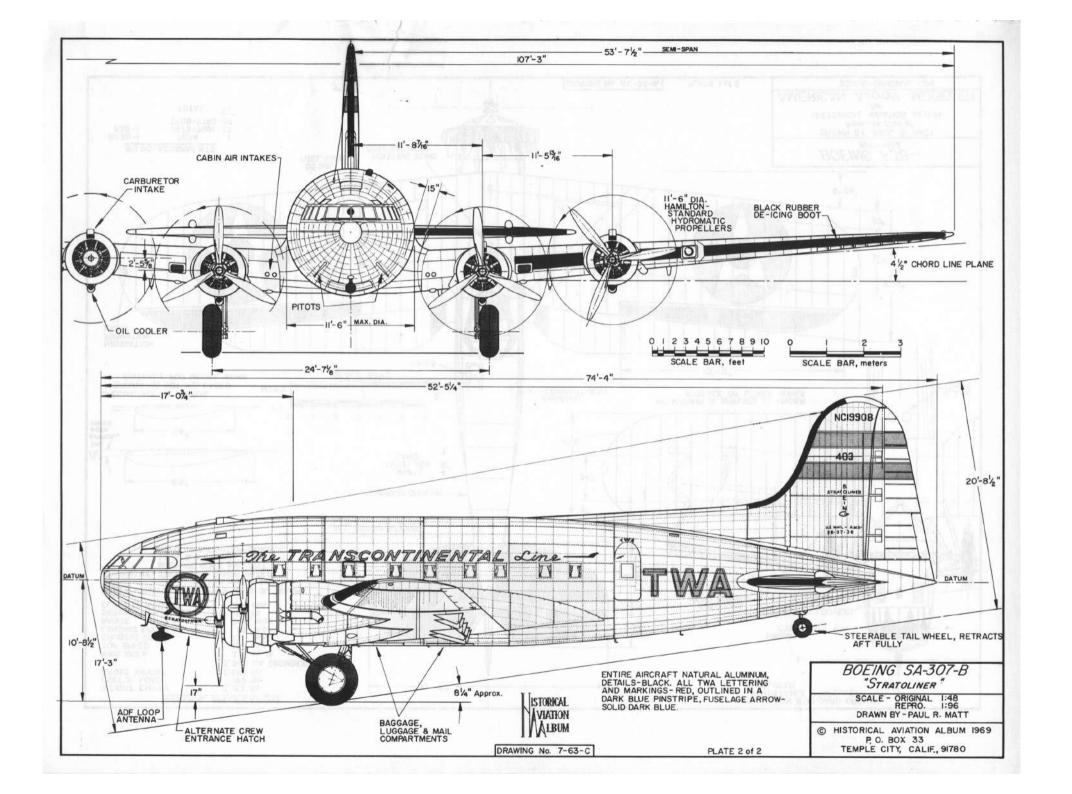












































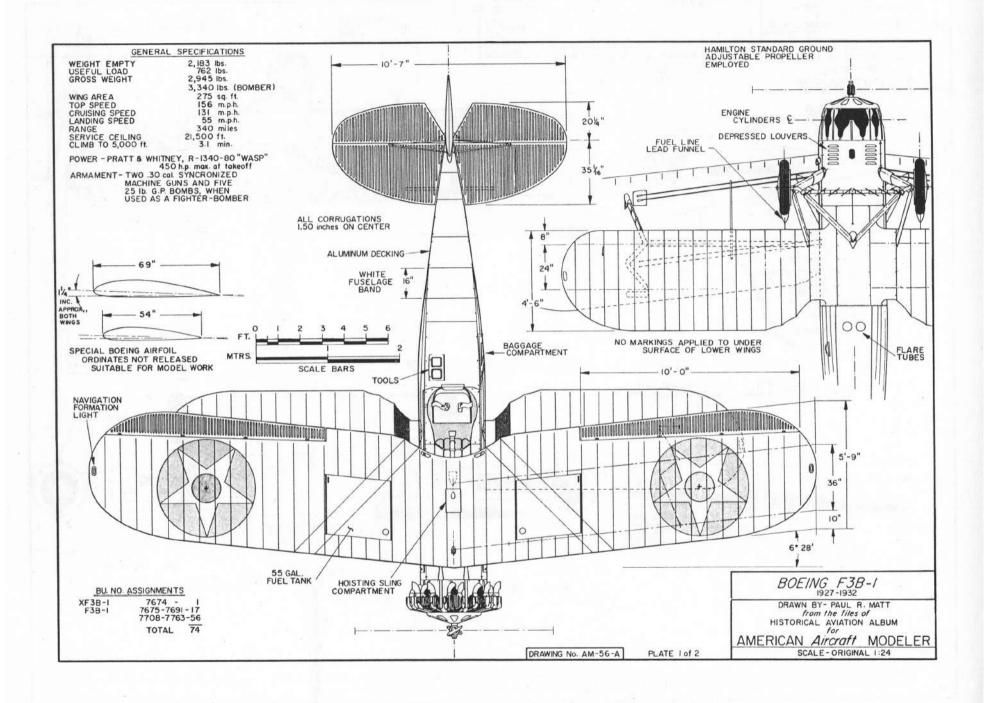


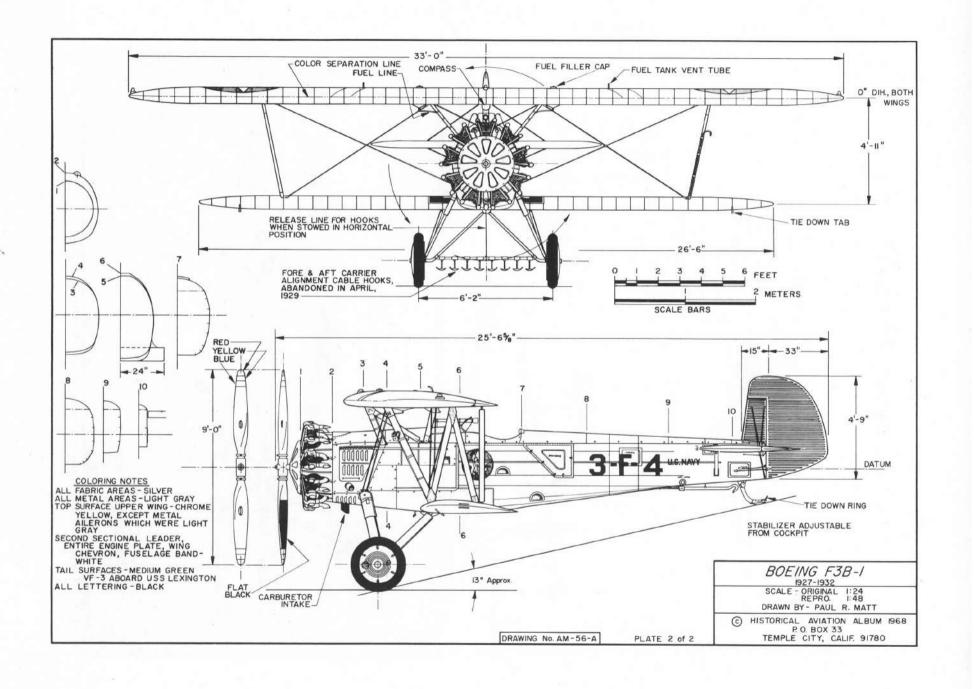












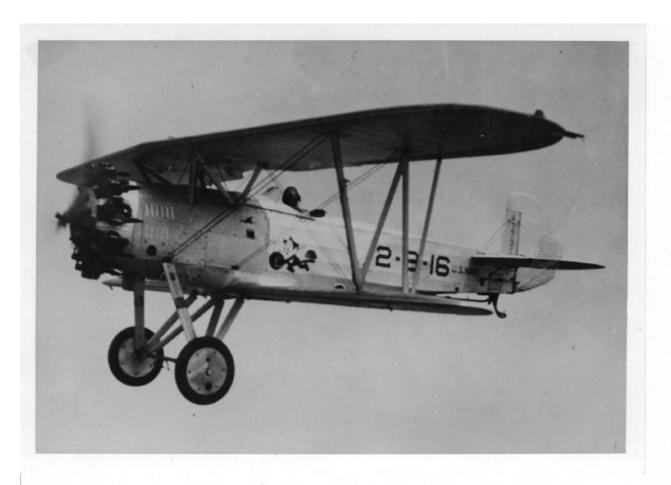
















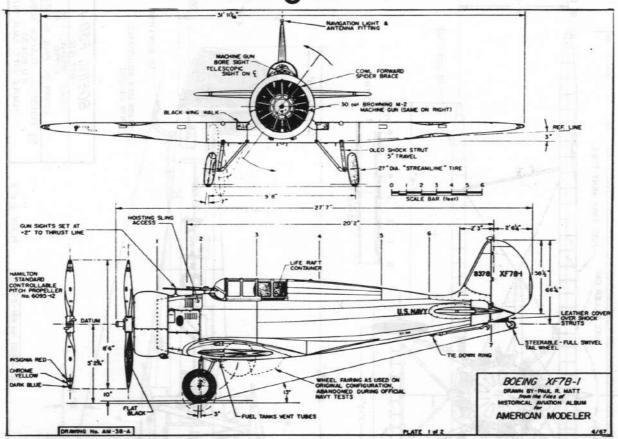


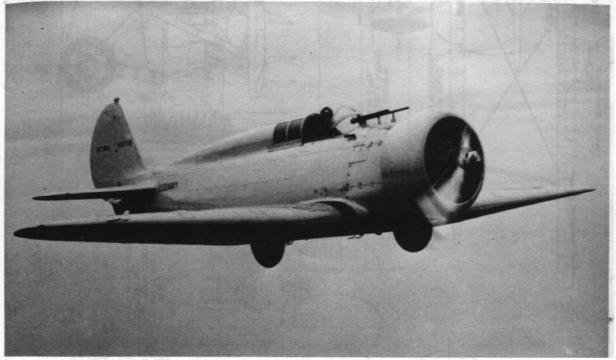






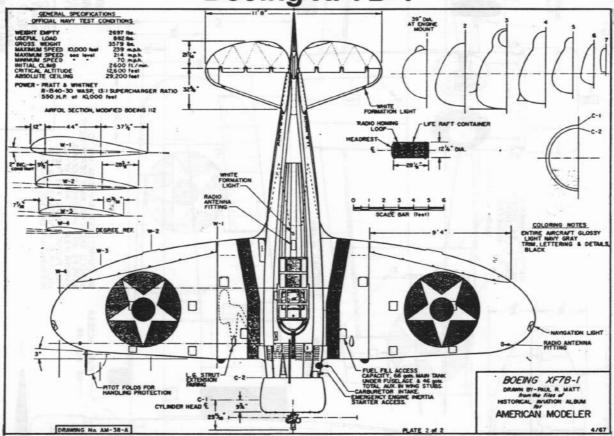
## **Boeing XF7B-1**





Boeing XF7B-1. Flight test at Anacostia in a revised configuration (January 9, 1934).

**Boeing XF7B-1** 





Original configuration of a Boeing XF7B-1 on September 14, 1933.

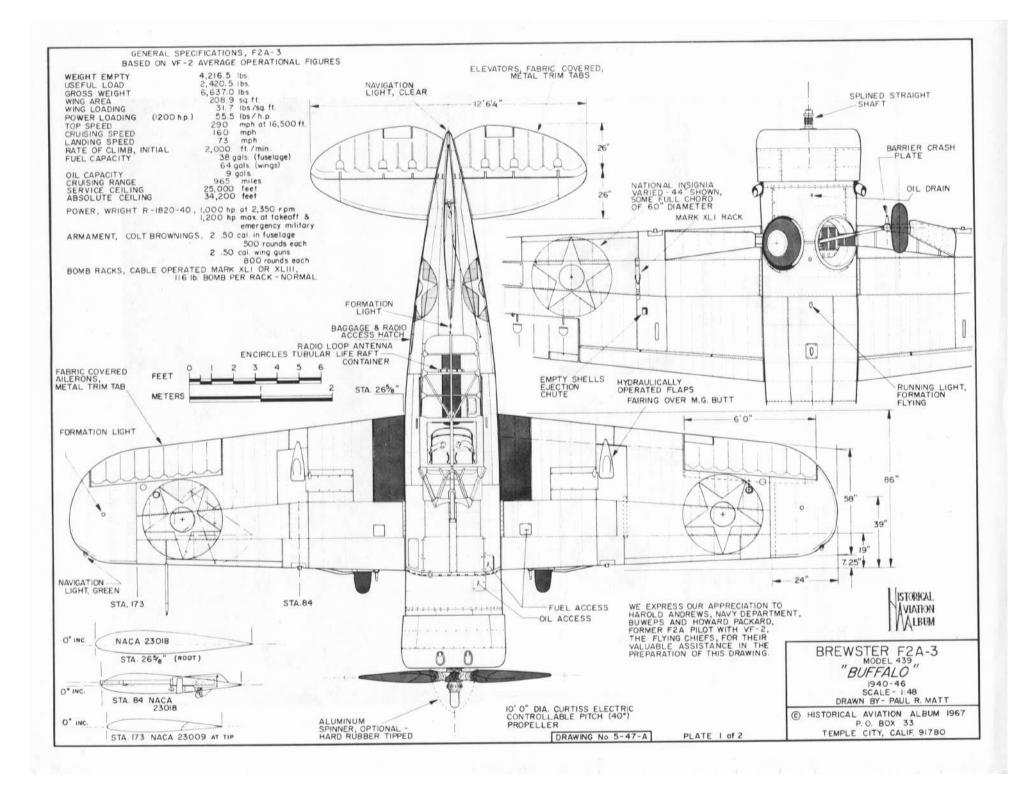


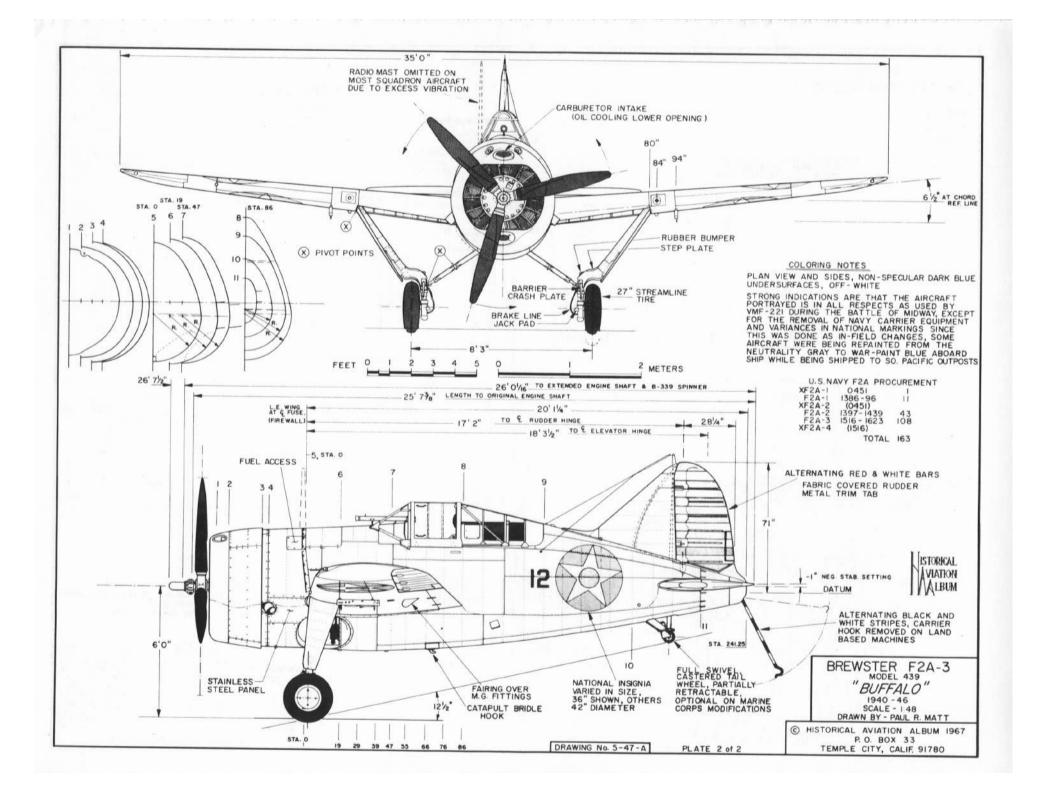




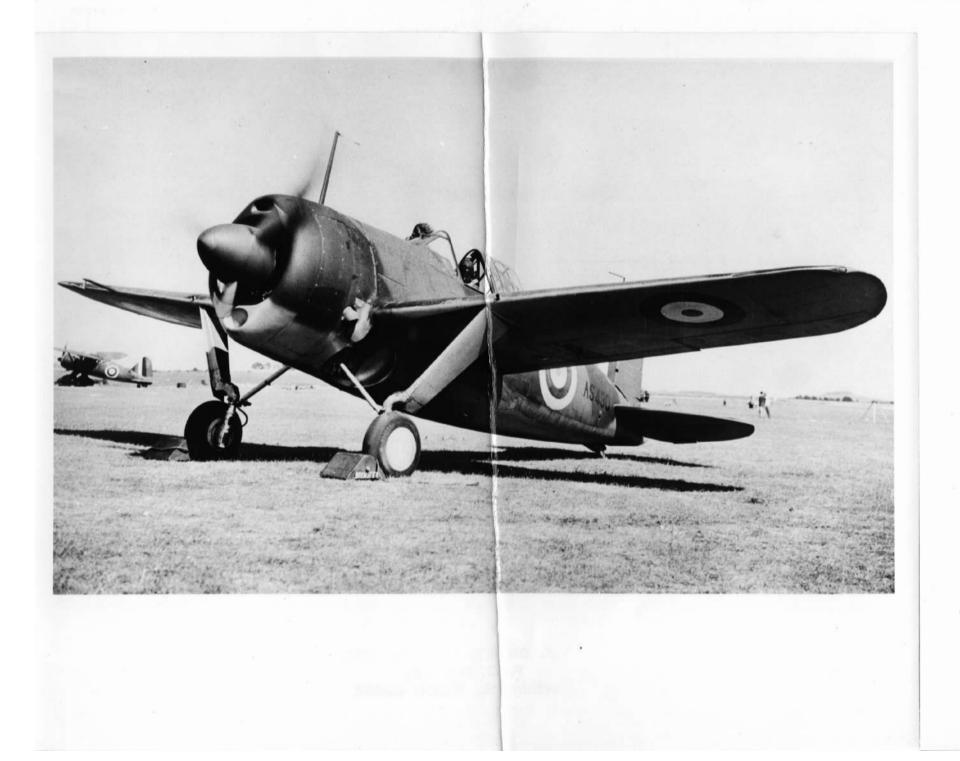
























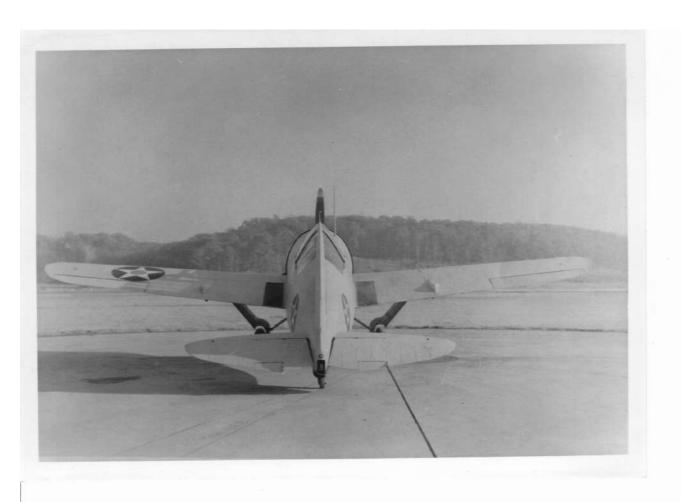






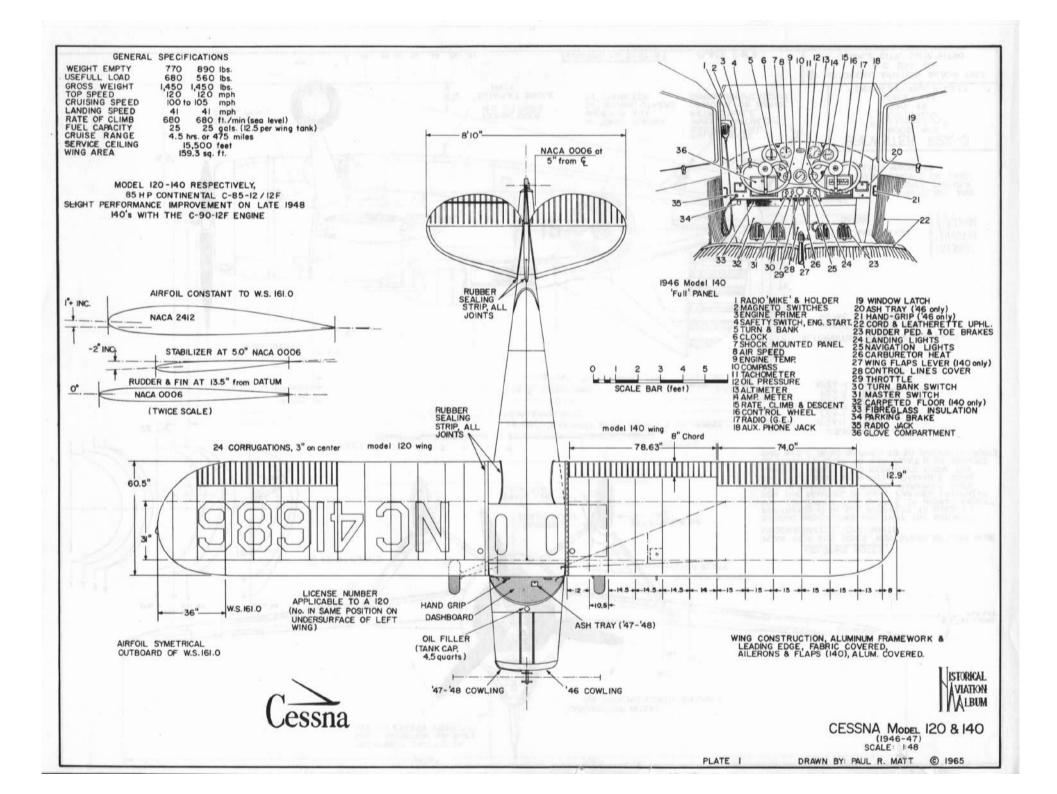


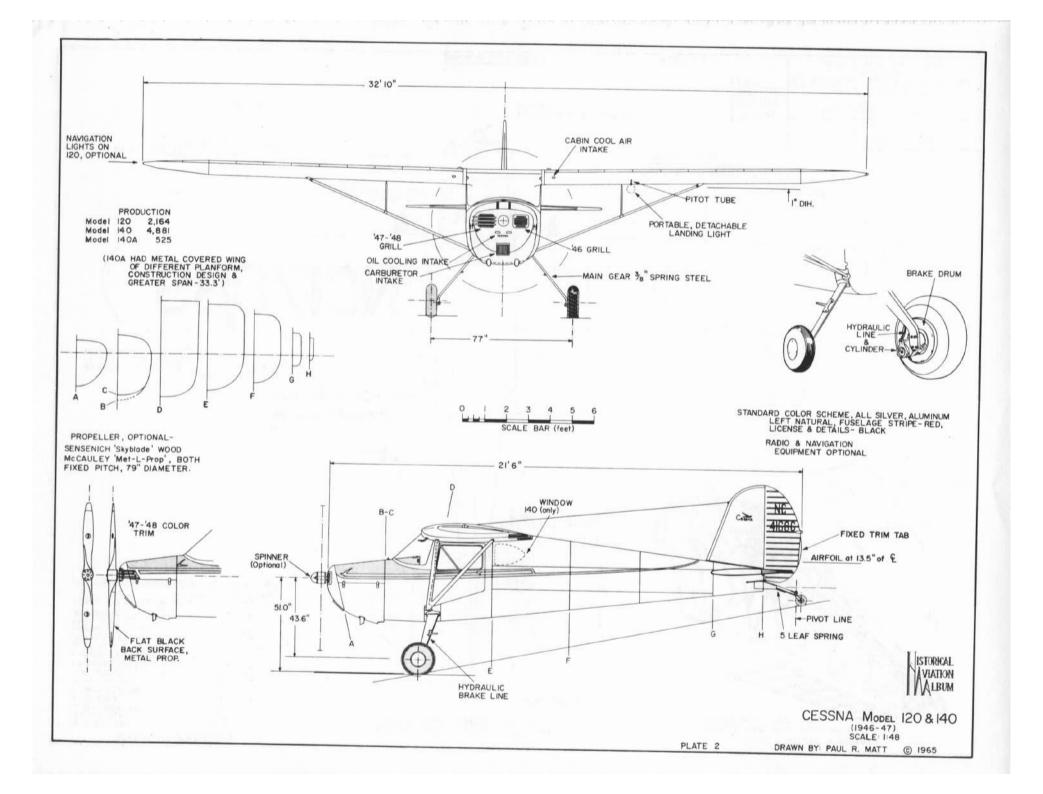




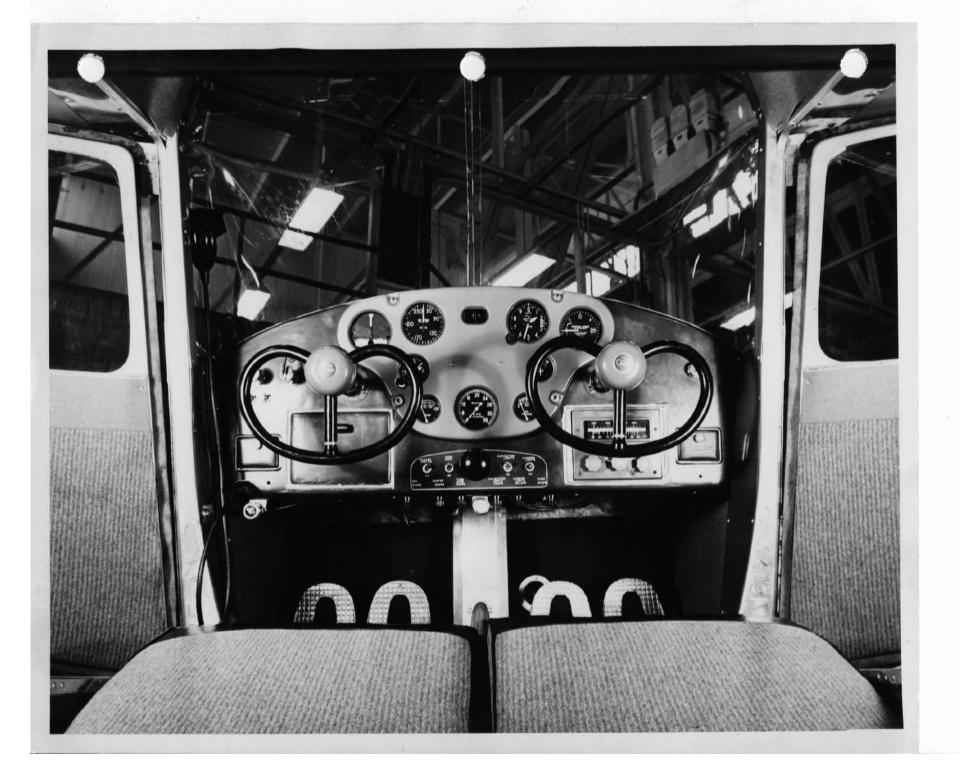
















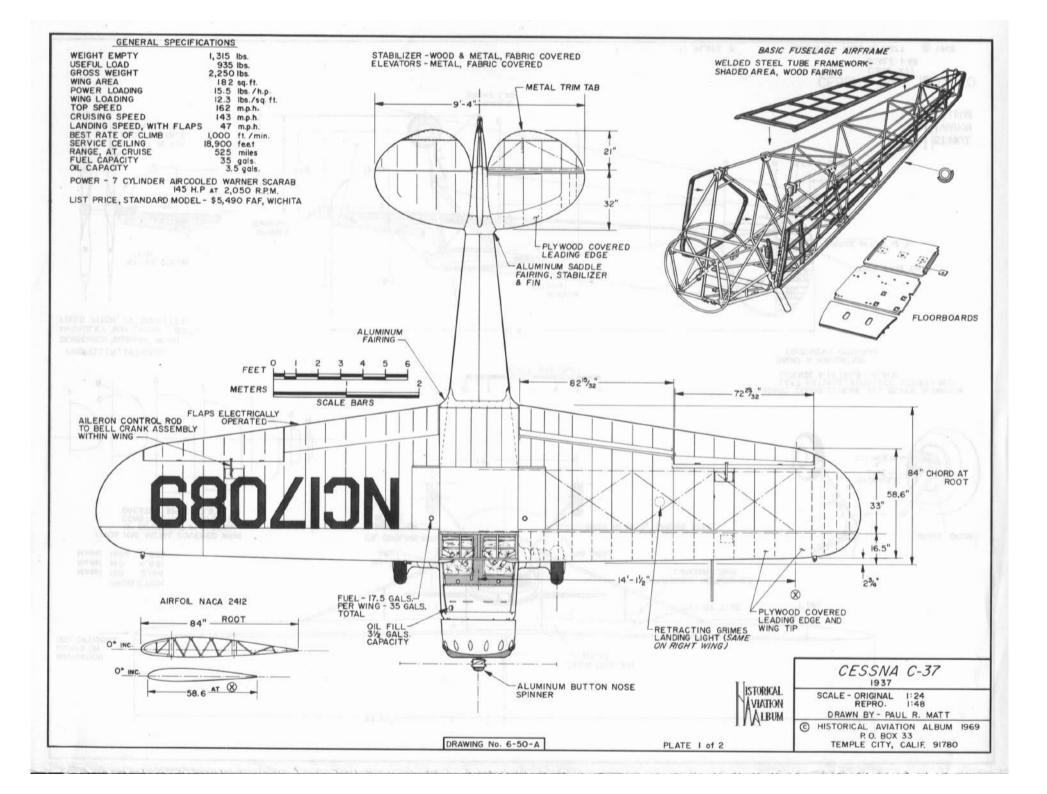


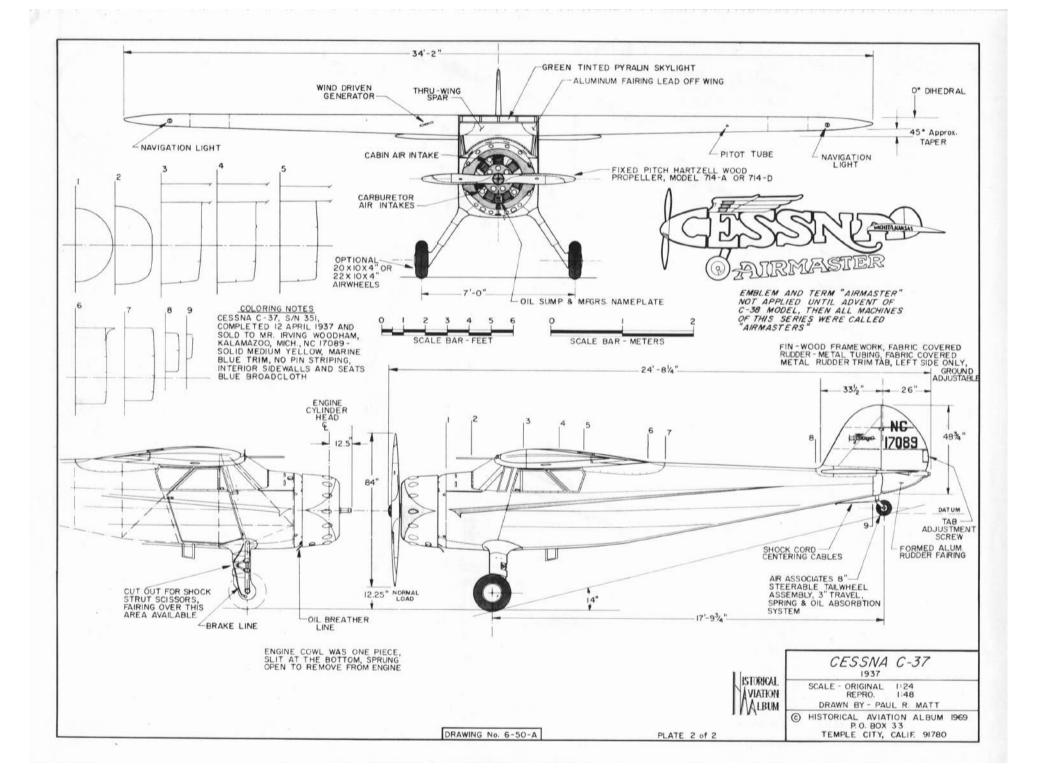








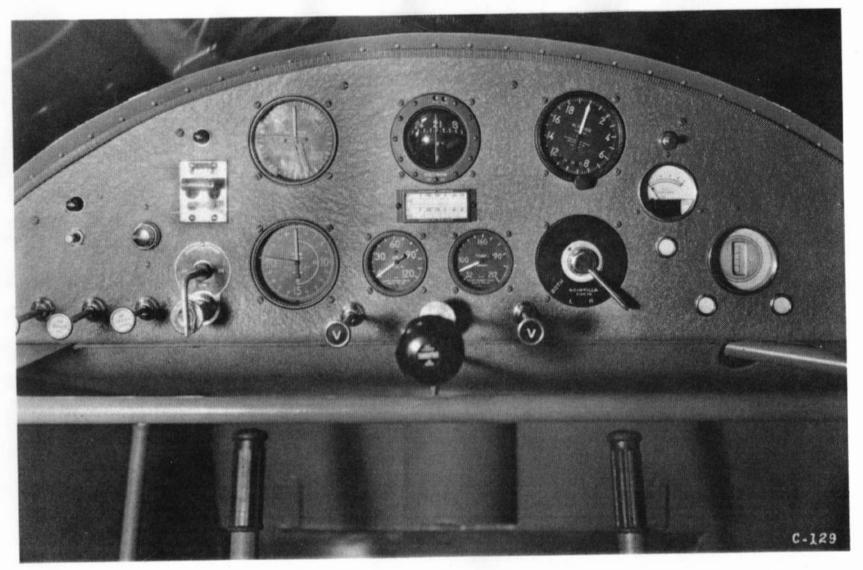




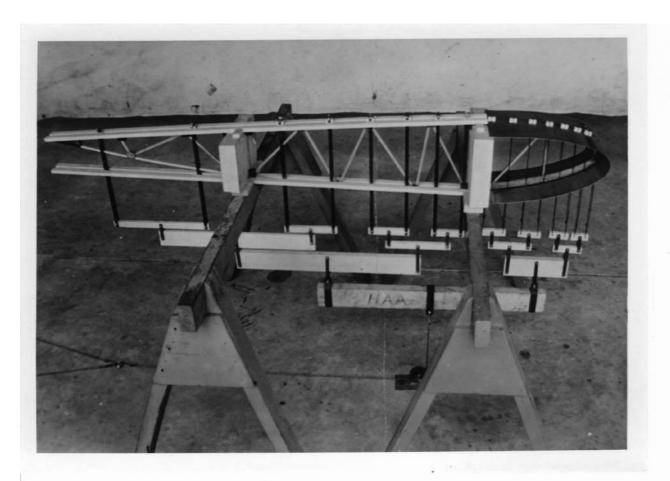




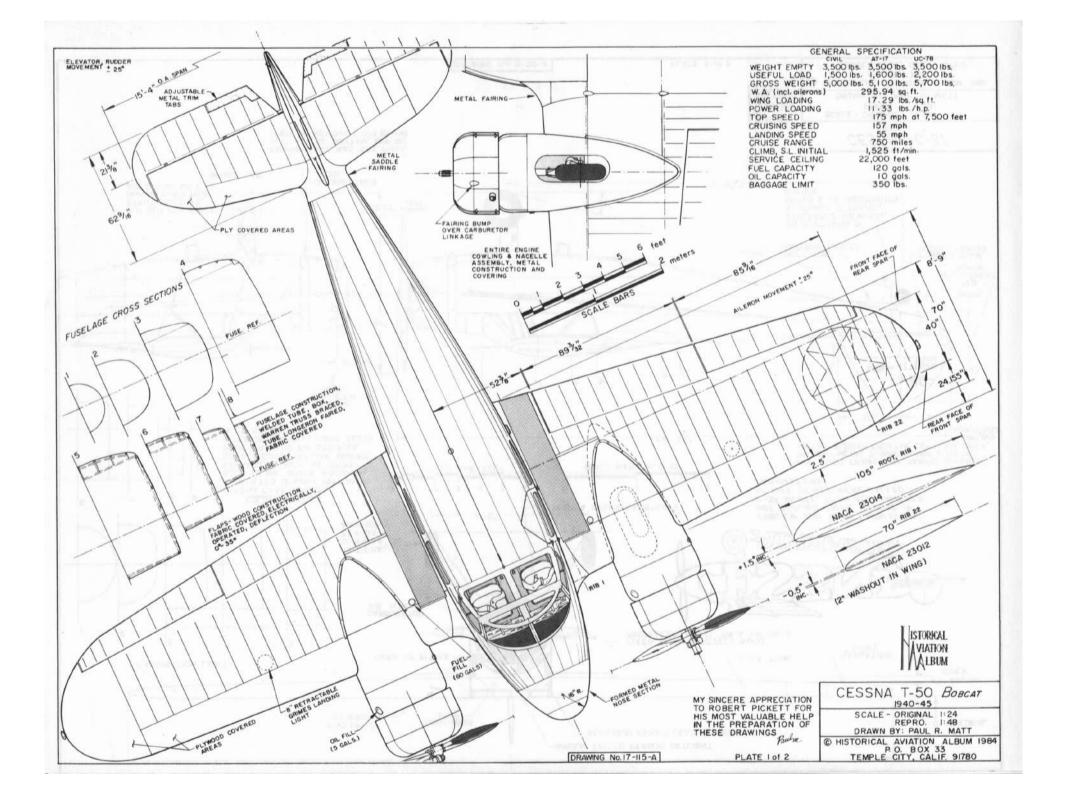


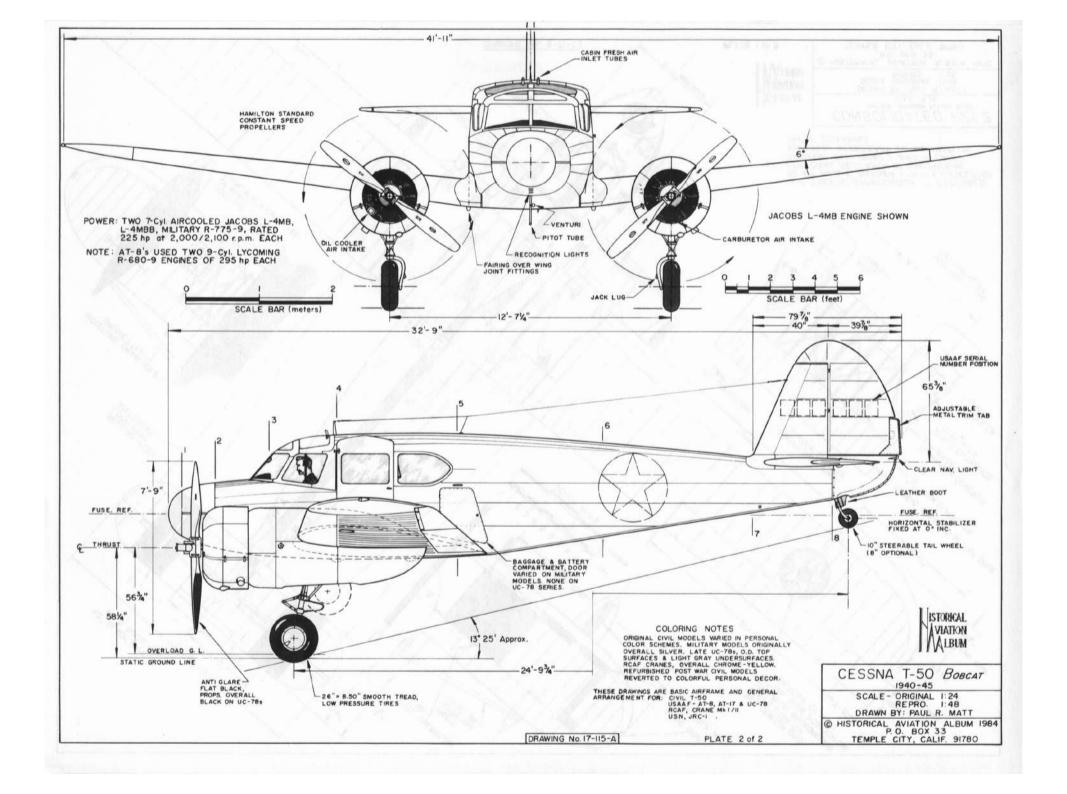


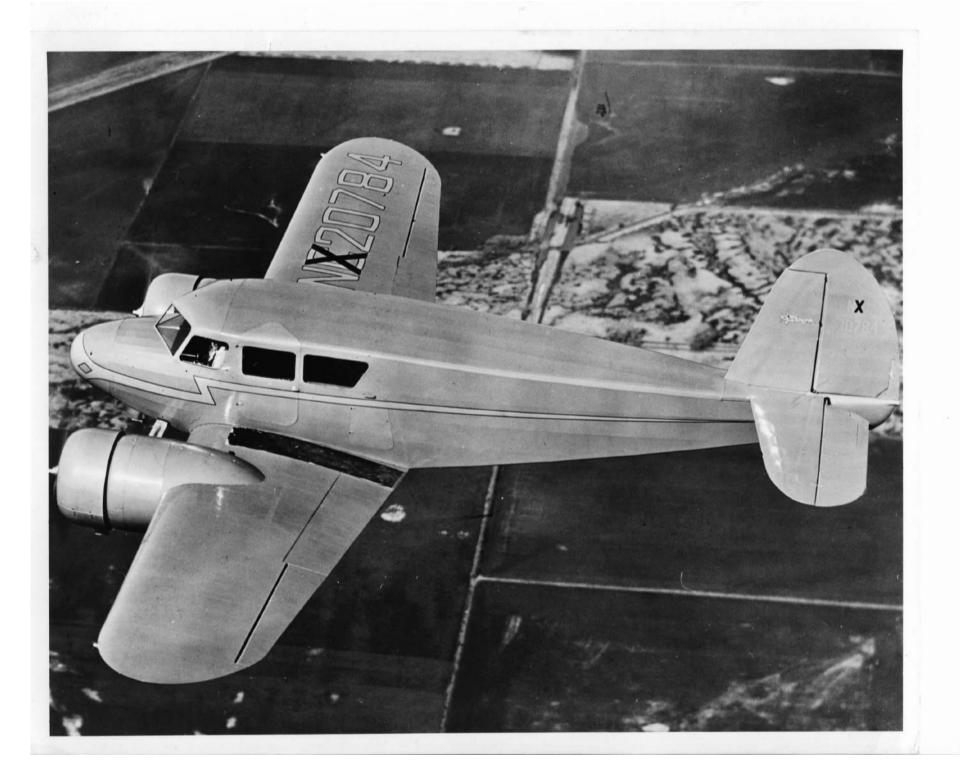
Panel of standard C-37 model.







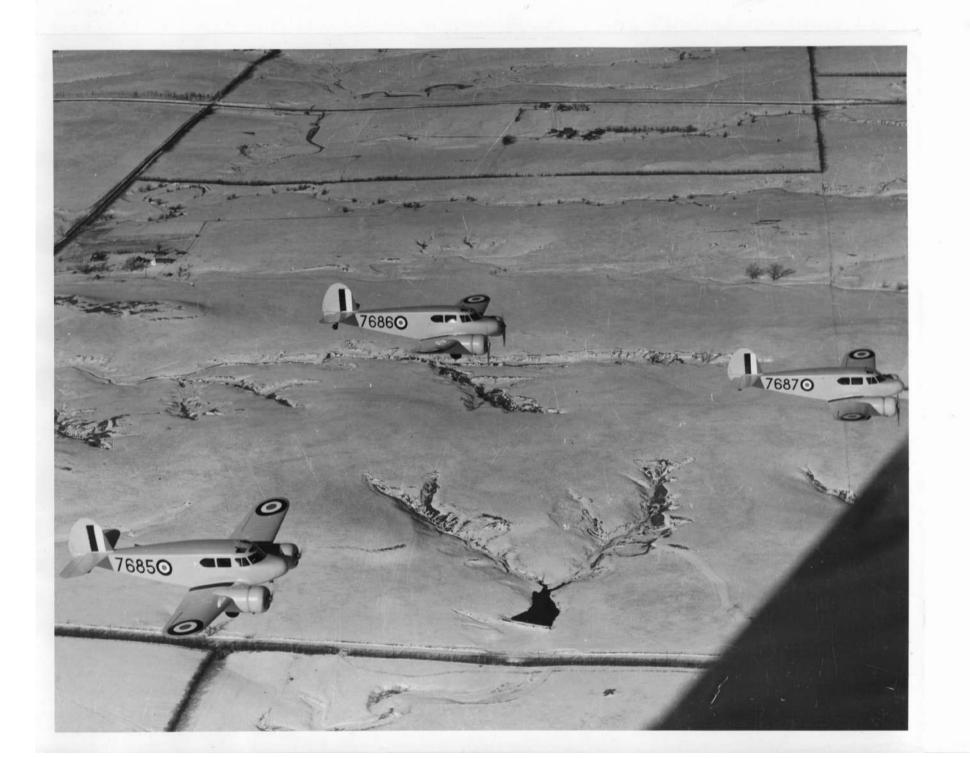




























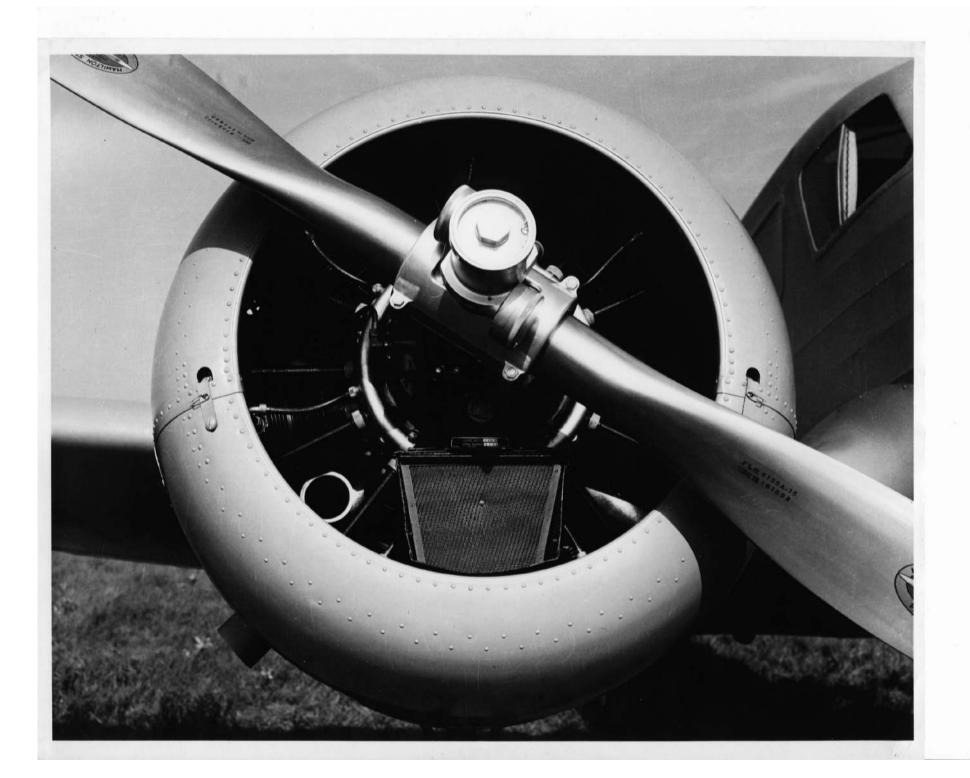




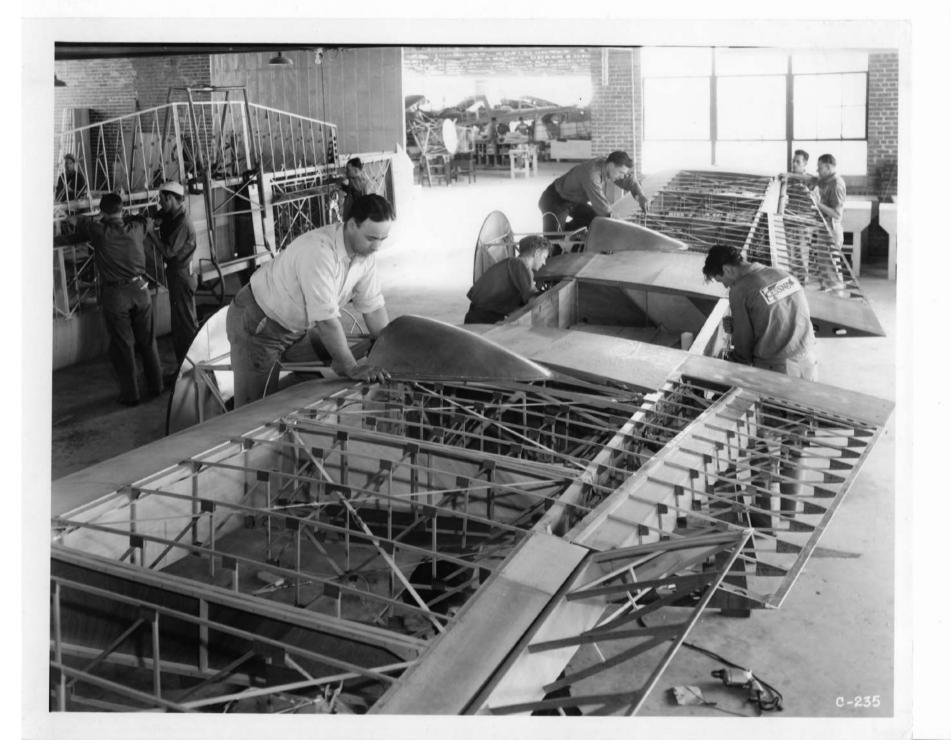


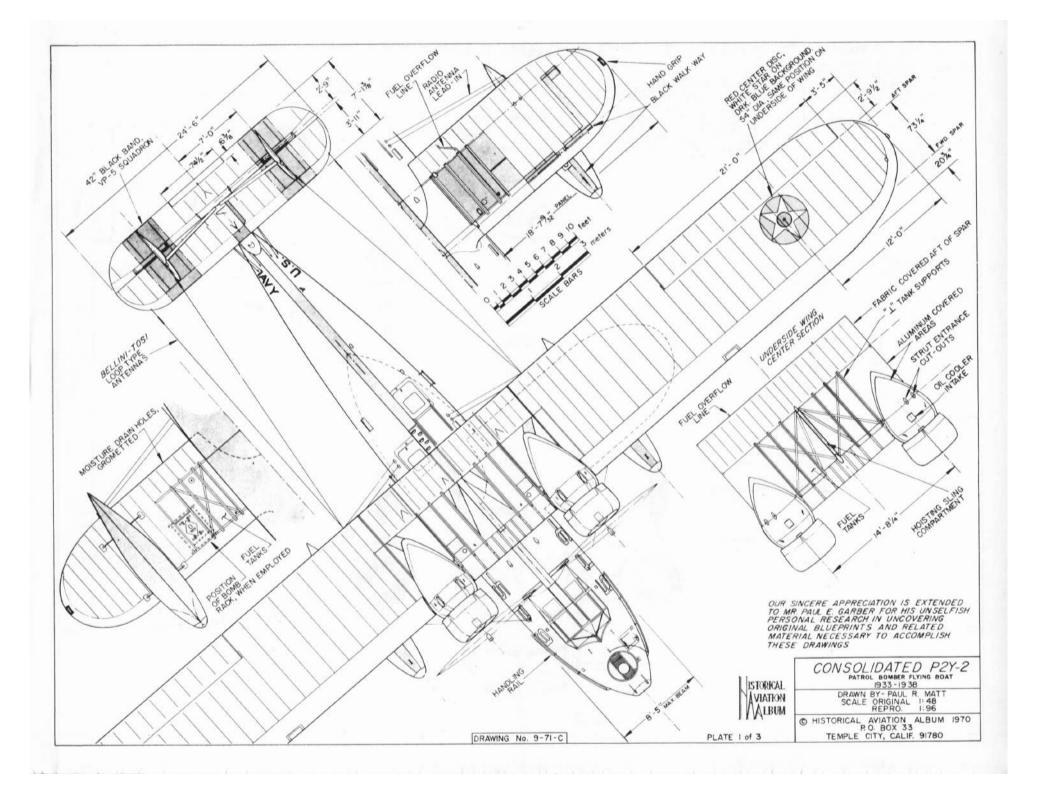


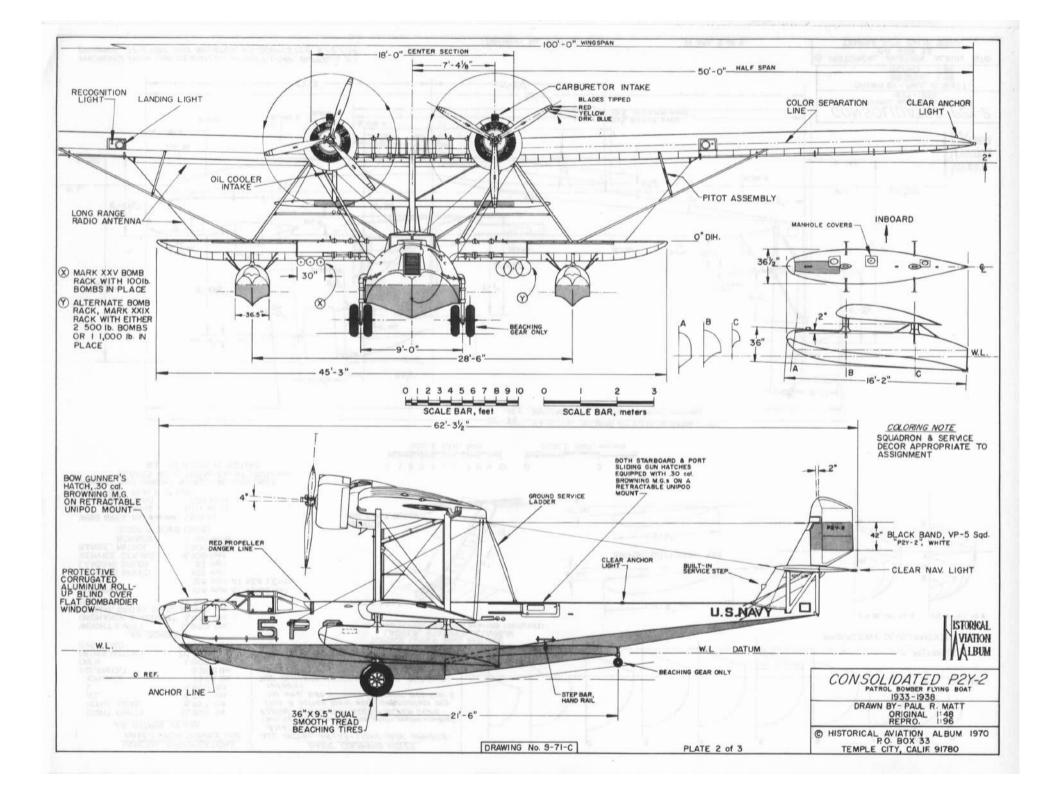


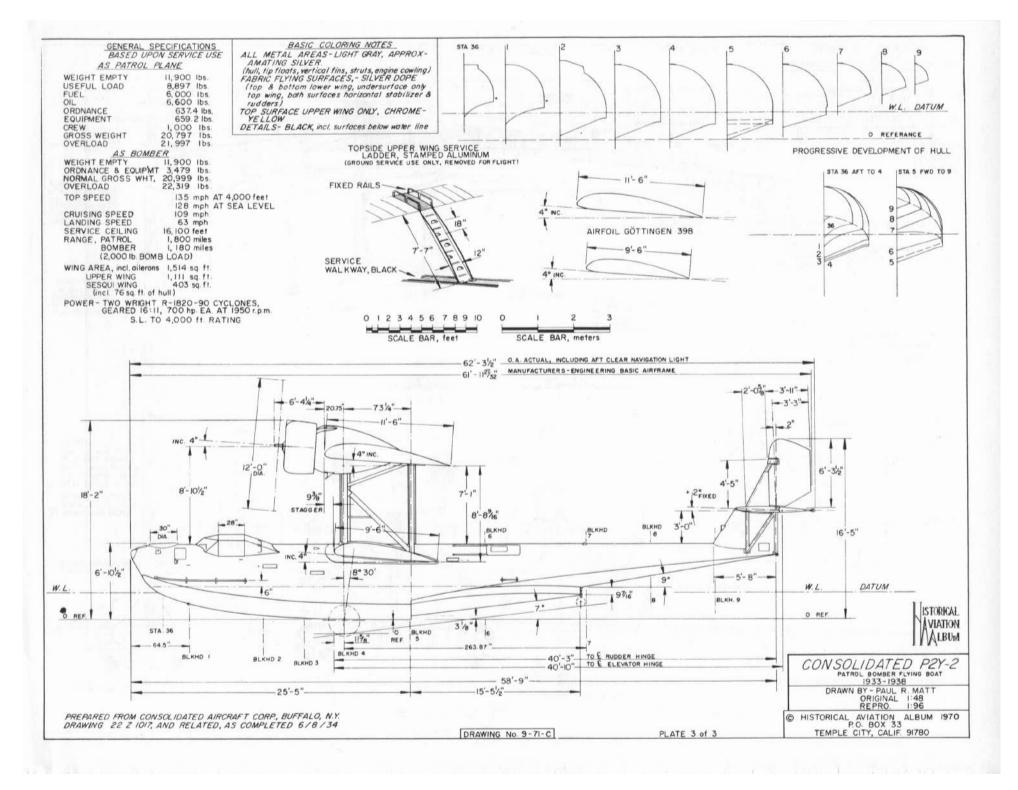








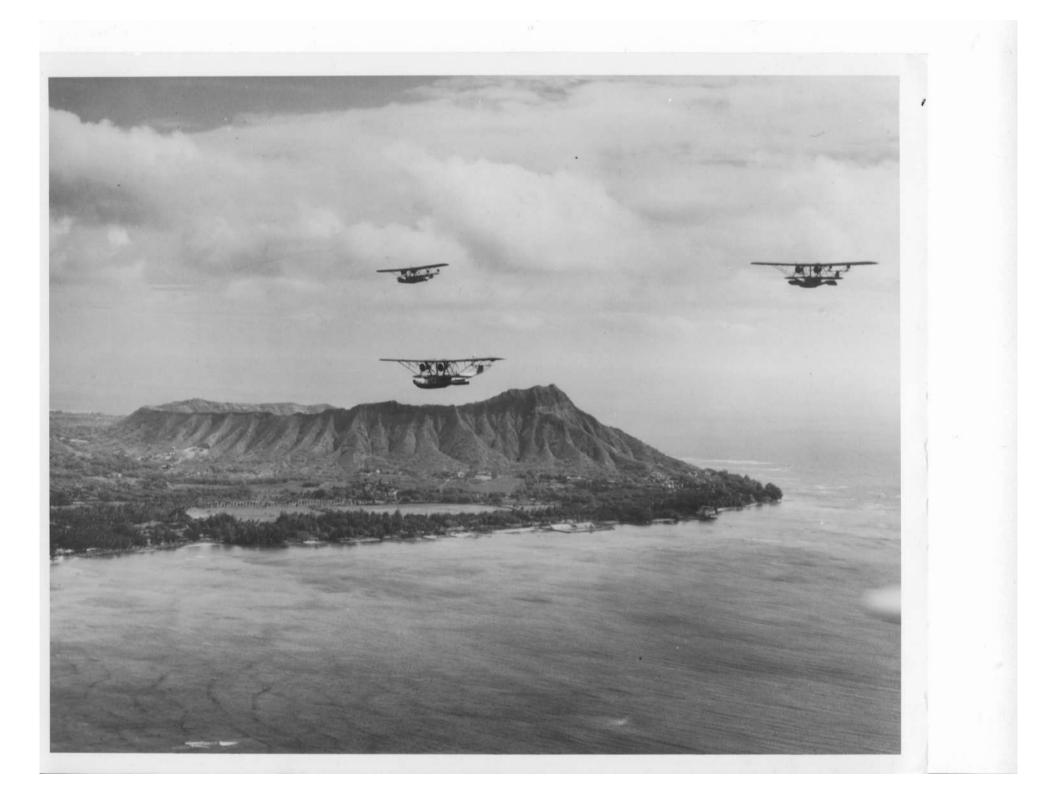






















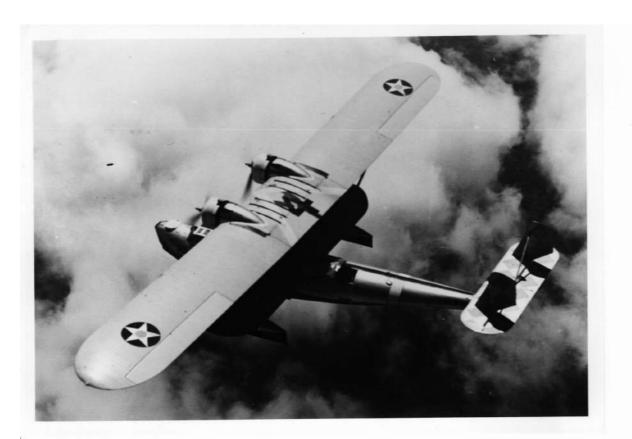






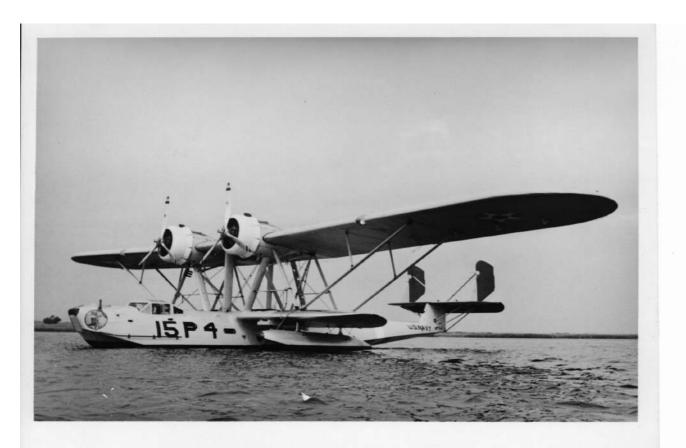




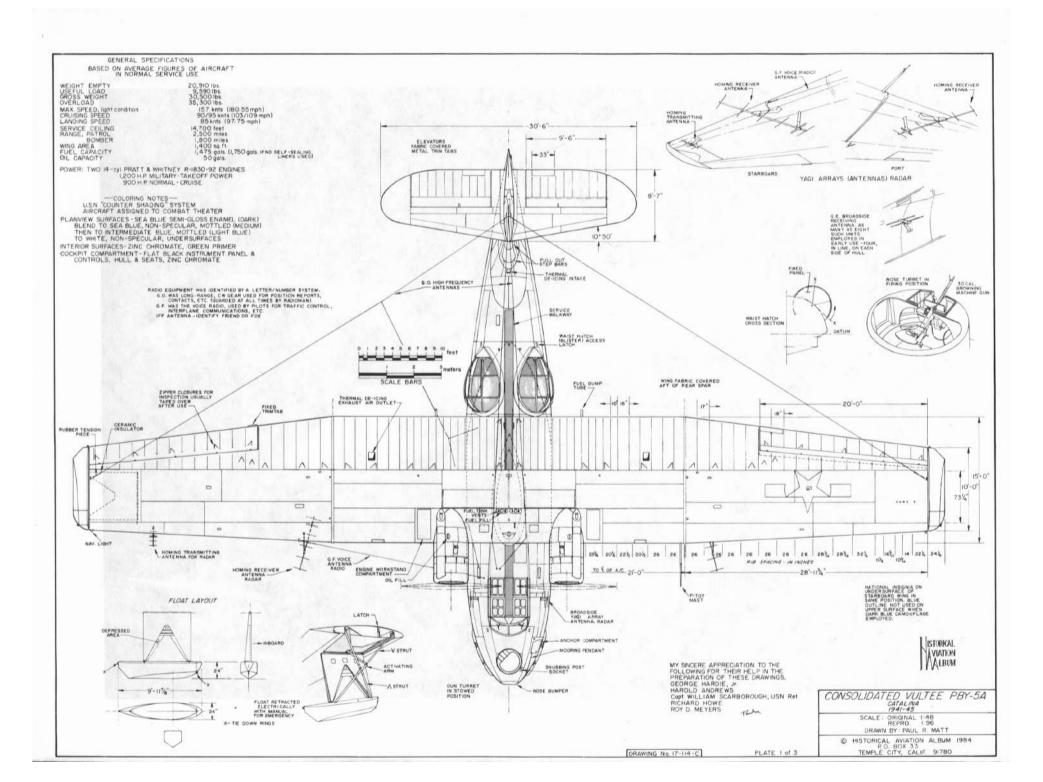


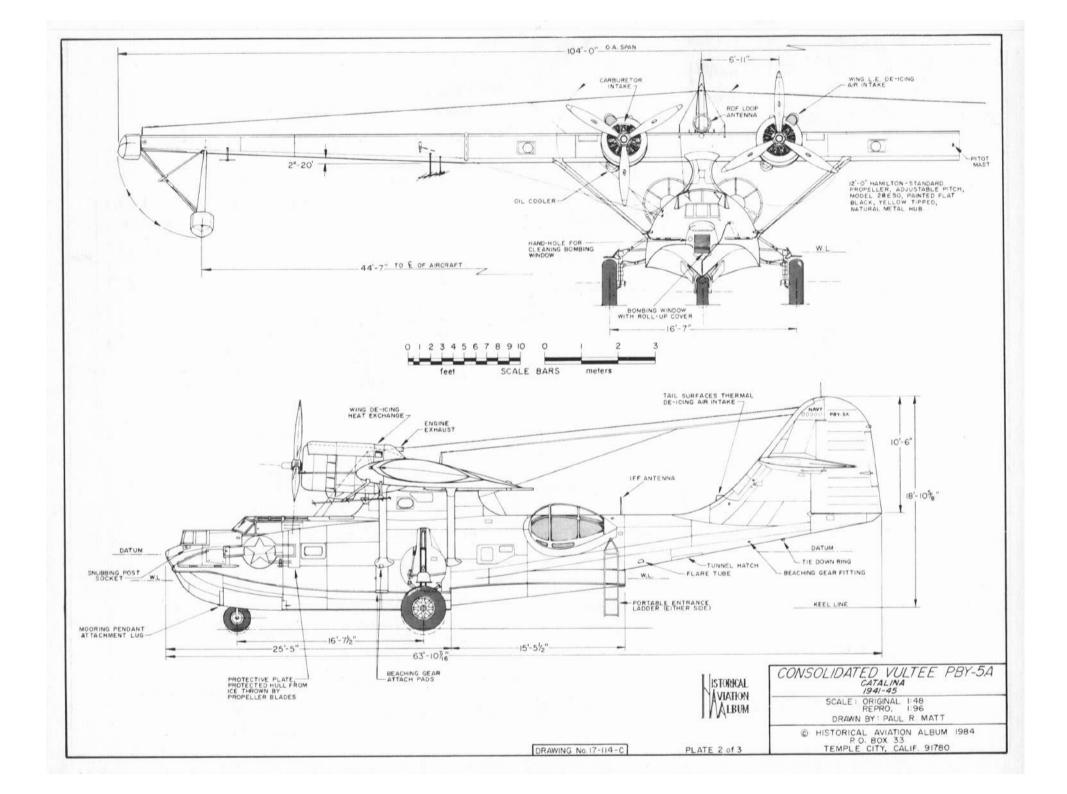


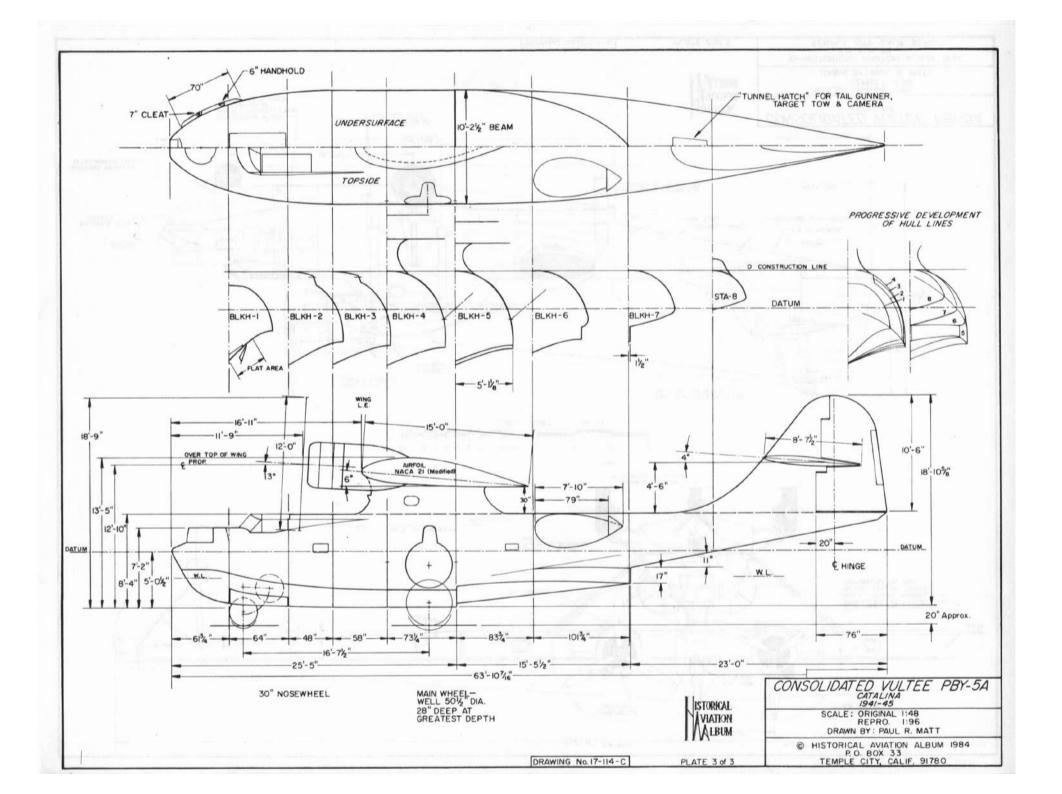






















CONSOLIDATED PBY-5A (2N)



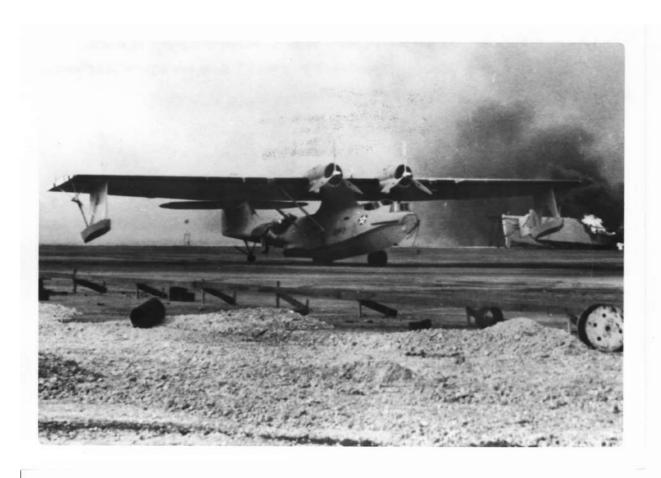
CONSOLIDATED PBY-6A (5N)











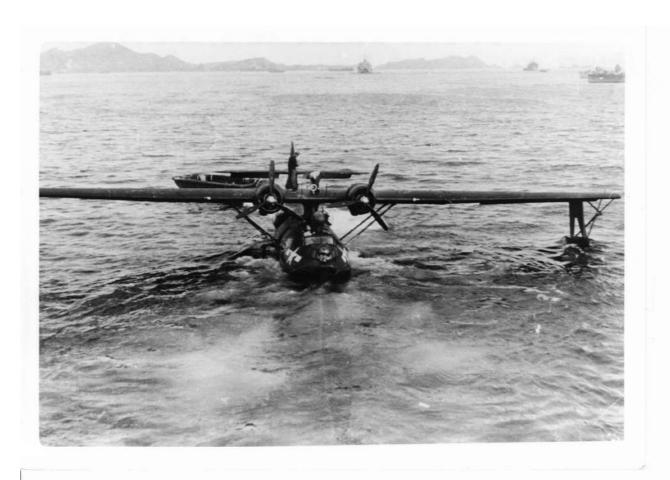




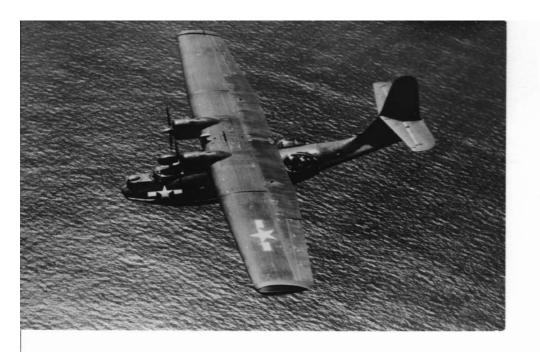






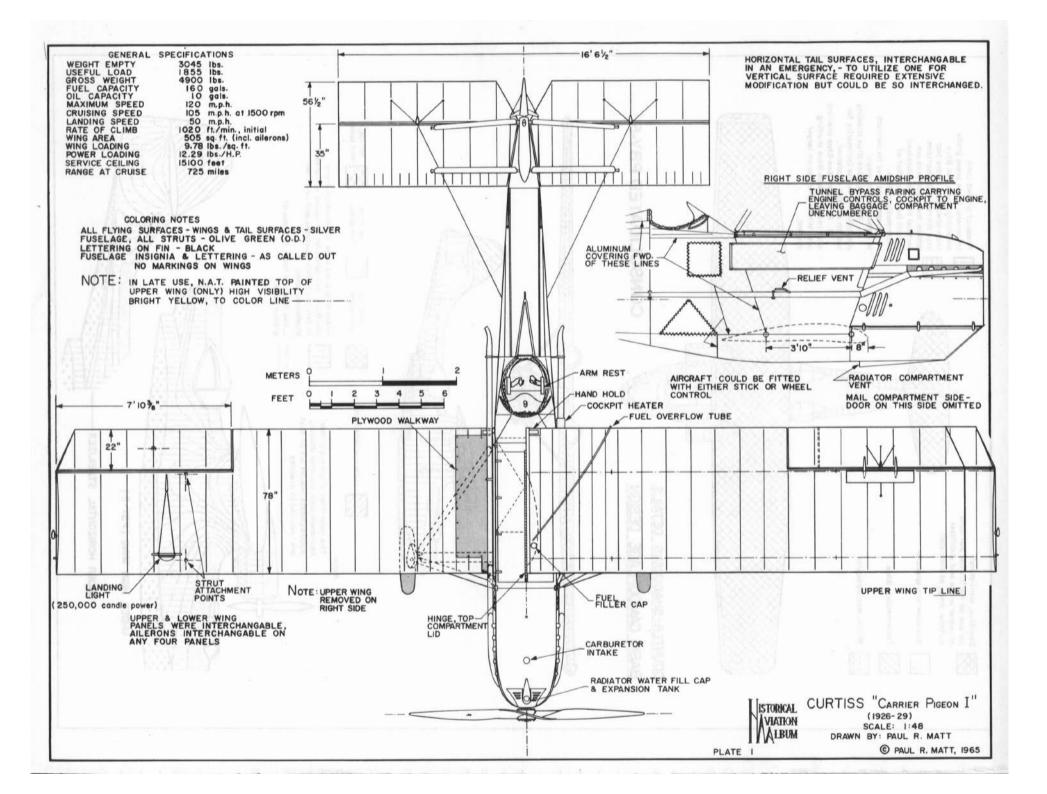


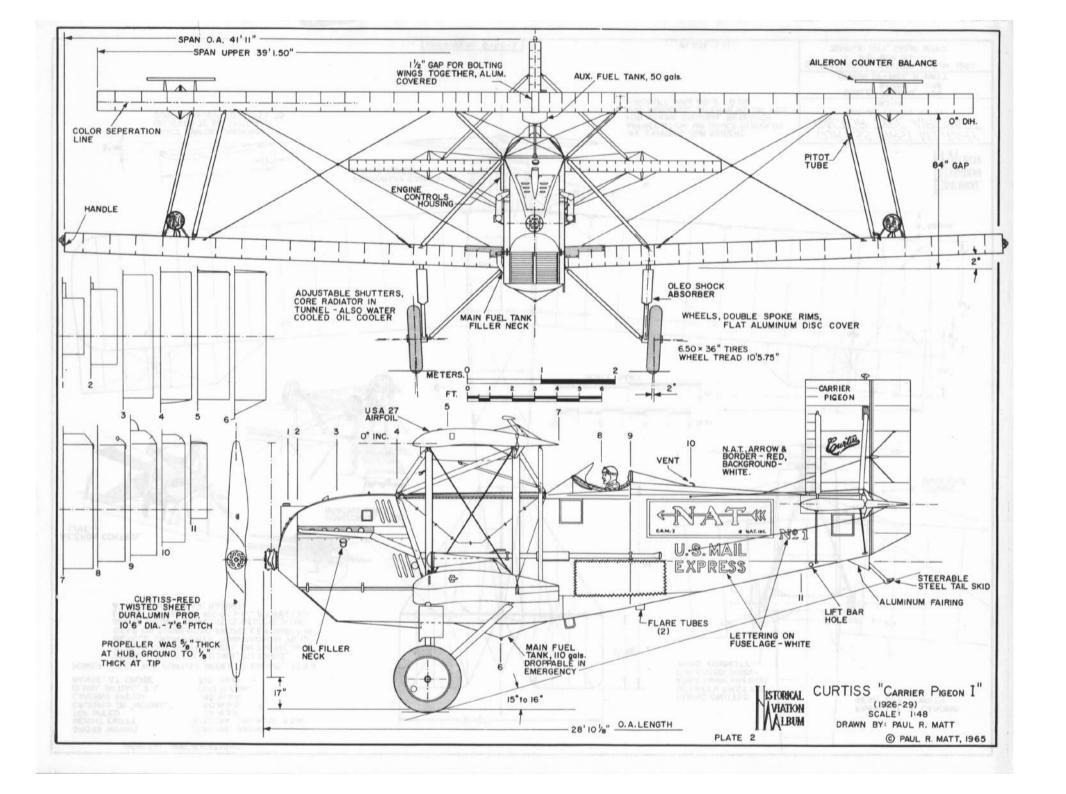


















Carrier Ticeon.









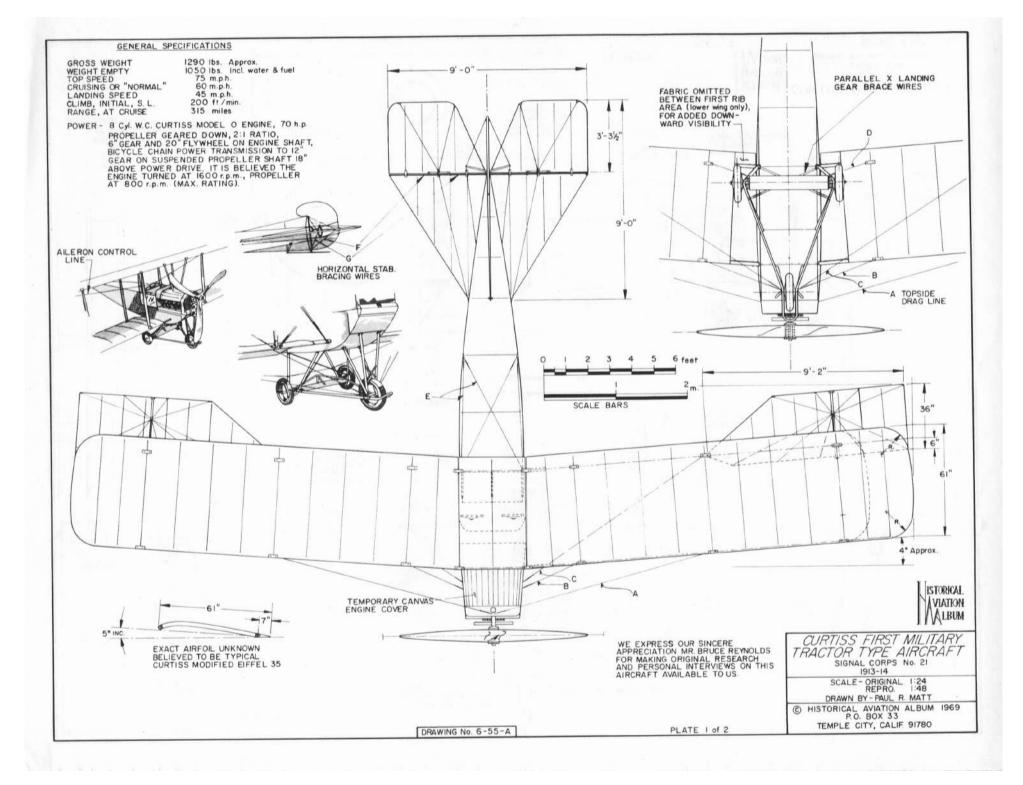


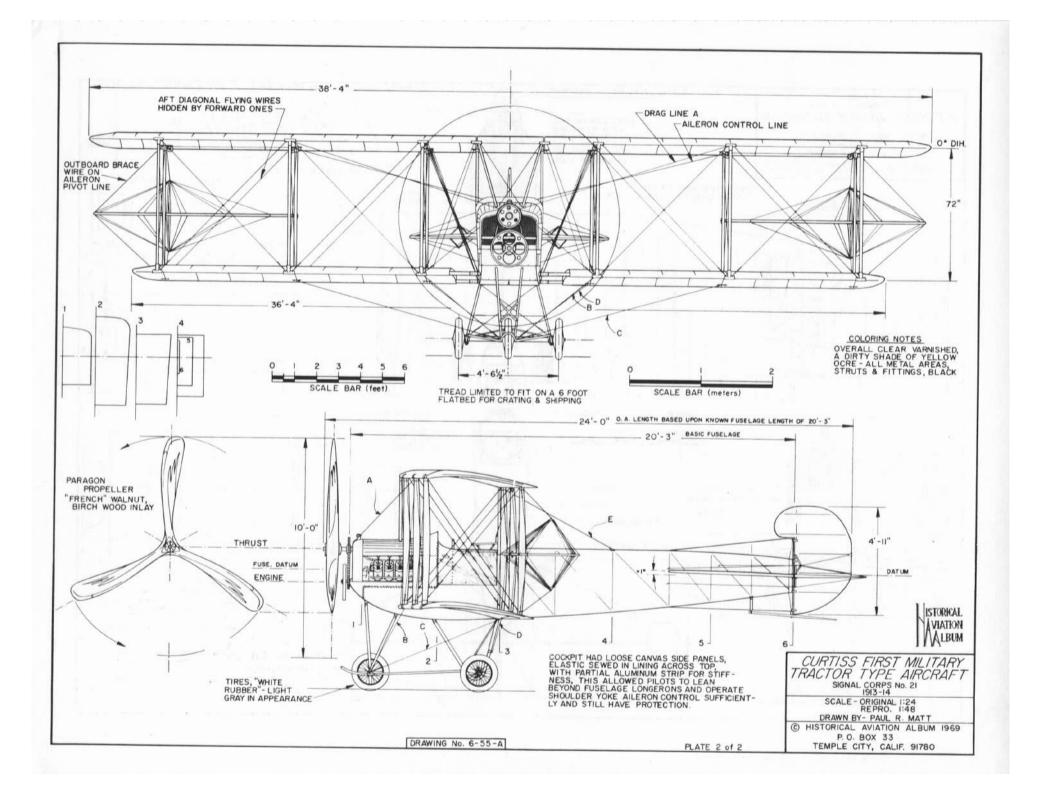


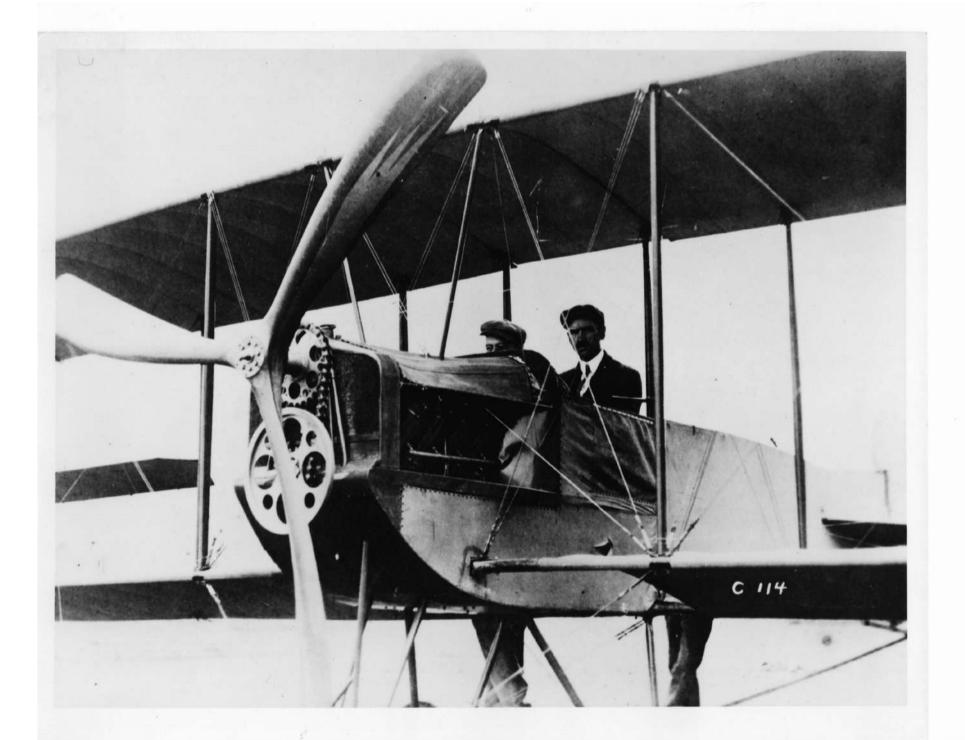






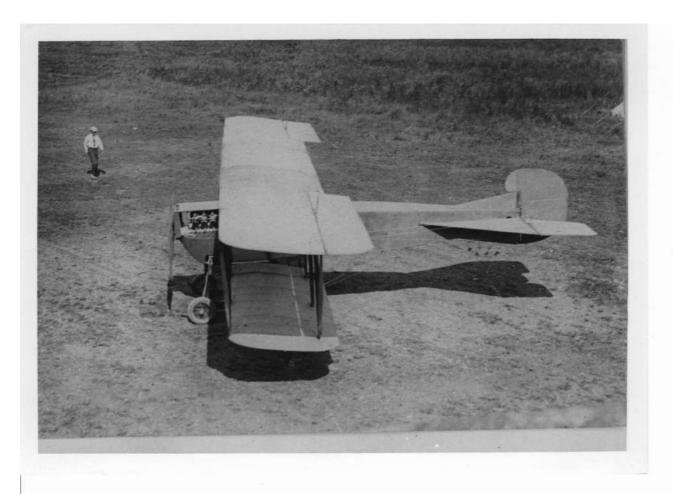


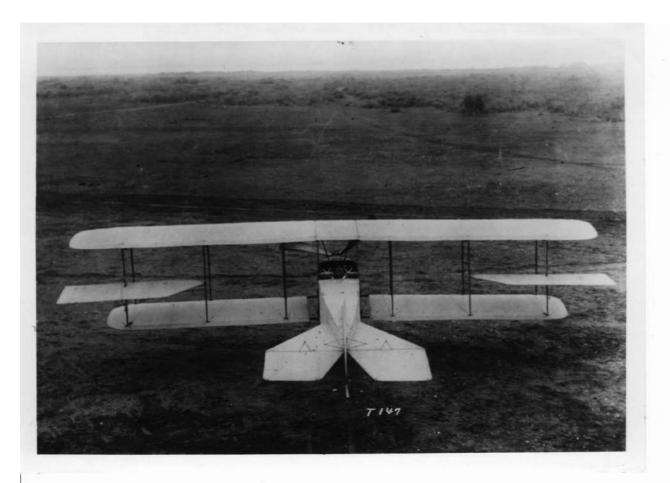


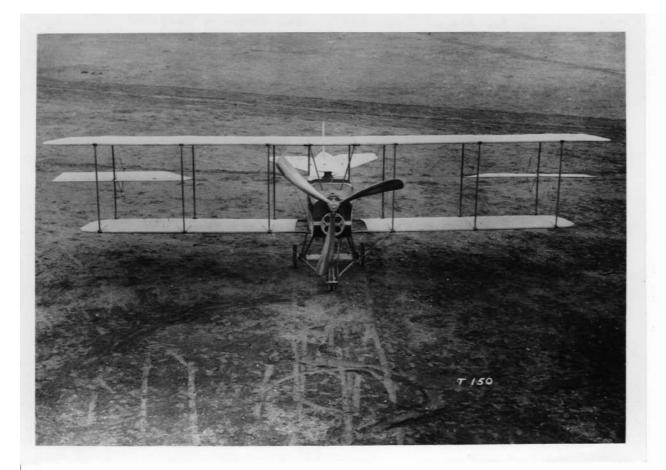


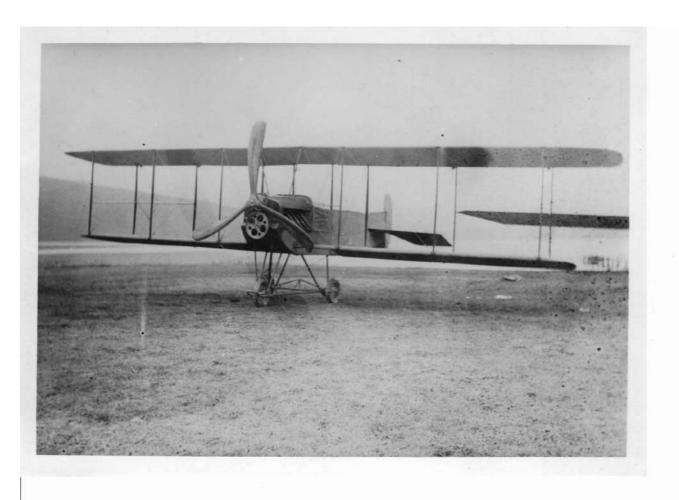






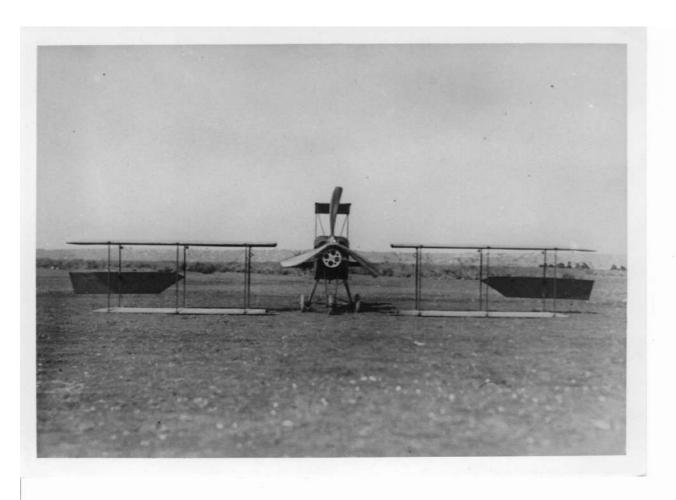


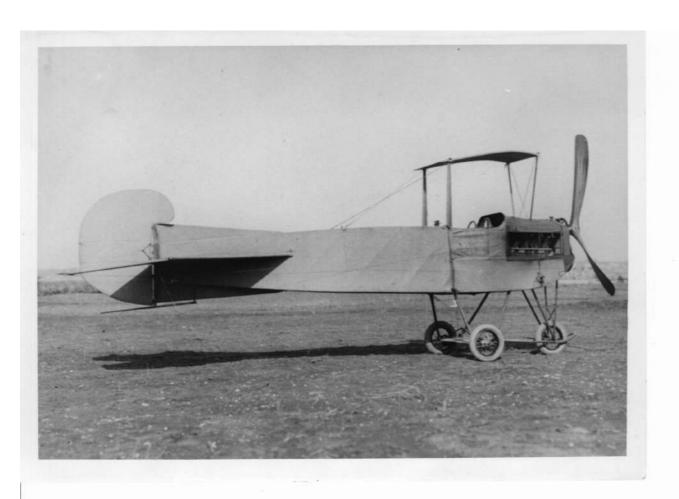


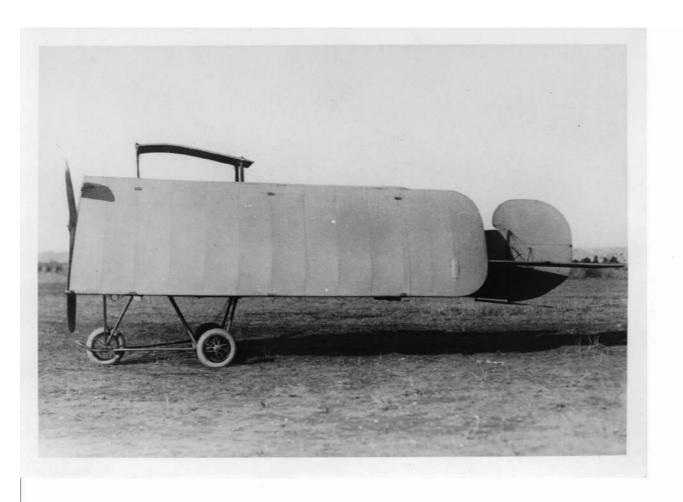


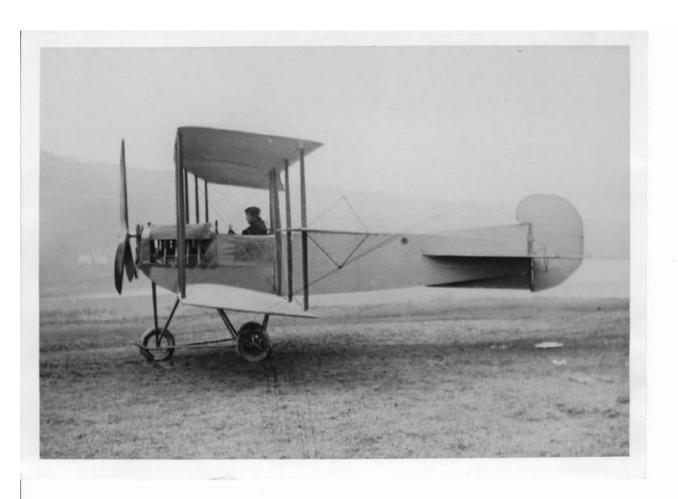






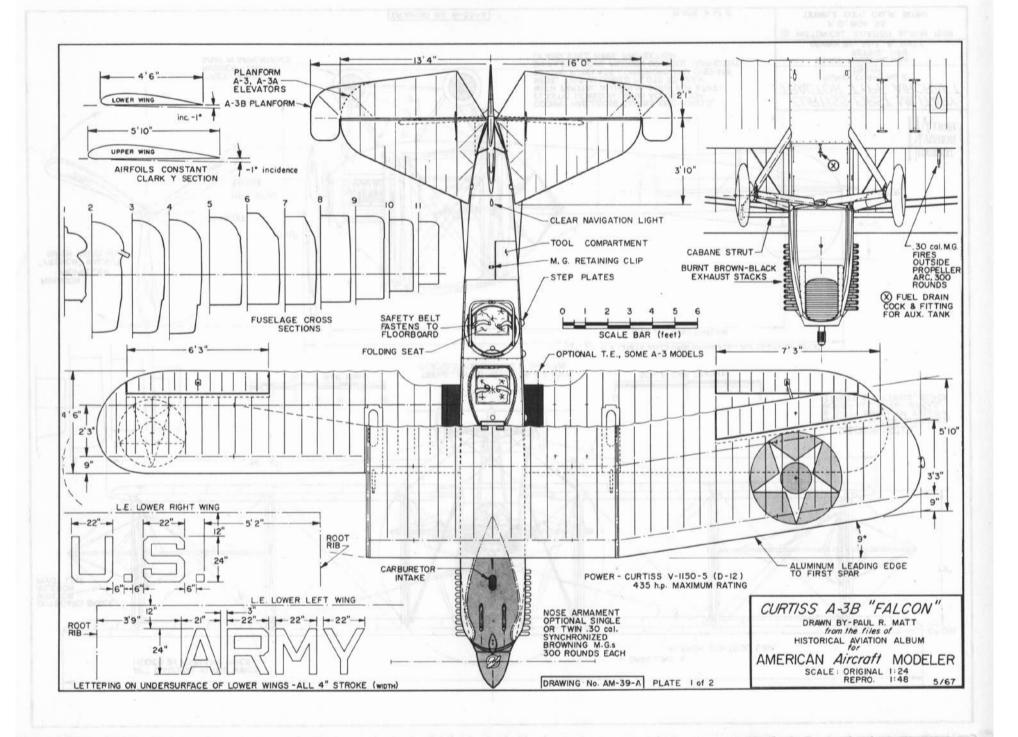


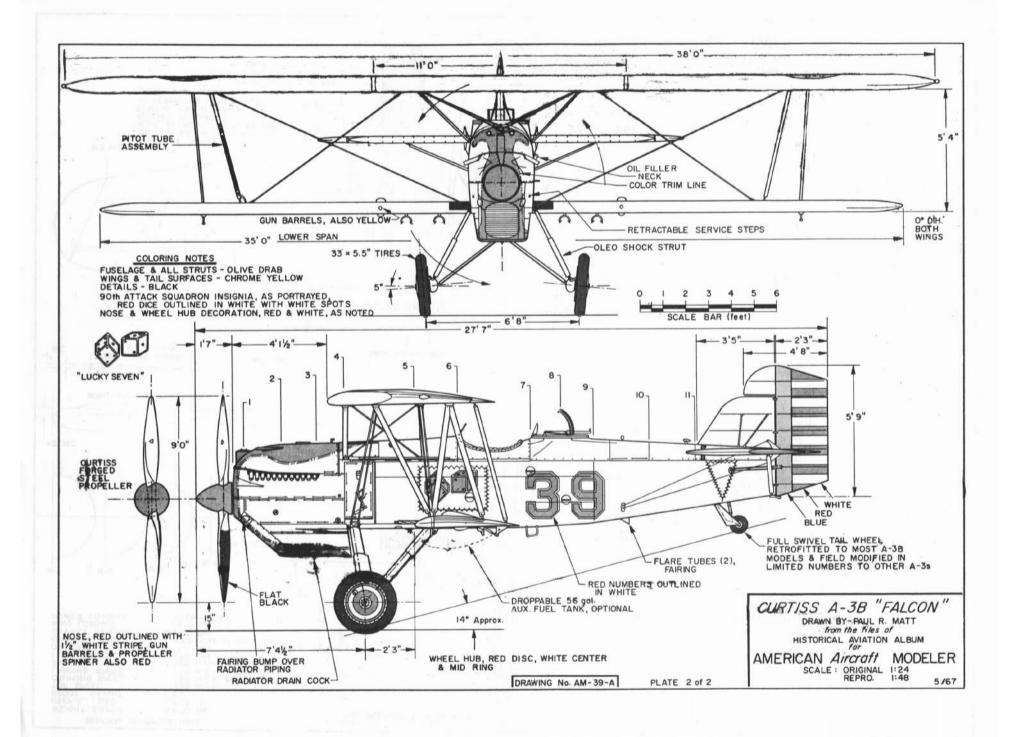




















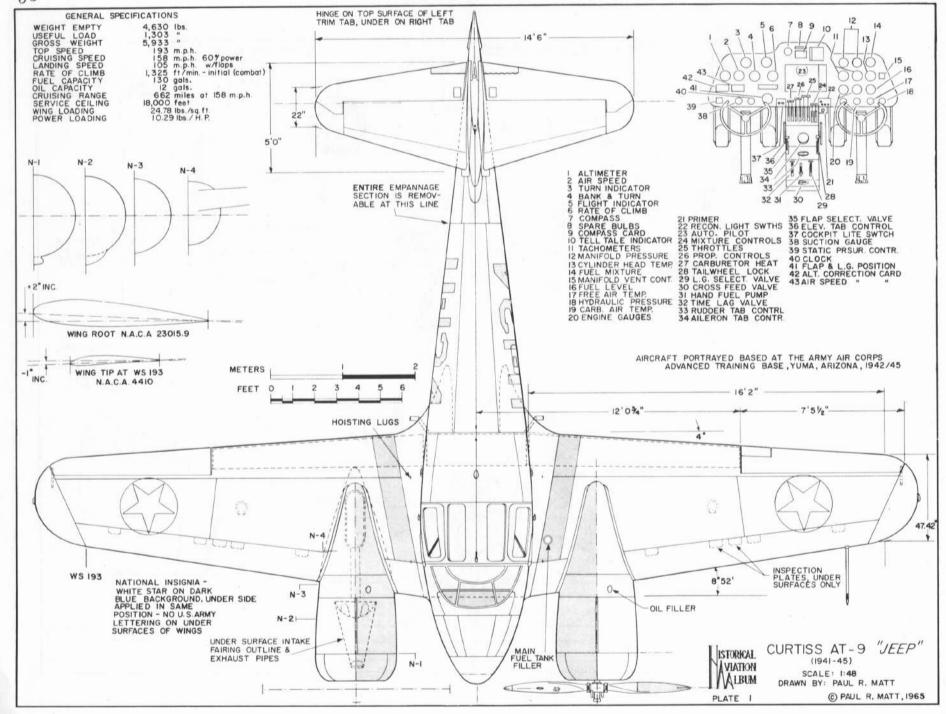


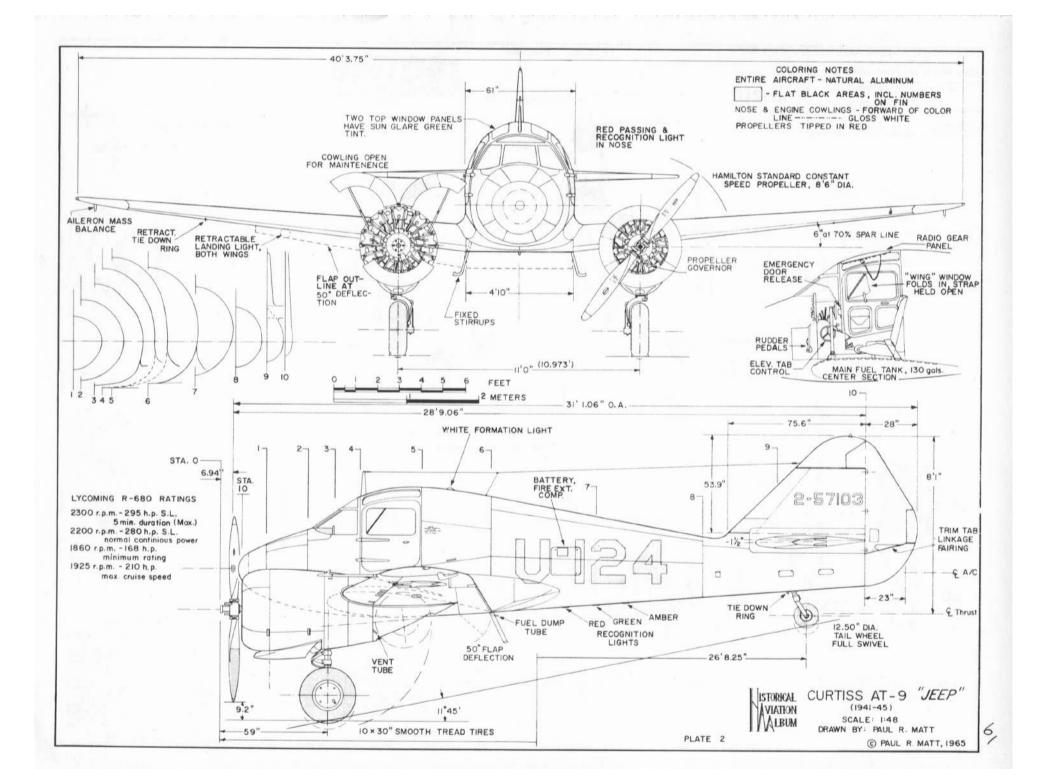














YEAR: 1941 AIRPLANE: Curtiss-Wright AT-9 TYPE: Advance Trainer









# AT-9 Trainers Assembled on Moving Line





The AT-9 assembly dollies are high enough to permit complete installation and testing of retractable landing gear. Work stands move along with the ship.

Curtiss-Wright Corporation Airplane Division has designed and has in "all out" production the AT-9—a transition trainer which duplicates for the pilot the tricky flying characteristics he will find in the operation of present day multi-engine bombers, fighters and interceptors. The purpose of the AT-9 is primarily one of flight instruction rather than navigation, although it is fully equipped for blind flying and radio operation.

Many AT-9's have been turned over to the Army Air Forces. Many more are in production. In a preceding page is an illustration of the moving final assembly line for Curtiss transition trainers to get them into the hands of student pilots faster than ever.

Certain pieces of Army equipment immediately strike the fancy of Army men. For months the Army has talked fondly of its Jeeps and Peeps, of its Kittyhawks and Tomahawks. The AT-9 also caught the fancy of Army pilots. In a ceremony at Ellington Field, Texas, an Air Cadet solemnly broke a bag of oxygen over the nose of the AT-9 as he christened it the Army's "Jeep of the Air."



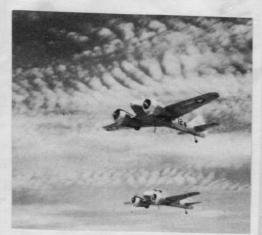
Twin-engine AT-9 Transition Trainers are assembled on a continu-

High above the clouds a Curtiss AT-9 "Jeep of the Air" makes a routine training flight.



AT-9 Curtiss, twin-engine. In advanced training, cadets begin simulated combat work, cross-country night flying, fixed-gun shooting, tight-formation flying, landing on small fields













Peter M. Bowers
CURTISS AT-9 (UNITED STATES)



#### Markinas

## Description

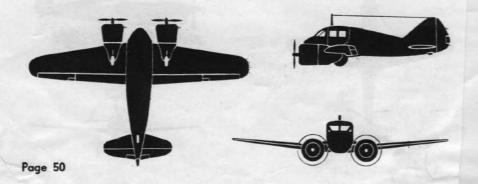
Low-wing, all-metal, four-place advanced training monoplane powered by two Lycoming R-680-9 radial air-cooled engines of 280 h.p. each. This plane was specially developed for twin-engine instruction of advanced student pilots. It incorporates many special features stipulated by the U. S. Army Air Forces and has the same general performance and operating characteristics of larger tactical aircraft.

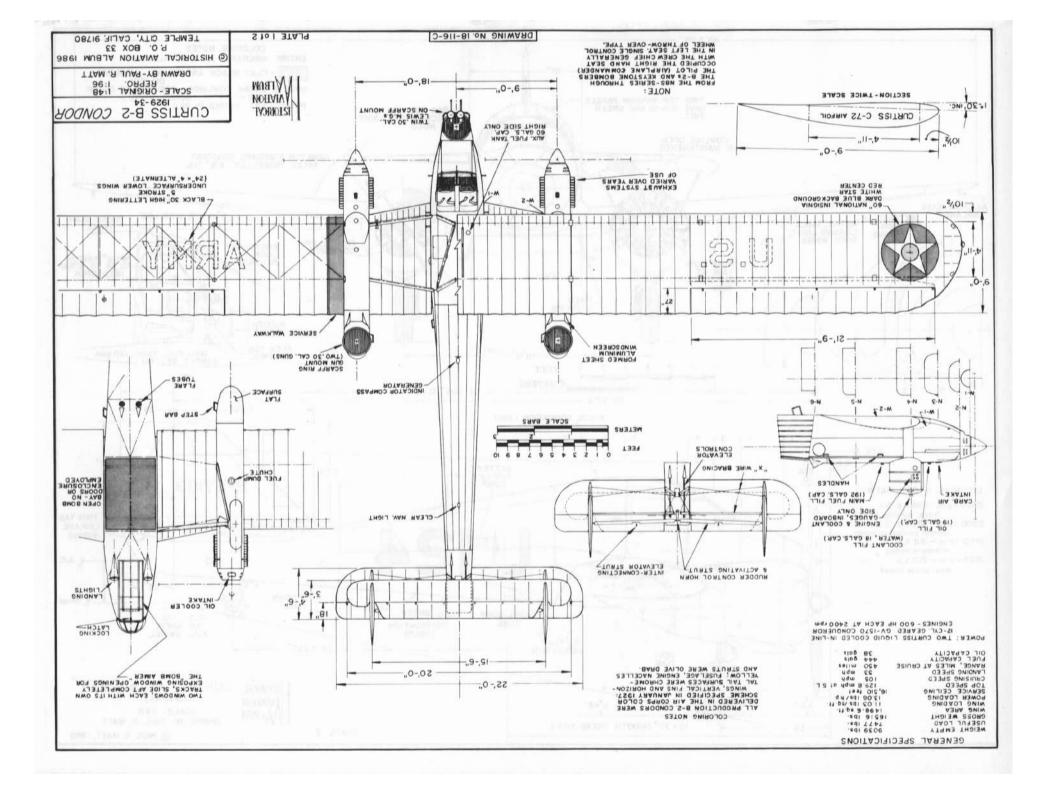
#### Recognition Characteristics

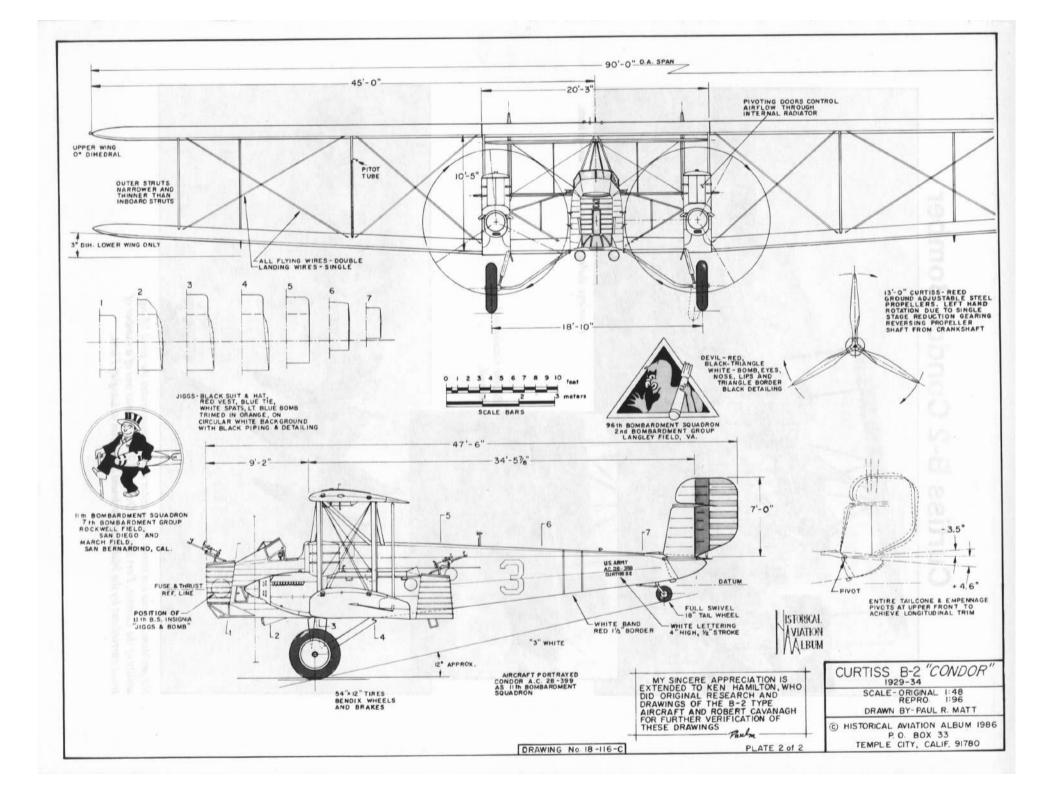
Low-wing, twin-engined monoplane. Engines protrude beyond nose. All-metal construction. Tapered wings.

## **Specifications**

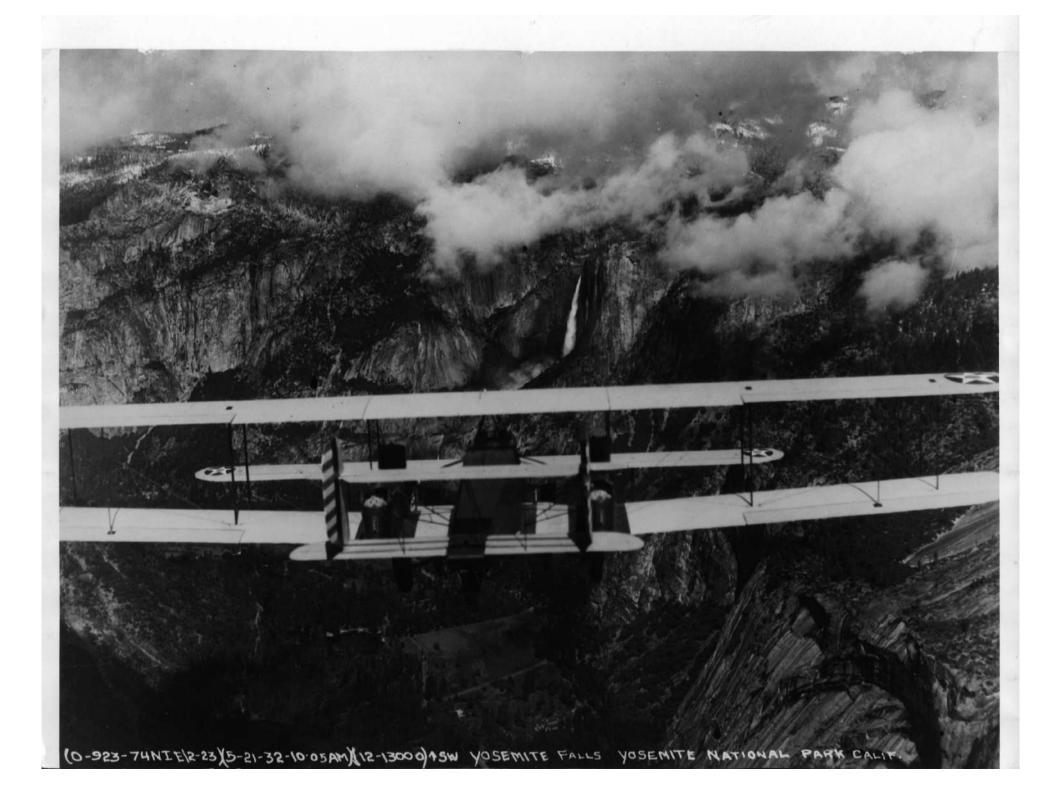
Span 40 ft.; length 31 ft.; height 9 ft. 4 in.; empty weight 4,380 lbs.; maximum speed more than 200 m.p.h.

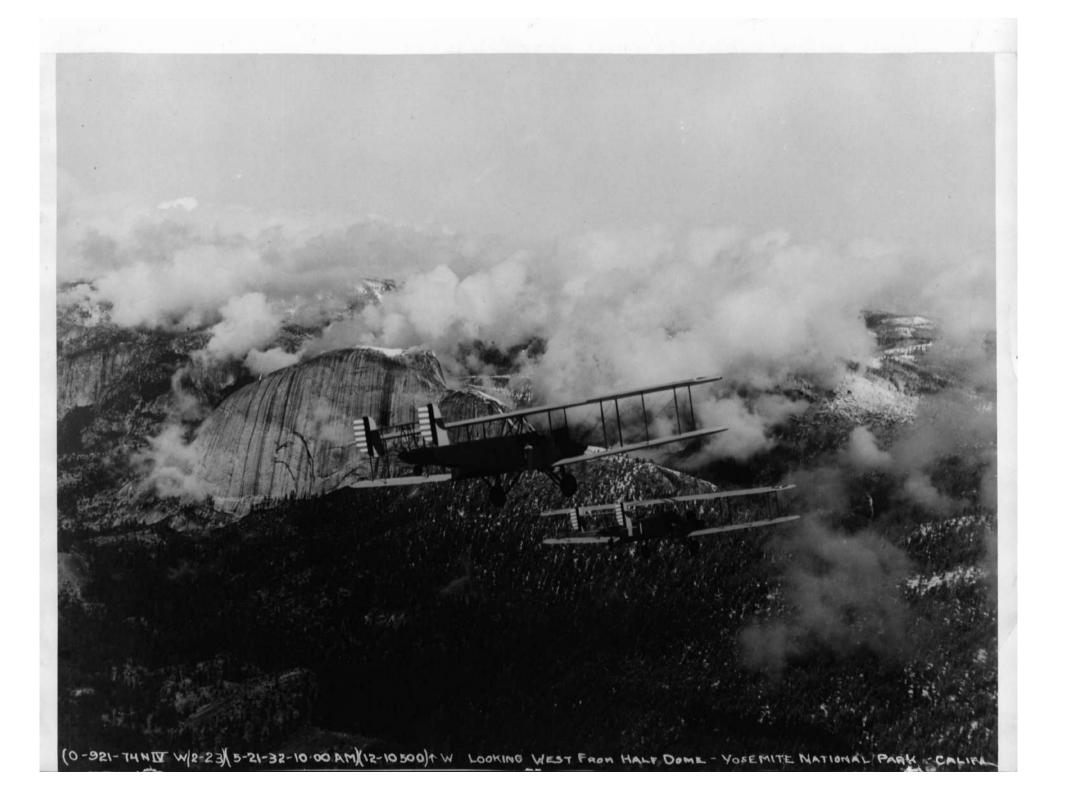




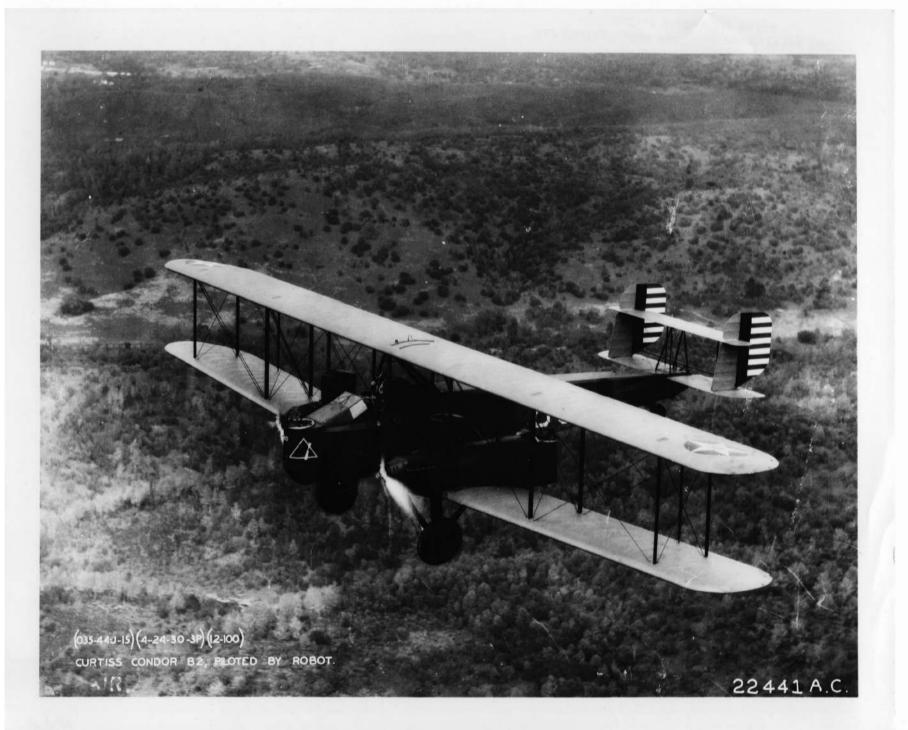










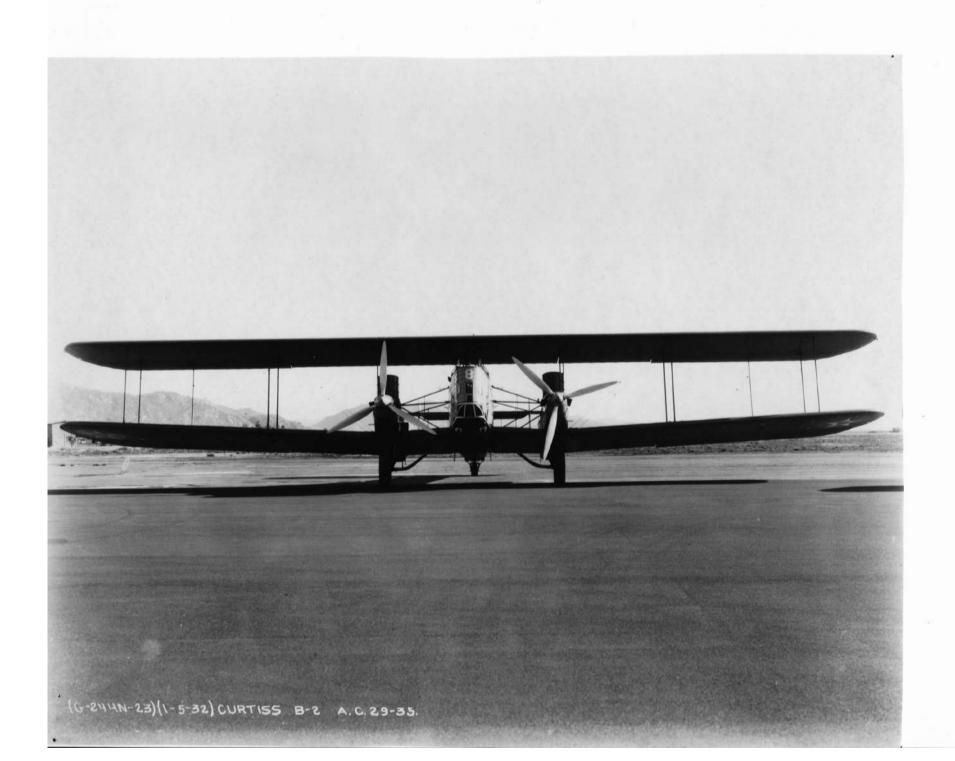




21/668+46211-88D)(10-23-30-2P)(12-3000) Condor Booker in Flight with 2000 10. Bomb 1



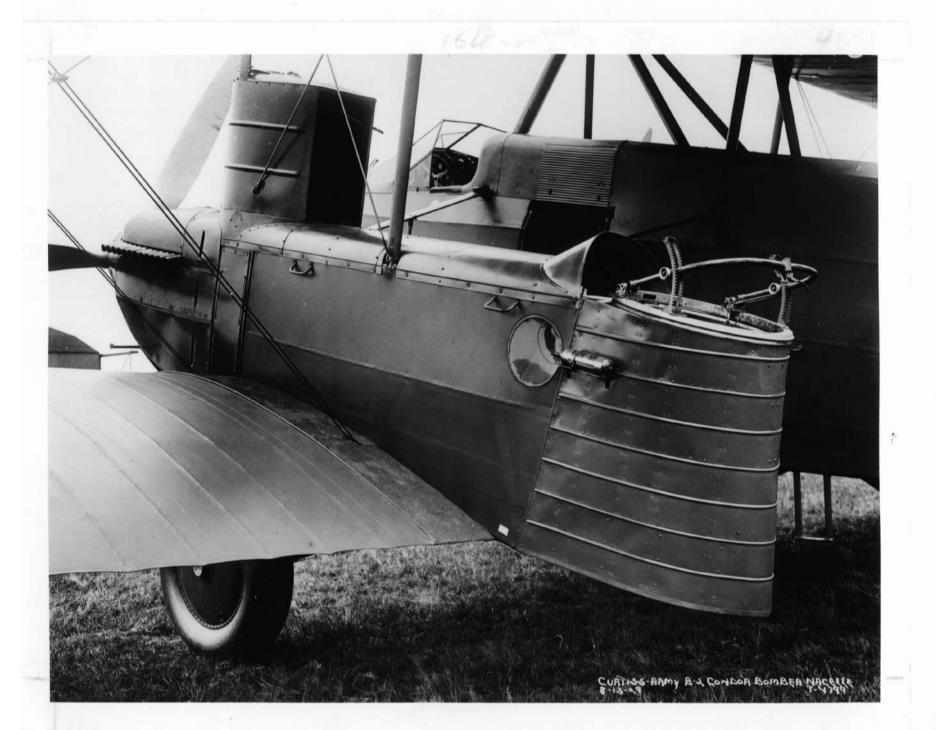




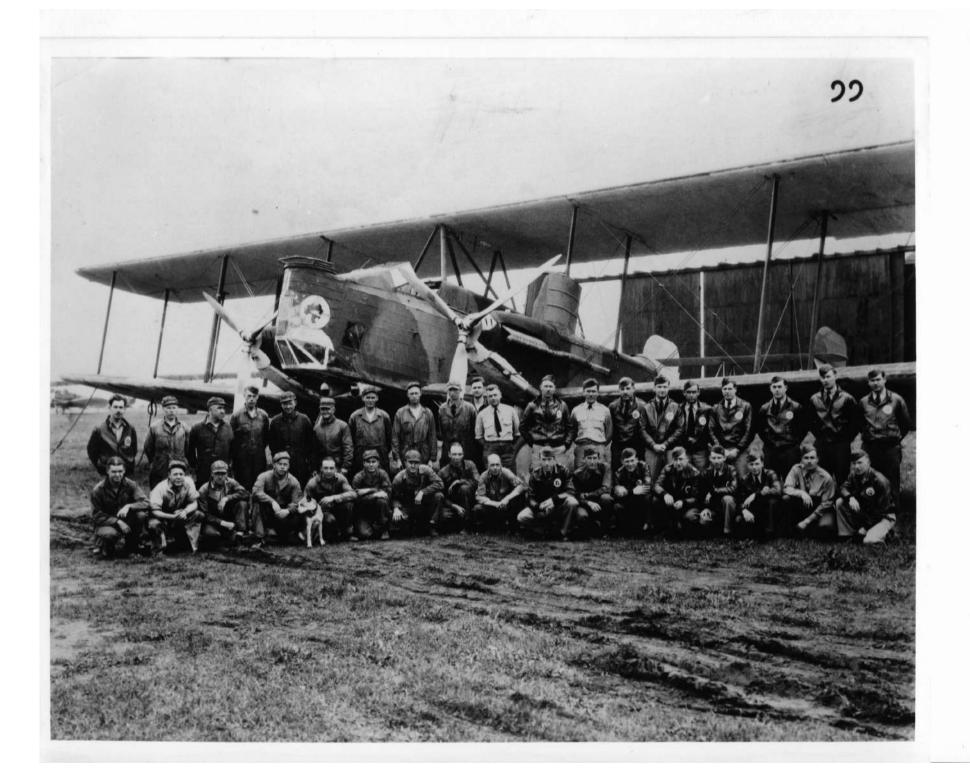








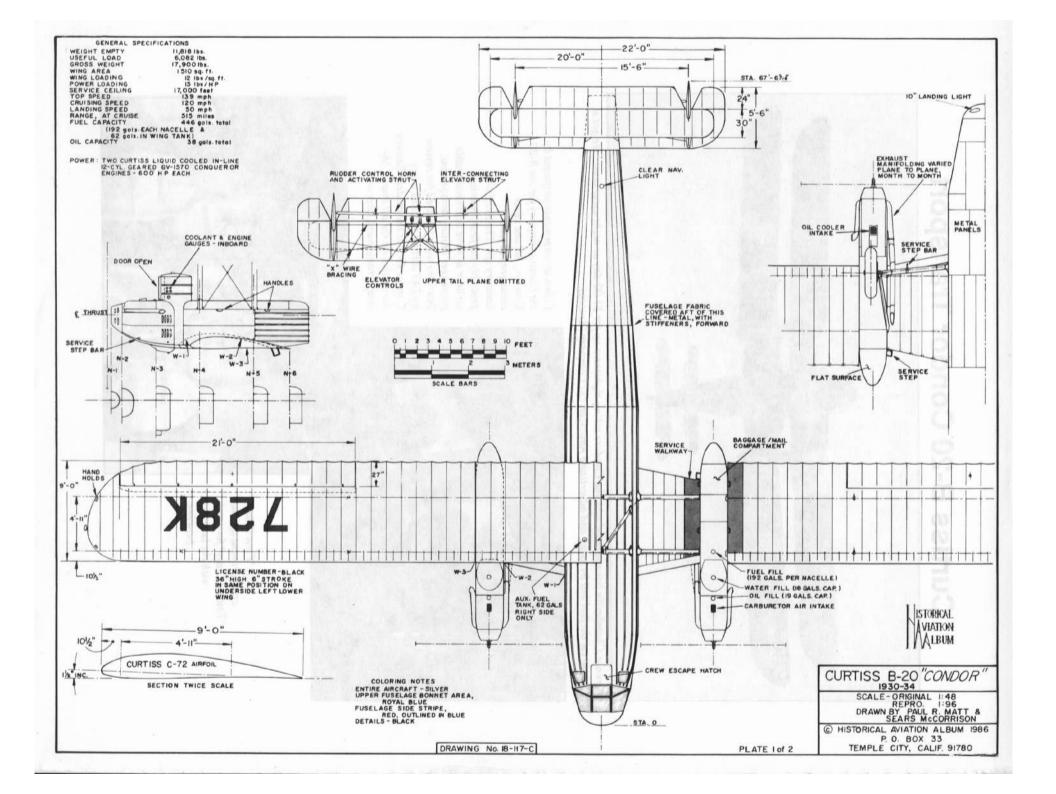


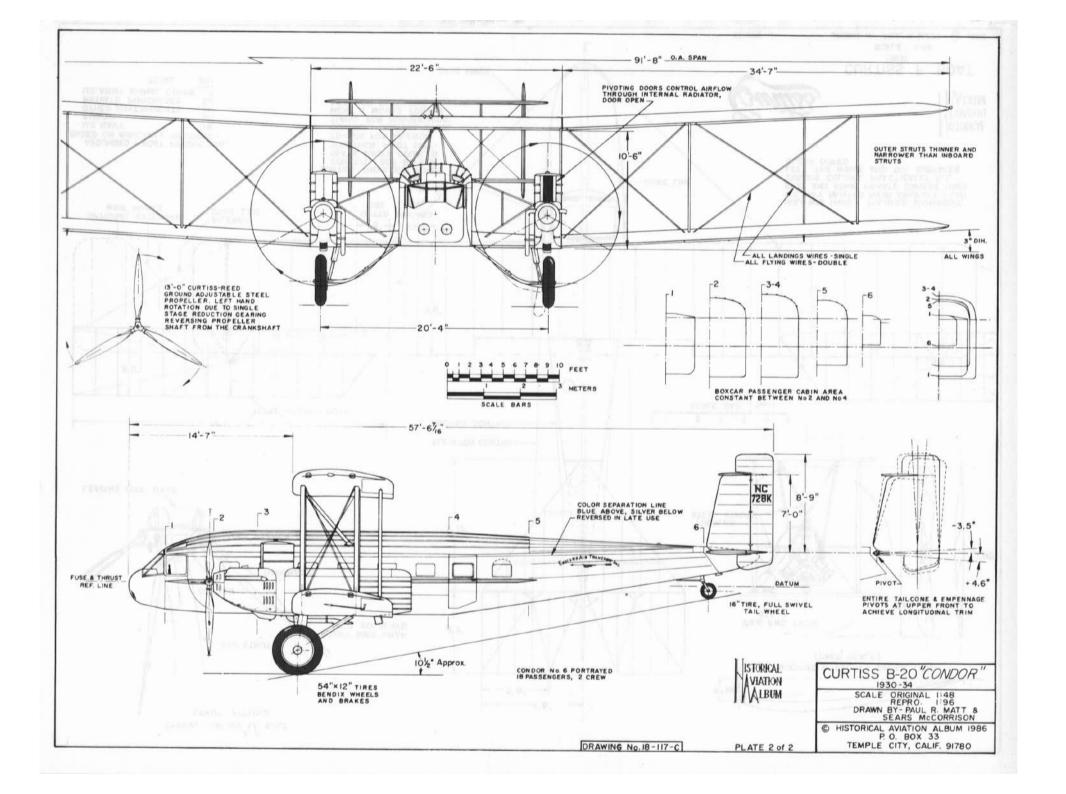


















Original B-20 Condor, 185H, preparing for first flight, July 21, 1929.

Peter M. Bowers

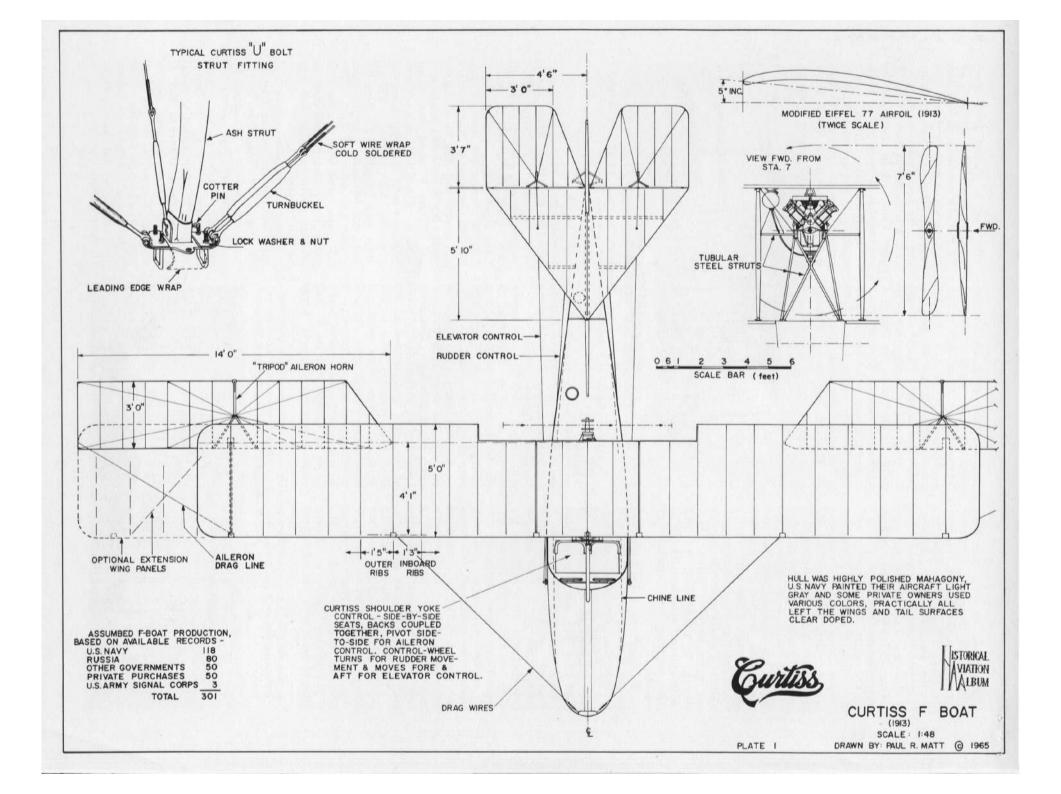


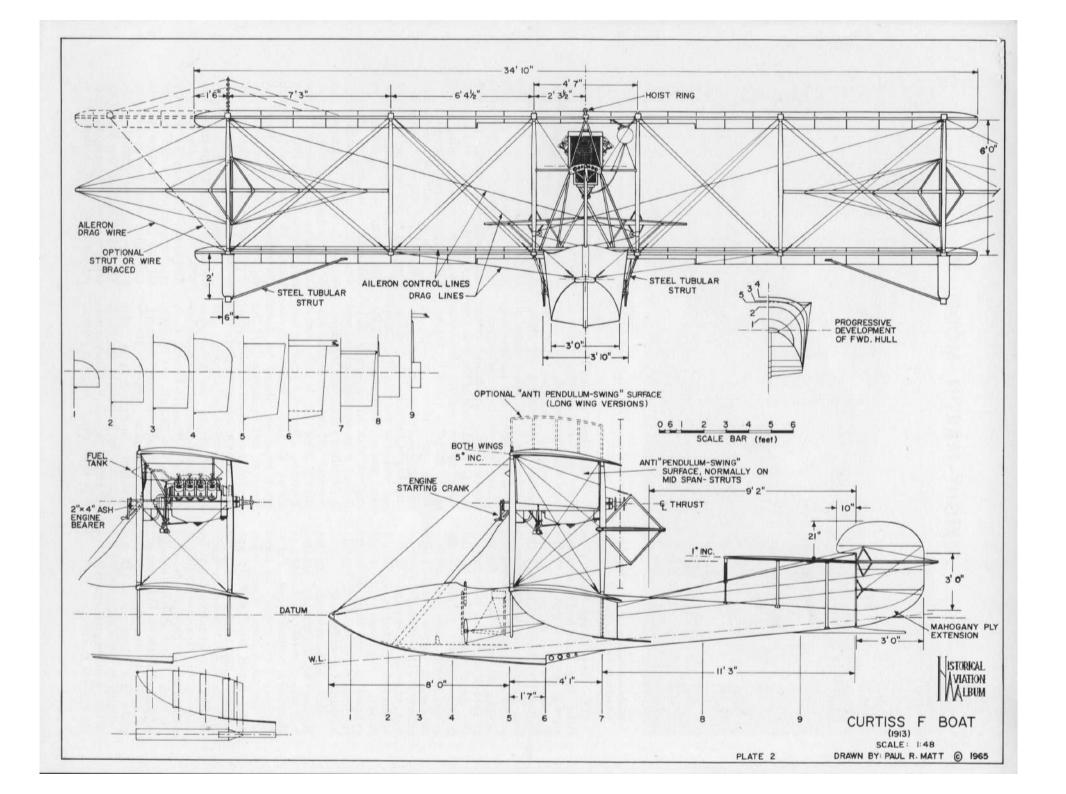
William Crosswell lifts B-20 off on its first flight. The plane is in the markings of Transcontinental Air Transport, a subsidiary of the Curtiss-Keys Group. Ironically the B-20 flew about three weeks before the first production B-2 bomber made its maiden flight.

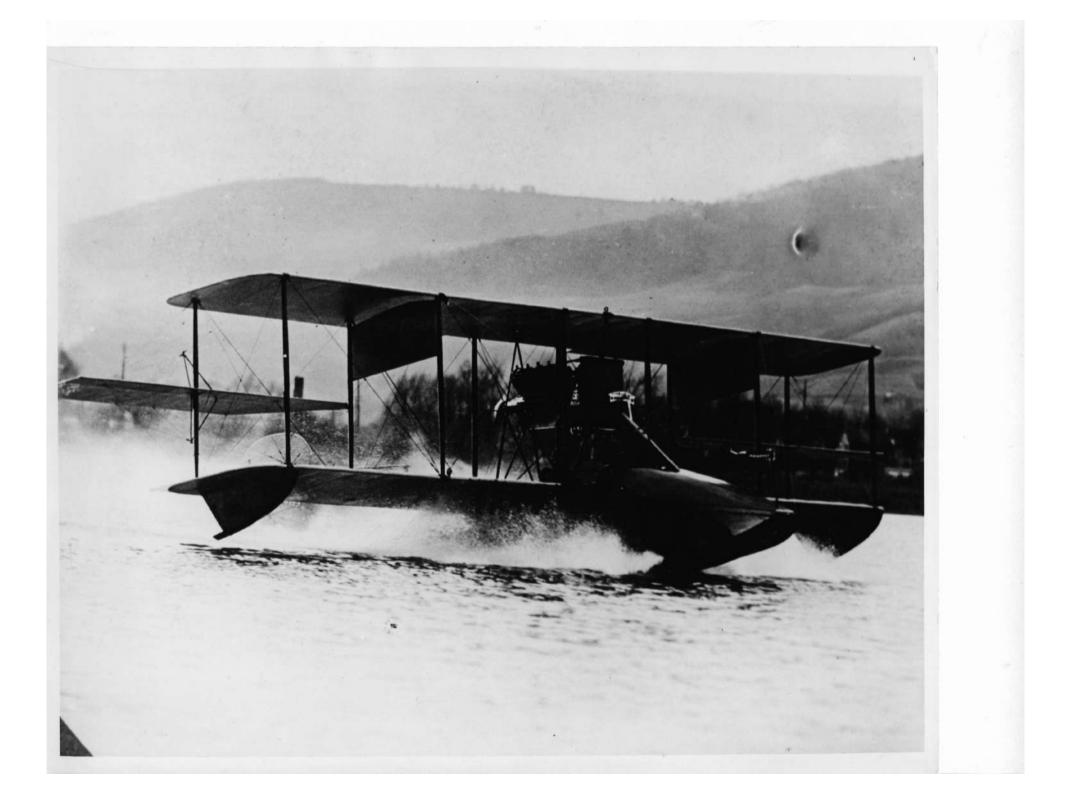
Peter M. Bowers





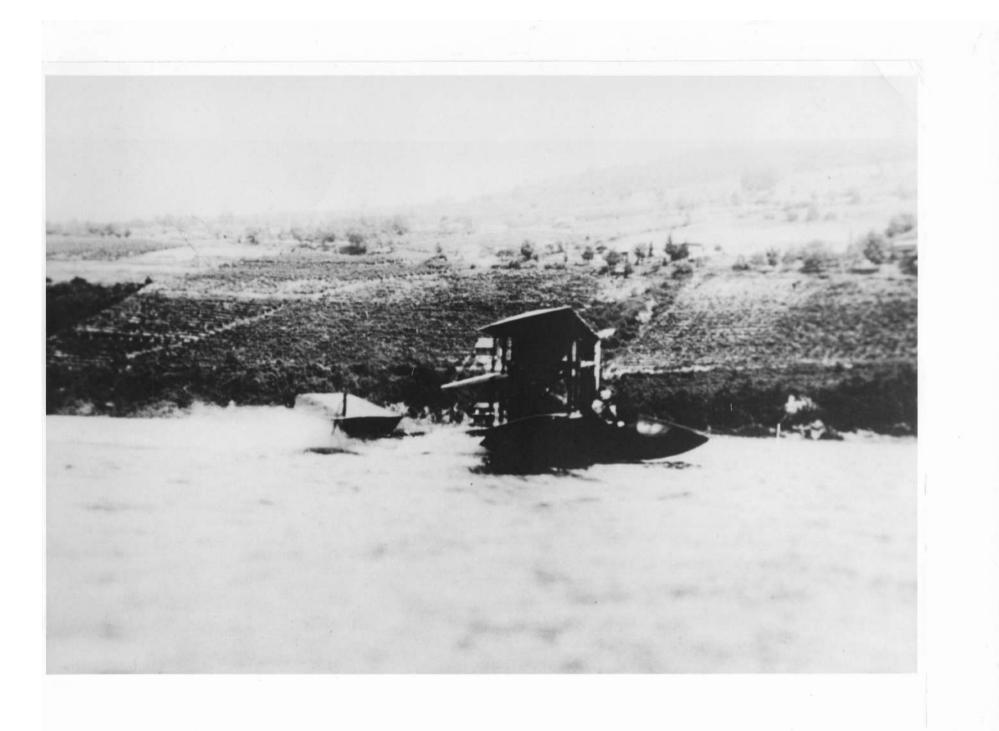












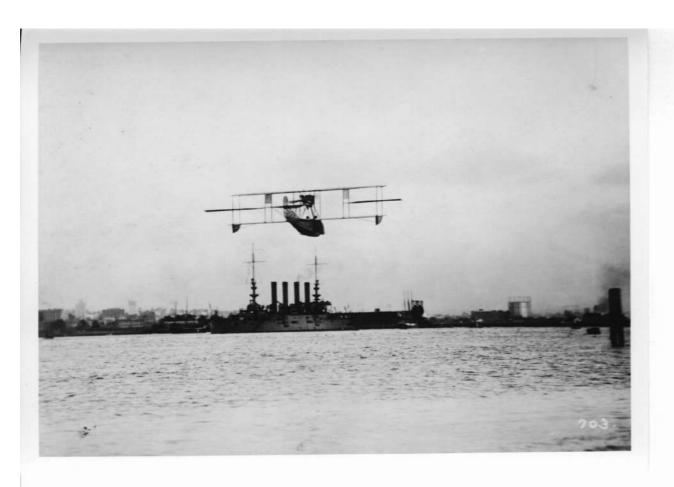


## Curtiss F Boat Specifications/Descriptions & Performance

Length Over All26' 4"	Useful Load:
Height Over All9' 8 1/2"	Fuel200 lbs.
Empty Weight1440 lbs.	Oil30 lbs.
Gross Weight2100 lbs.	Pilot165 lbs.
Maximum speed,	Passengers265 lbs.
horizontal flight65 mph	. Total
Minimum speed,	Non Skid Planes (8 sq. ft. each) 16.0 sq. ft.
horizontal flight45 mph	Non skid planes are between outer wing
Climb 1500 ft./10 minutes	struts above top plane
	Total Supporting Surface 417.3 sq. ft.
Wine Cons. House 9 Laure 9 Coll 408	Total Supporting Surface with
Wing Span, Upper & Lower34' 10"	optional extensions 468.95 sq. ft.
Wing Span Upper with optional extension	Horizontal Stabilizer26.85 sq. ft. Horizontal Stabilizer Incidence 1°+
wing panels45' 2"	Vertical Stabilizer13.74 sq. ft.
Chord	Elevators (13.425 sq. ft. each) 26.85 sq. ft.
Gap72"	
Stagger0°	Rudder
Wing Incidence5°	4 stroke cycle, water
Dihedral0°	cooled 90 hp at 1400
Sweep Back0°	rpm, weight per rated
Wing CurveCurtiss	hp 4.17 lbs., bore and
Wing Area	stroke 4" x 5".
upper (34' 10" span) 174.15 sq. ft.	
Wing Area upper	Fuel consumption per hour 9 gallons
optional extension225.8 sq. ft.	Fuel Tank Capacity34 gallons
Wing Area lower	Oil Capacity carried
Ailerons (42 sq. ft. each)84 sq. ft.	in crankcase4 gallons
Two wing pontoons:	Fuel consumption per brake
Hull,	hp per hour0.60 lbs. Oil consumption per brake
nose to rudder post 23' 4"	hp per hour0.030 lbs.
Hull width3' 10"	Propellerwood
Hull height3' 7"	riopelleiwood
Wing Loading5.03 lbs./sq. ft.	Standard aguinment:
Wing Loading with optional	Standard equipment:
extensions4.47 lbs./sq. ft.	Tachometer, oil and gas gauge, complete set
Power Loading22.80 sq. ft./hp	of tools. Other equipment on special order.

## Color scheme of the Curtiss F Flying Boat

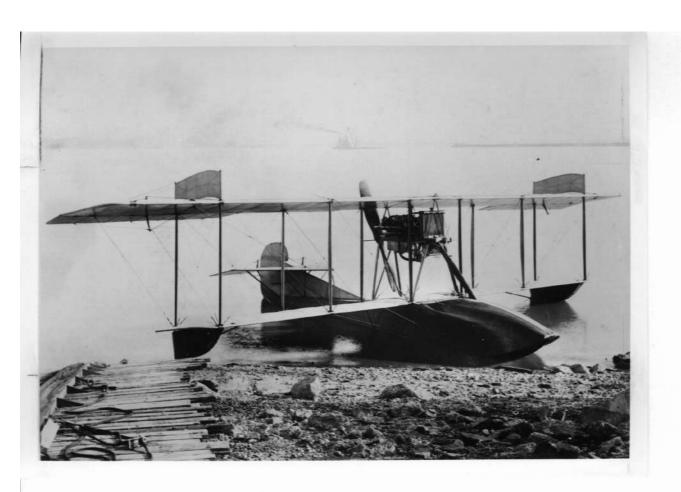
Hull was highly polished mahogony, U.S. Navy painted their aircraft light gray and some private owners used various colors, practically all left the wings and tail surfaces clear doped.

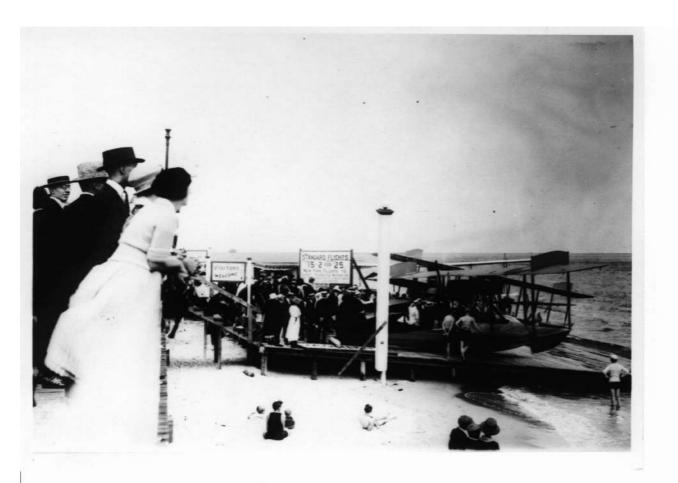




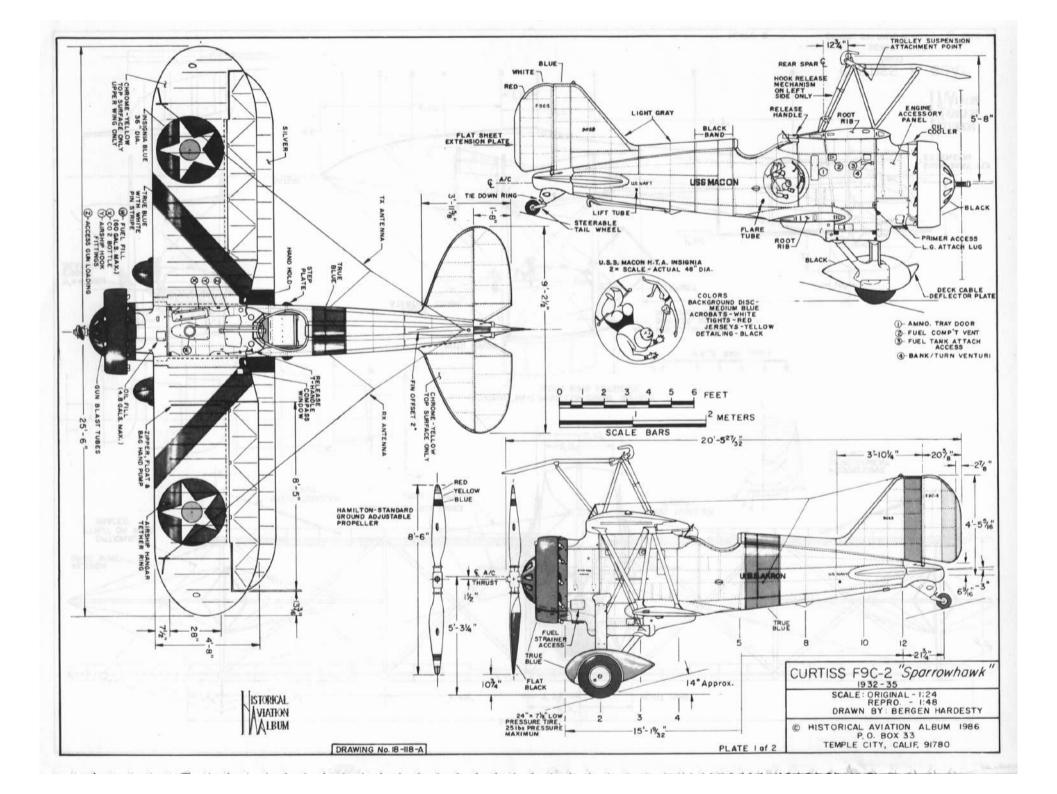


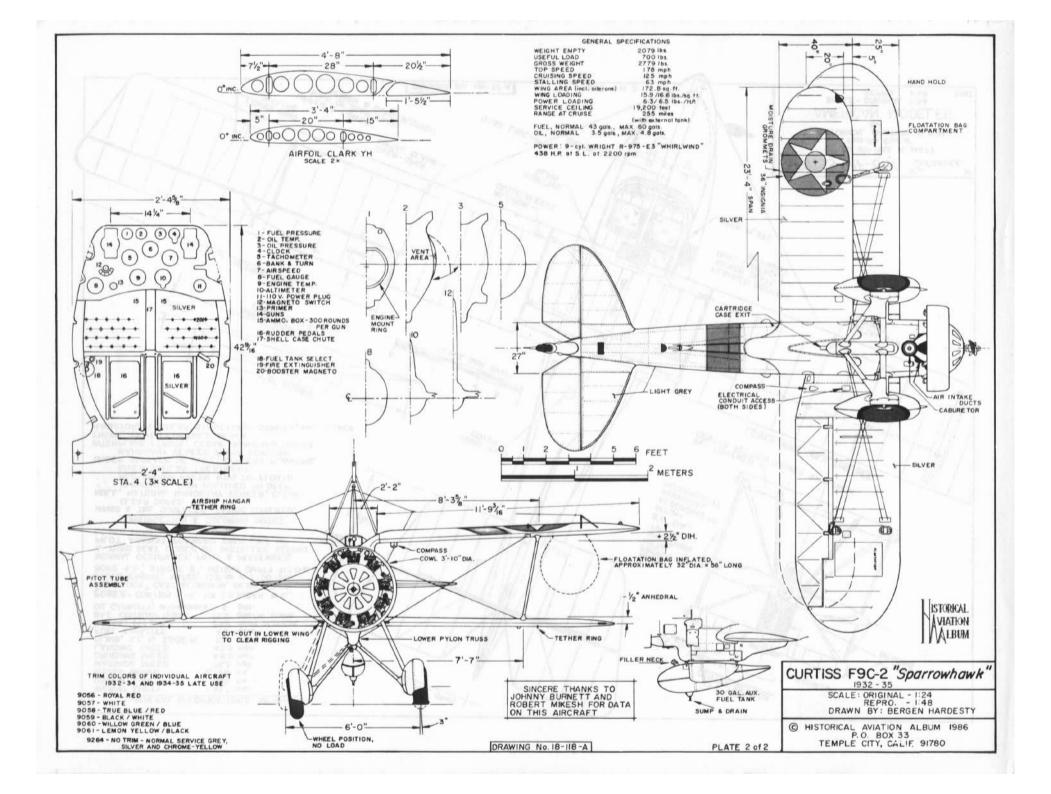


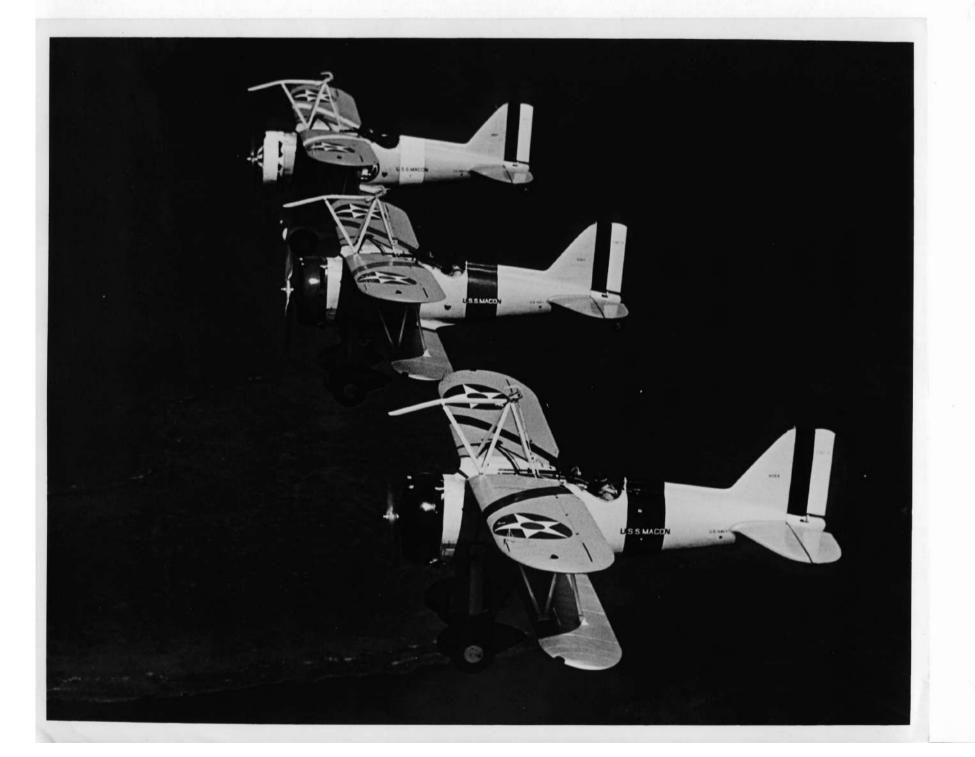
















Curtiss "Sparrowhawk" FRC-2 ALOHP. Wright "Whirlwind"

Roanoke, Va. May 1,1938



