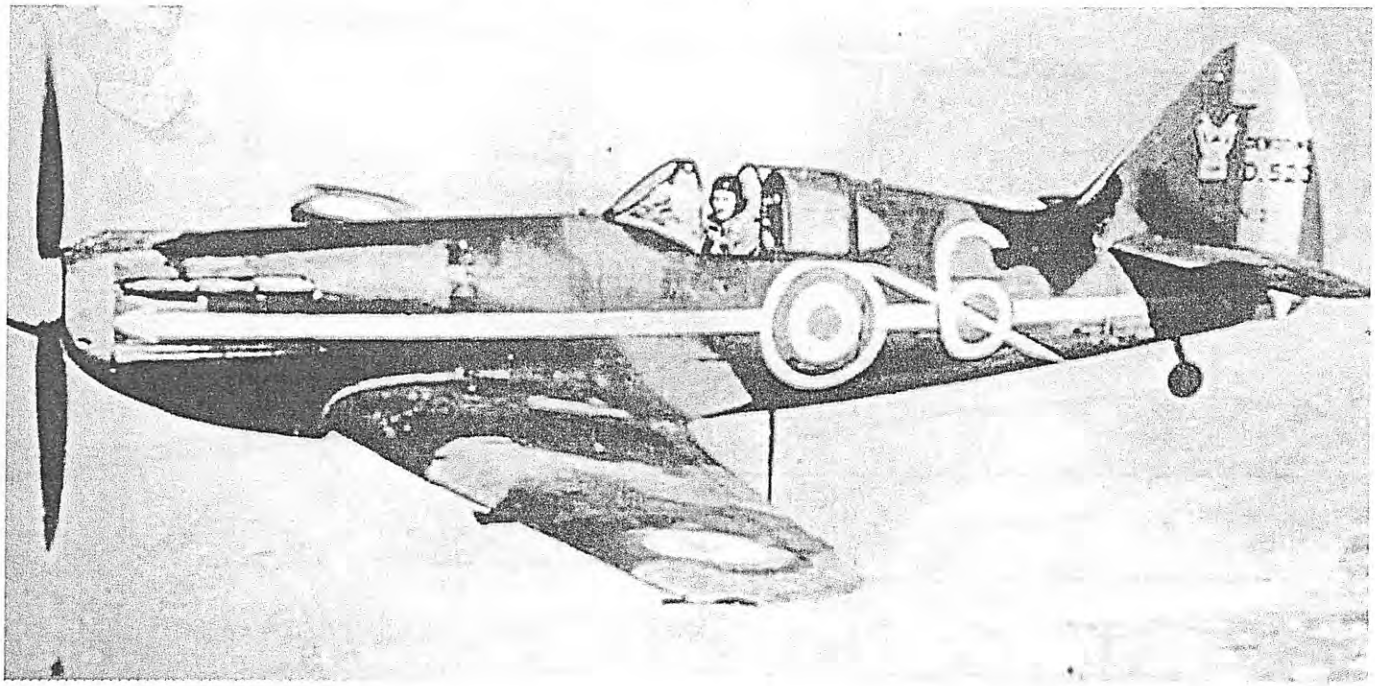
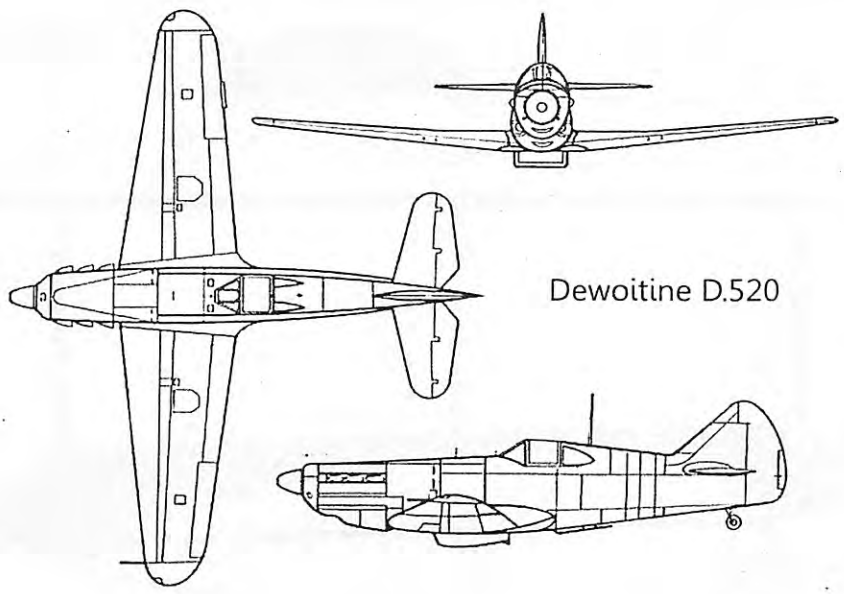
CROSSWINDS #131

Dewoitine D.520

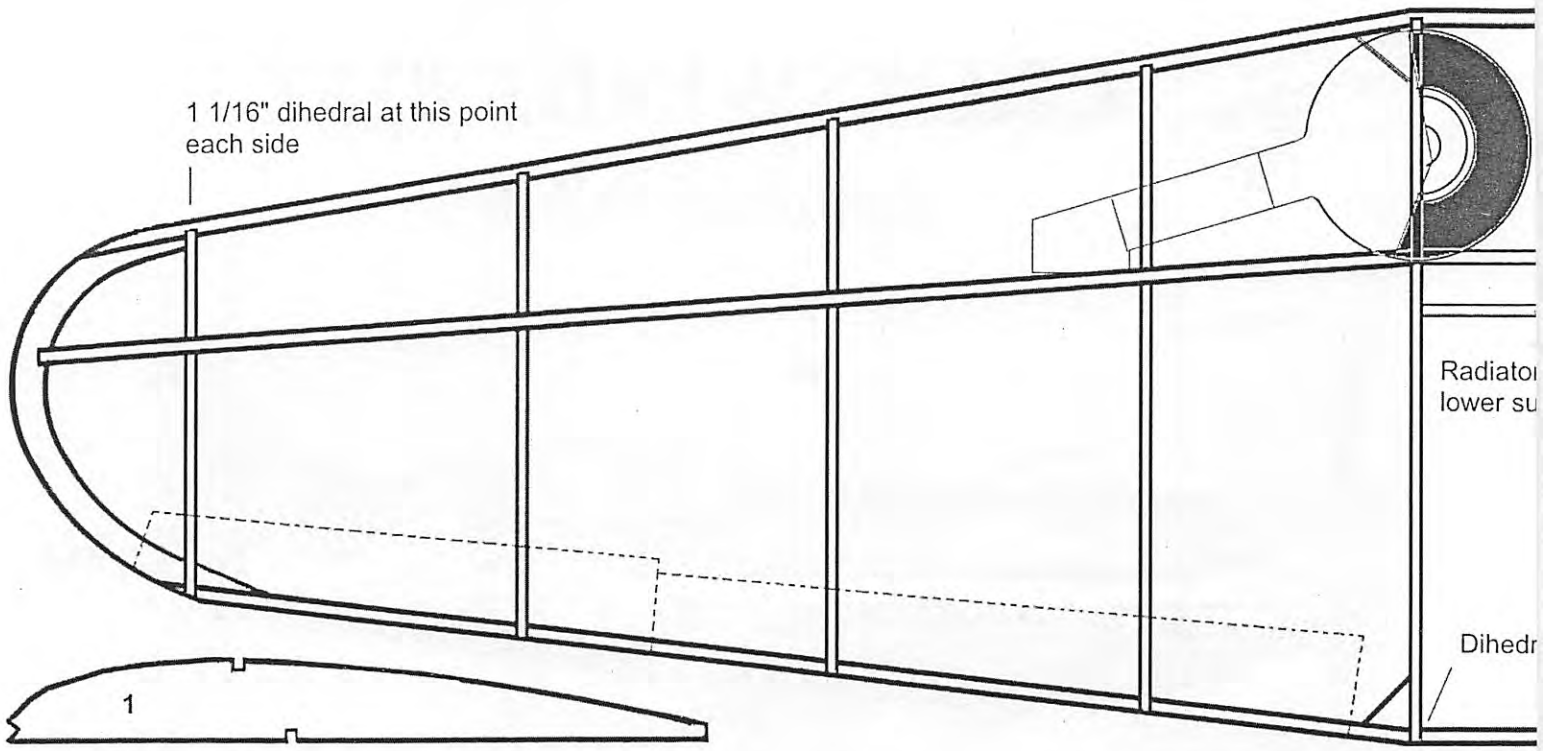


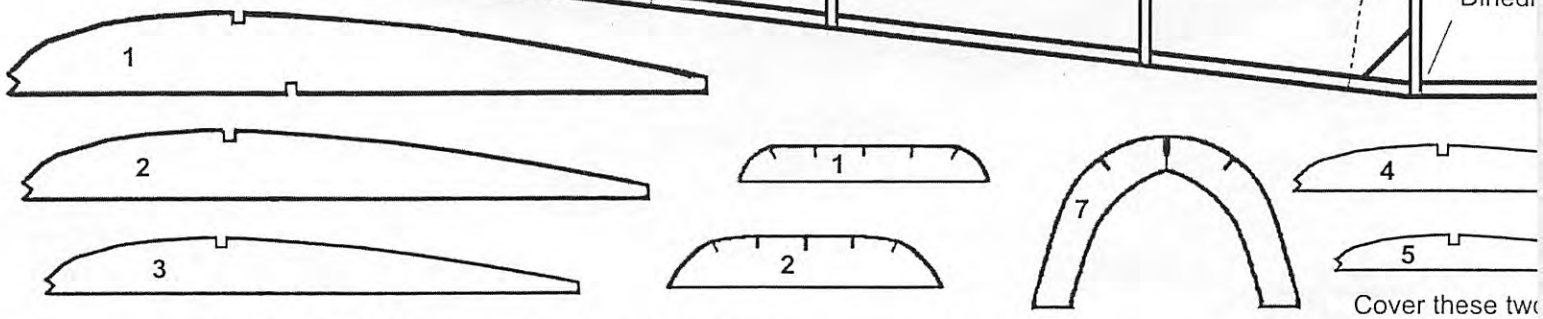
CROSSWINDS
RUSS BROWN
4909 N. SEDGEWICK
LYNDHURST, OH 44124

CLEVELAND FREE FLIGHT SOCIETY

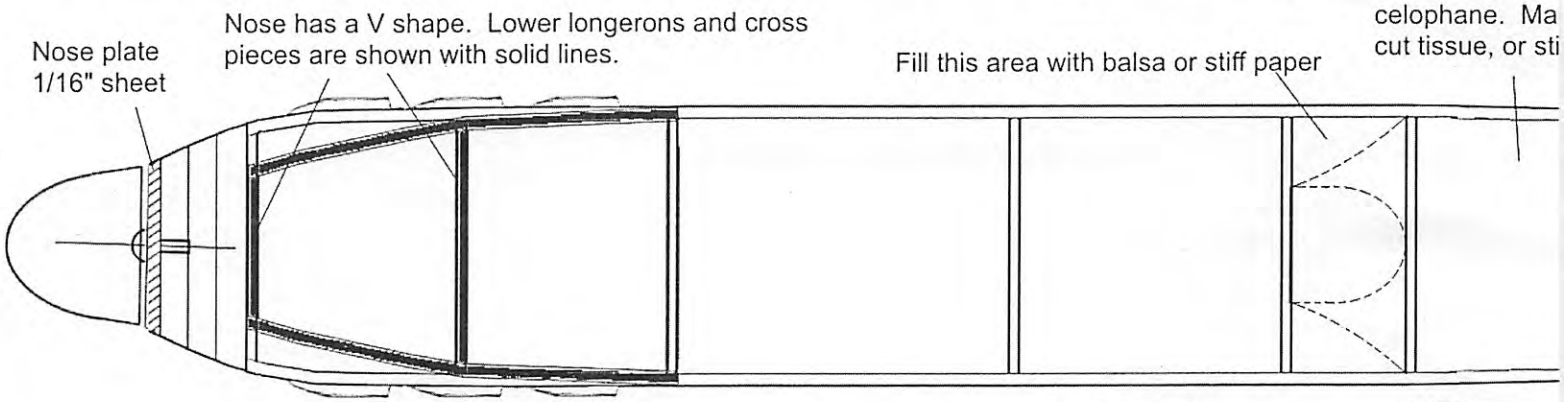


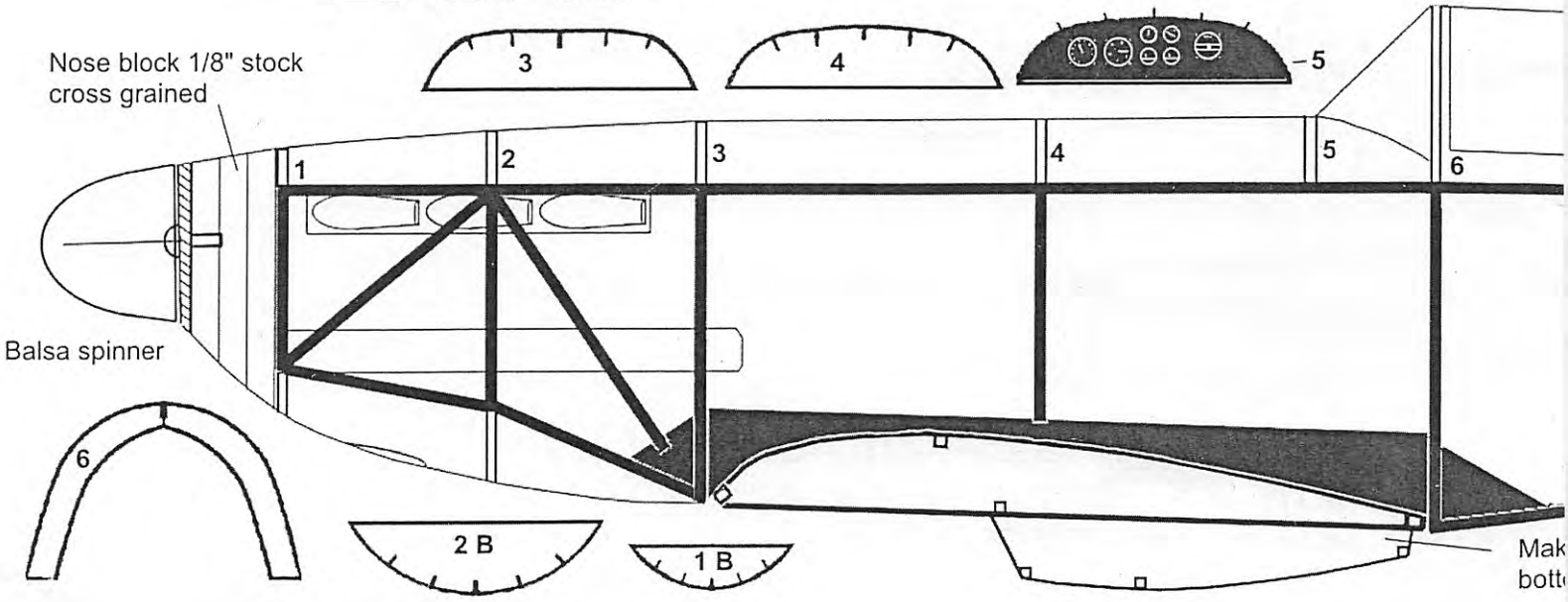
Dewoitine D.520





Cover these two celophane. Ma cut tissue, or sti





Dewoitine D.520 – the Airplane

Anyone who says that the French only build ugly airplanes probably never saw a Dewoitine D.520. It was also quite potent and regarded as the best fighter in the Armee de l'Air during the Battle of France. Its performance was a match for the opposing Bf 190E fighters on most counts, and had a definite edge when it came to maneuverability. There were simply not enough of them to stop the German onslaught.

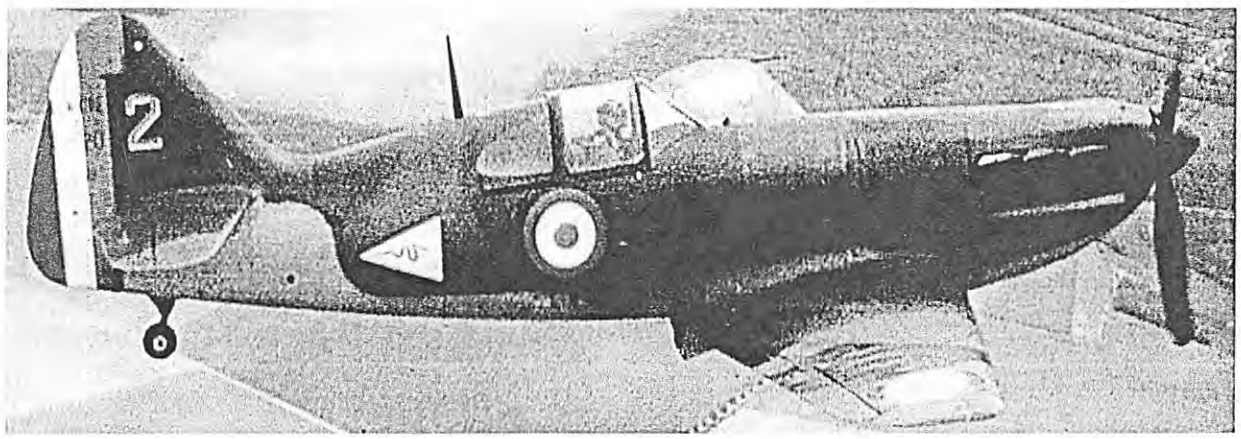
The first flight was in October 1938, but performance was less than expected. With a more powerful engine installed, the potential of the new design was realized. The French government ordered the first production batch in April 1939. When the war broke out in September, orders were dramatically increased. Deliveries began at the end of the year and increased through the Spring of 1940. By the time the Phony War turned into Blitzkrieg in May, only one Fighter Group was operational with the new type. Five more were rushed into action before the Armistice. Despite being given little time to train with the new machines, these units gave a good account of themselves. At the time of the Armistice, about 400 machines had been produced. Many of the survivors flew to North Africa.

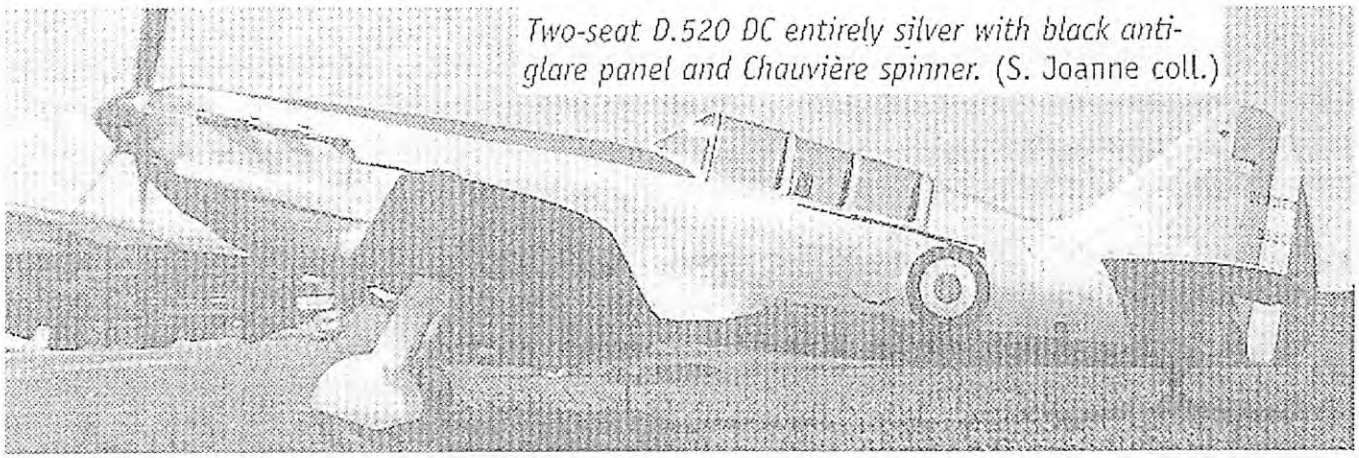
After the armistice, the Vichy Government wanted to replace all the other fighter types in service with the D.520. They were given permission to resume production on a limited basis. These saw action in Syria in 1941 against the British, and in North Africa opposing the Torch landings in 1942. Free French forces took over these machines after the campaigns.

With Algeria in Allied hands, the Germans folded up the Vichy Air Force and confiscated all their planes. They recognized the potential of the Dewoitine fighters and sent them to advanced fighter training units. Some sources say that some saw service operationally against the Russians and for local defense. The Germans continued production, bringing the total number to over 800 machines. Sixty were sent to Italy, adding to those they captured early in the war, where they were used as second line fighters and advanced fighter trainers. Another batch of 120 machines was sent to Bulgaria and saw considerable action against the Russians, and US bombing raids.

After the Allied invasion of France, the Free French air service was tasked with attacking the German pockets at Royan, and Pointe de Grave along the coast. The D.520 fighters of Groupe Doret provided air cover for FFI Dauntless bombers, and strafed enemy positions.

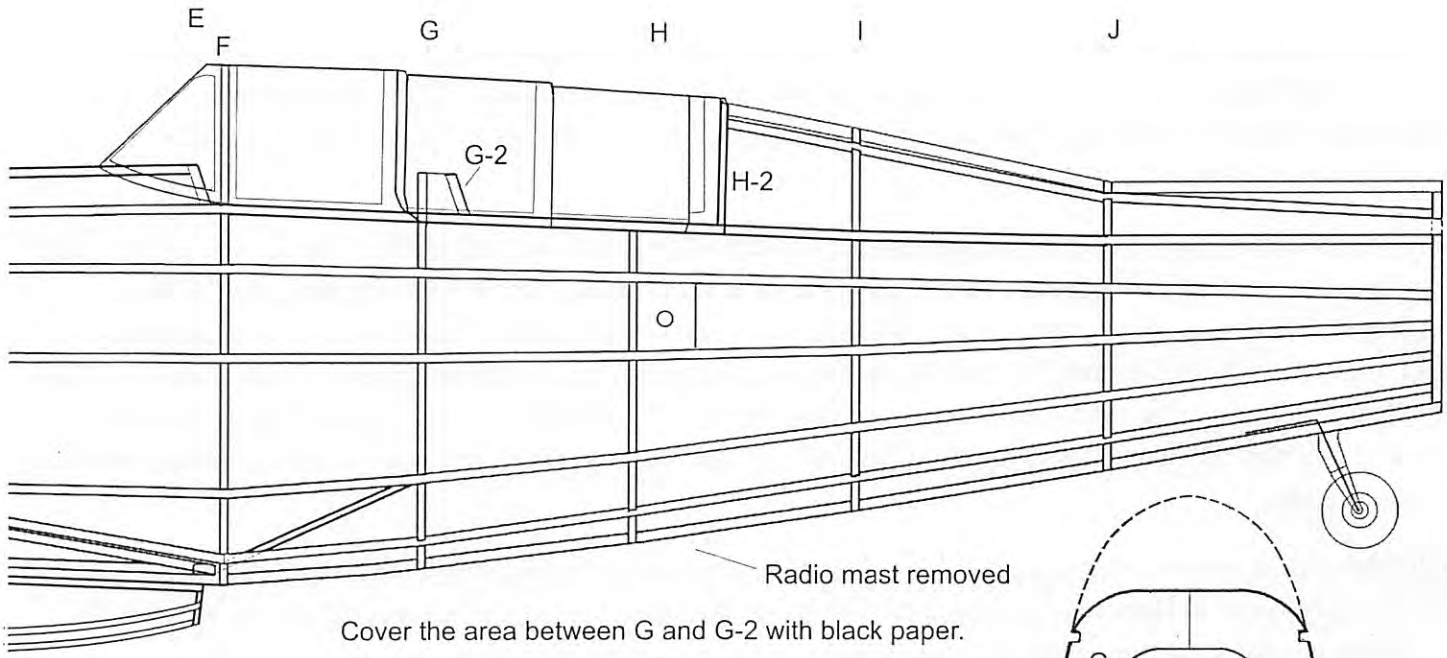
In the immediate post war period, the Armee de l'Air used the surviving machines as trainers. About a dozen were converted to dual control two seaters. They remained in service until 1953.



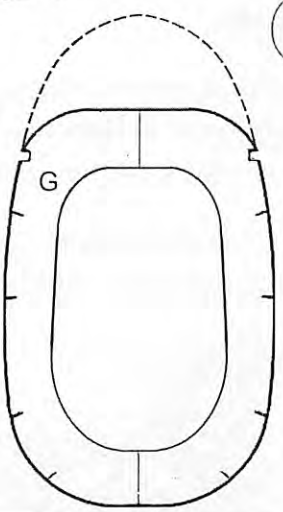


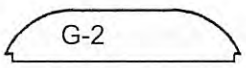
Two-seat D.520 DC entirely silver with black anti-glare panel and Chauvière spinner. (S. Joanne coll.)

The post WWII two seat trainer version was identical to the fighter version except for the canopy. Cut out the drawing below and tape it over the side view on Page 1 of the plan. The modified formers are shown below.



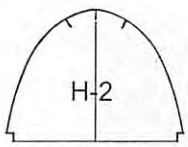
Cover the area between G and G-2 with black paper.

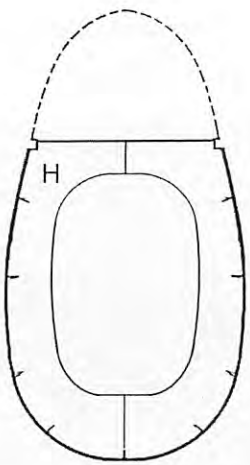






Rear cockpit instrument panel





Color Scheme:

- Trainers were painted overall matte silver or light gray.
- Standard rudder stripes and roundels in six positions.
- Black anti glare panel from the front of the windscreen to the front of the cowl.

Dewoitine D.520

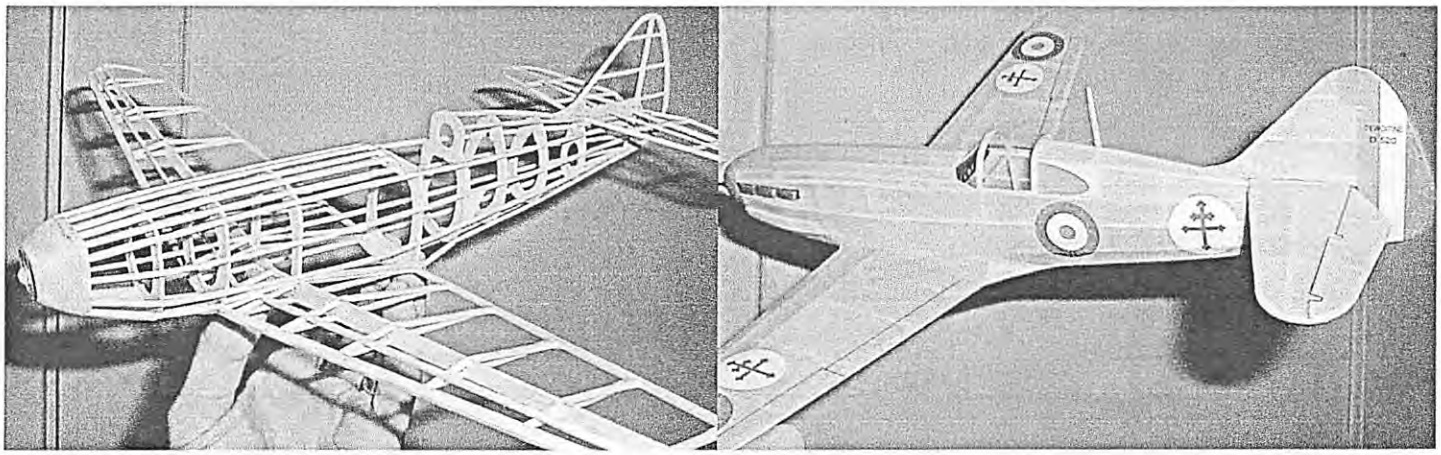
Two Seat Trainer Conversion

1/24th scale **16.7" Span**

Wingnut Aero Works Rich Weber 2009

Dewoitine D.520 – the Model

One of the most popular sizes for FF models in the realm of FAC competition is 24" wingspan. This poses a problem for newsletter publishers with a built in limit of 11"x17" paper. The choice is to break up the drawing into smaller bits and ask the modeler to piece it together, or scale it to fit the page and have him blow it up at his local copy shop. Since many modelers make copies of their newsletter plans to build on anyway, a reduced plan was the lesser of two evils. The D.520 plan has been drawn at 1/24 scale, which works out to 16.728" span. I built the prototype model at that size, and it has been a good flying model from the start. If you prefer to build your model with a 24" wingspan, the instructions for conversion are on page two of the plan. I've also included three options for constructing the wing: traditional sheet ribs, cracked ribs, or sliced ribs. Take your pick. If you use cracked or sliced ribs, note that the top is glued in next to the bottom rather than on top of it. This greatly increases the strength of the joint at the LE and TE, with little weight penalty.

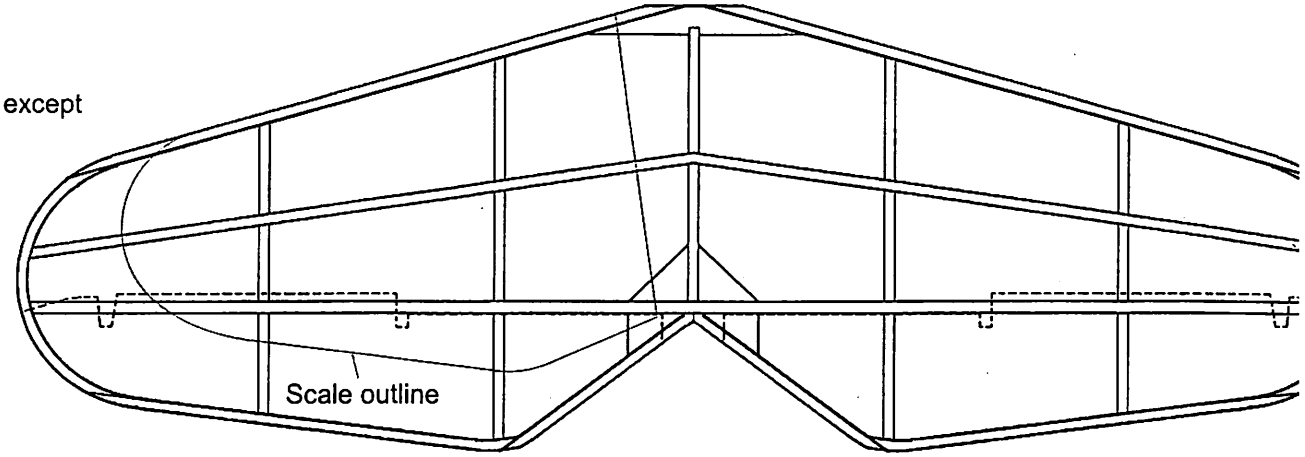


The wing root fairing is built in two parts, as seen in the photo of the finished model above. It's the least fussy way I've found to make this compound curved structure without a ton of weight, or complex engineering. After installing the wing, add the two support pieces on each side. You then have three triangles to cover: front, back, and bottom. The bottom is a simple matter of sticking on a little scrap of tissue to cover the bare balsa support. To get the right shape for the front and back parts, I use the "cut and try" method with a piece of scrap paper. I use it as it as a pattern to cut tracing paper backers. These are stuck on a piece of covering tissue using glue stick. The tissue is trimmed around the backer, leaving a 1/16" overhang. Pre curved around a dowel, they are glued in with glue stick. The tracing paper is all but invisible, leaving a perfect tissue match with the rest of the airframe. The whole procedure should work as well with traditional dope used as an adhesive.

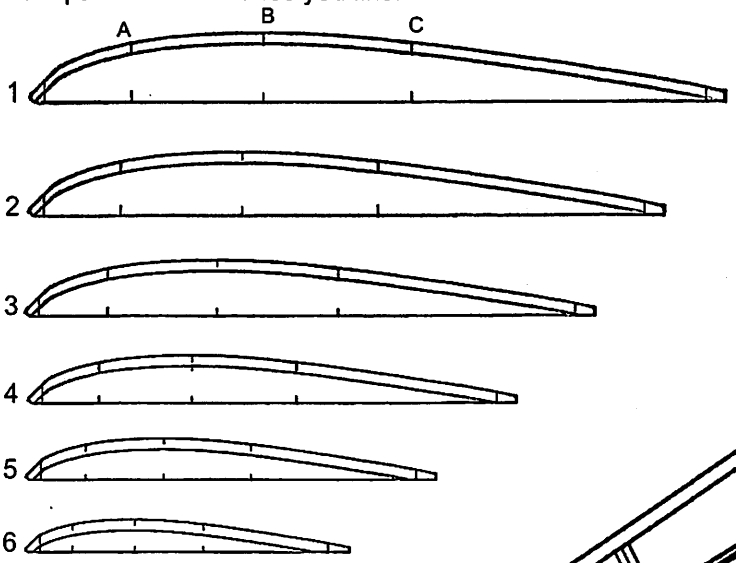
The radiator can be built up over the plan and added at final assembly time, or carved from foam. The upper radio antenna is mounted on a piece of 20# monofilament, allowing it to flex. The lower one is best added in the folded position if you're going to have it for more than one flight. FAC GHQ likes to see gun muzzles on WWII ships, so drill the LE and glue in stubs of 1/16" aluminum tube. Make them flush with the surface as they were buried in the wing on the real airplane. The 20mm canon that fired through the spinner can be handled the same way, using 3/32 tubing. Note that there were two different shaped spinners used. Check a photo of the machine that you are modeling to see which one was fitted. I made the canopy from two pieces of flat acetate. The front bow was made by laminating two strips of 1/64" balsa.

Free Bonus! There is a conversion sheet to make the Low Wing Military Trainer version, and a Neo Dimer plan included.

All 1/16" stock except as noted.



Sheet ribs are shown for those who prefer this type of wing structure. There are six points marked for spars. Use the ones you like.



Sliced rib patterns are shown on sheet ribs.

Left wing shows panel lines for under surface. Right wing shows them for the top.

Crack LE and TE along this line

Tip is raised to meet top of spar

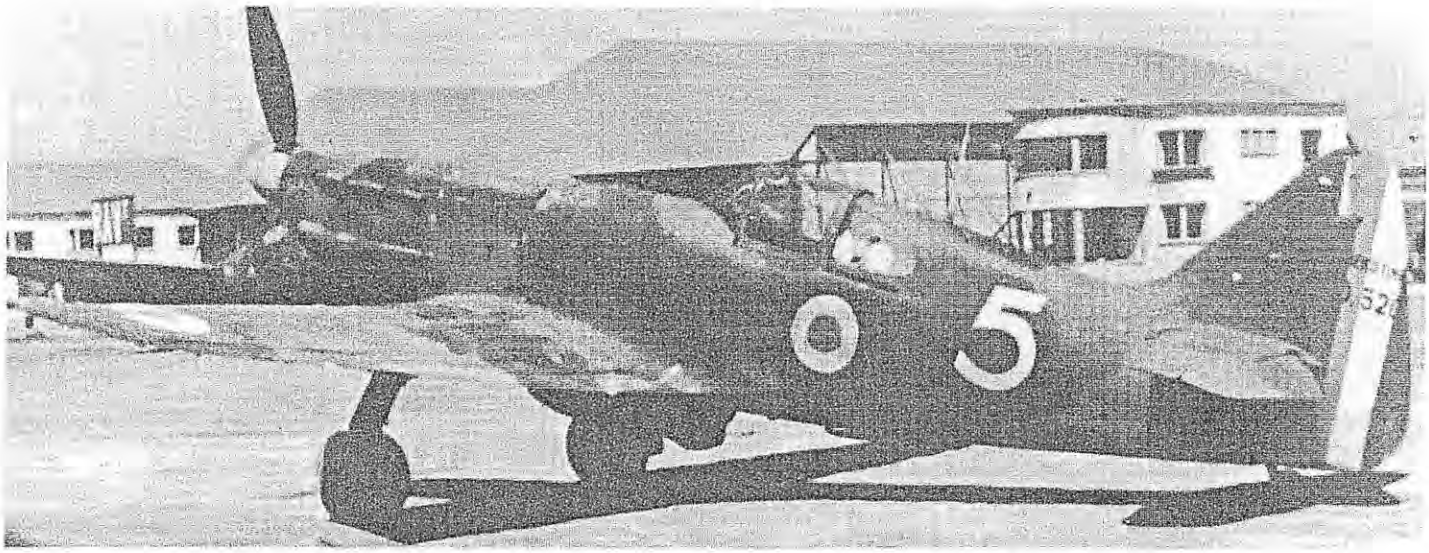
Dihedral
- 16.7" wing 1 1/8"
- 24" wing 1 3/4"
each panel

Markings

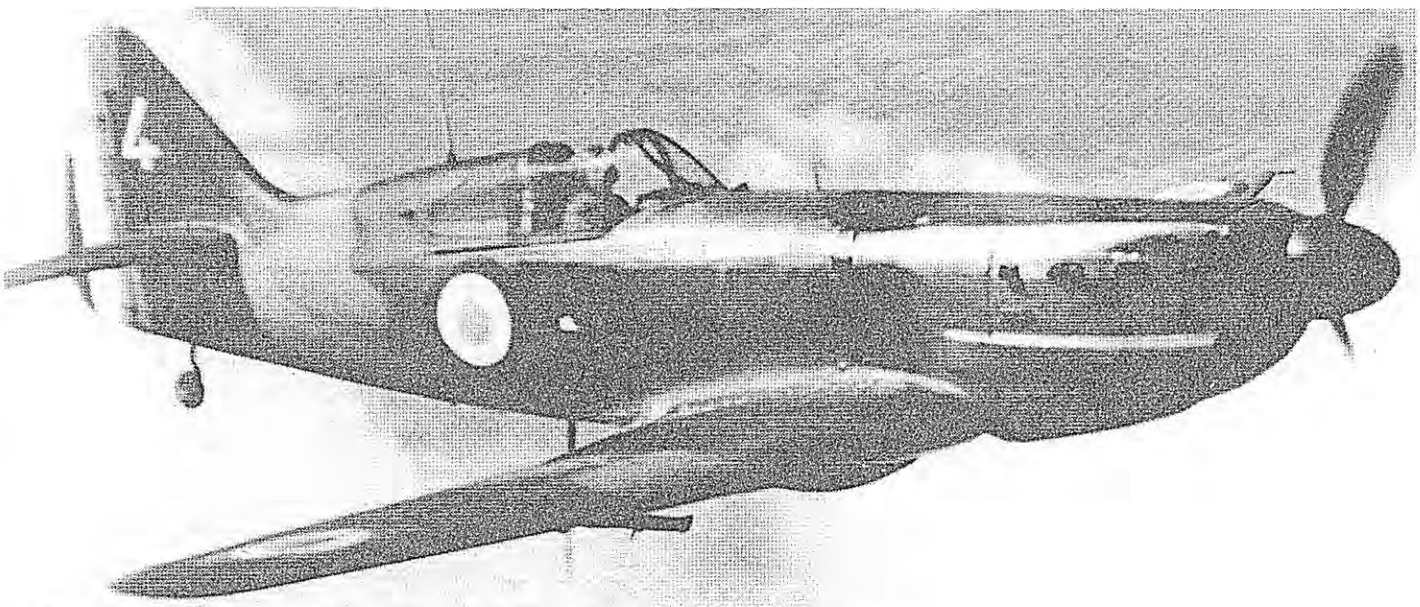
There are more color schemes available for this one than can be crammed into one newsletter. Here's a few samples from each of the major users of the type.

Battle of France

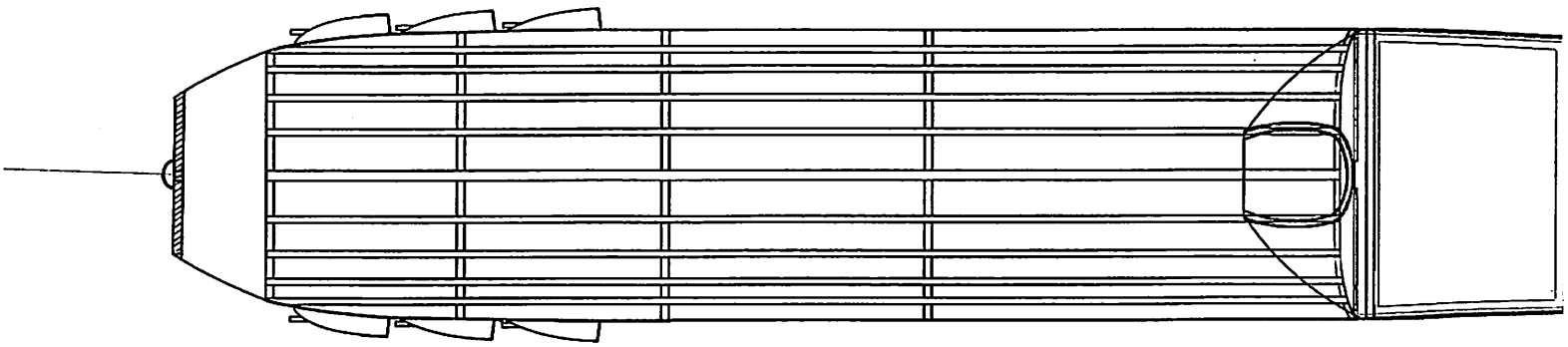
The standard French camouflage scheme used on the D.520 was made up of large irregular patches of dark brown, dark green, and blue-gray on the upper surfaces, with the underside overall light blue-gray. There were no set patterns to the application of the colors. There was also no standardization in the application of aircraft numbers or unit markings so check the photos and match up as best you can.



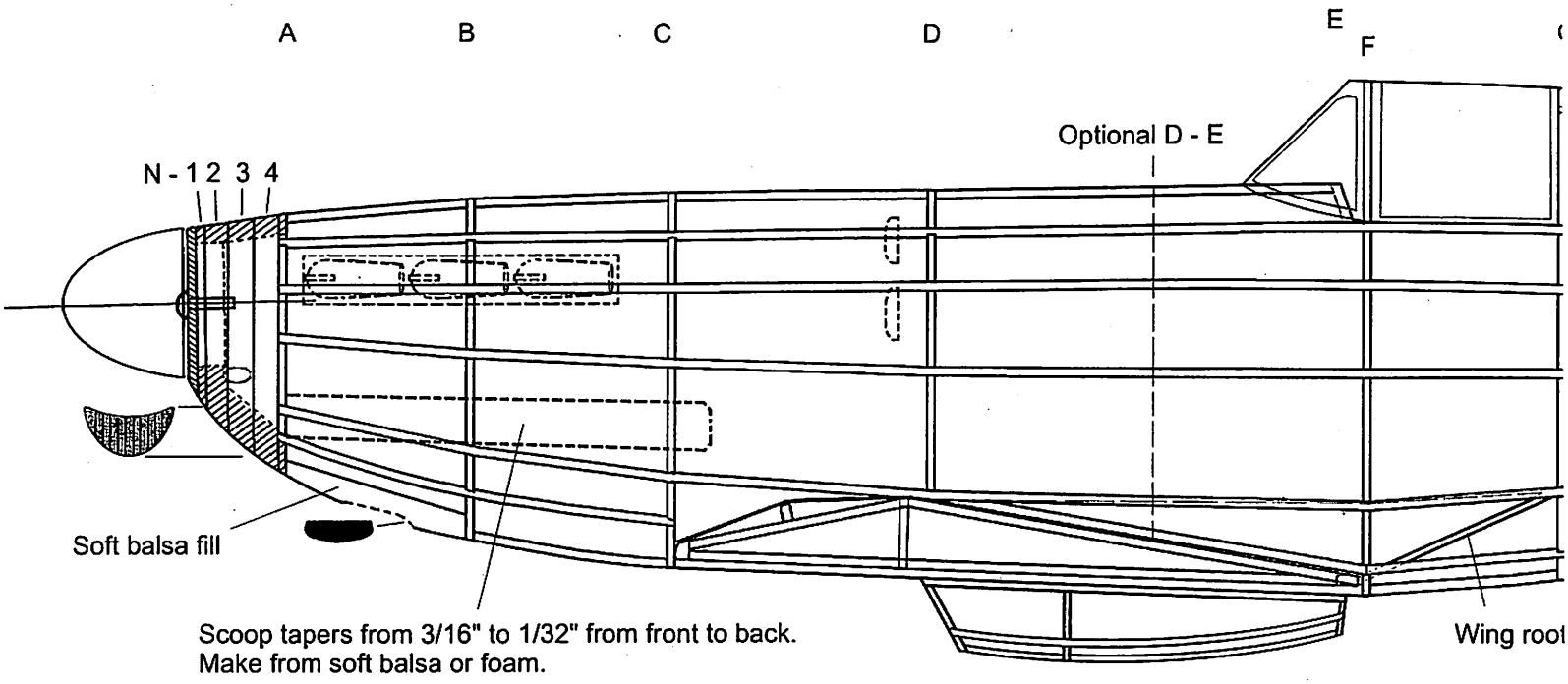
Pas de n° de série sur ce D520! L'unité nous est inconnue. (MUSEE DE L'AIR)

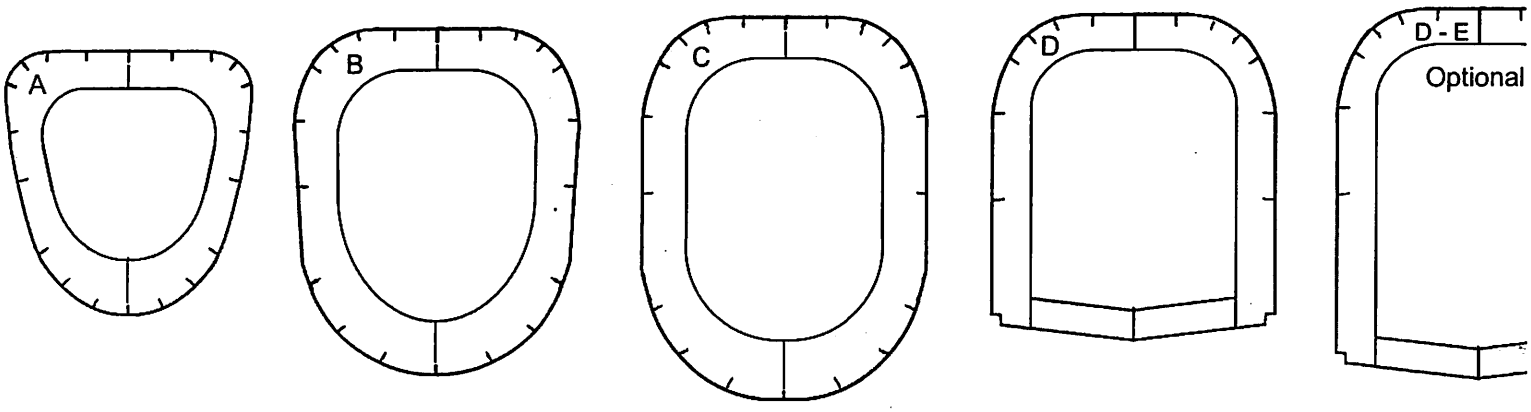


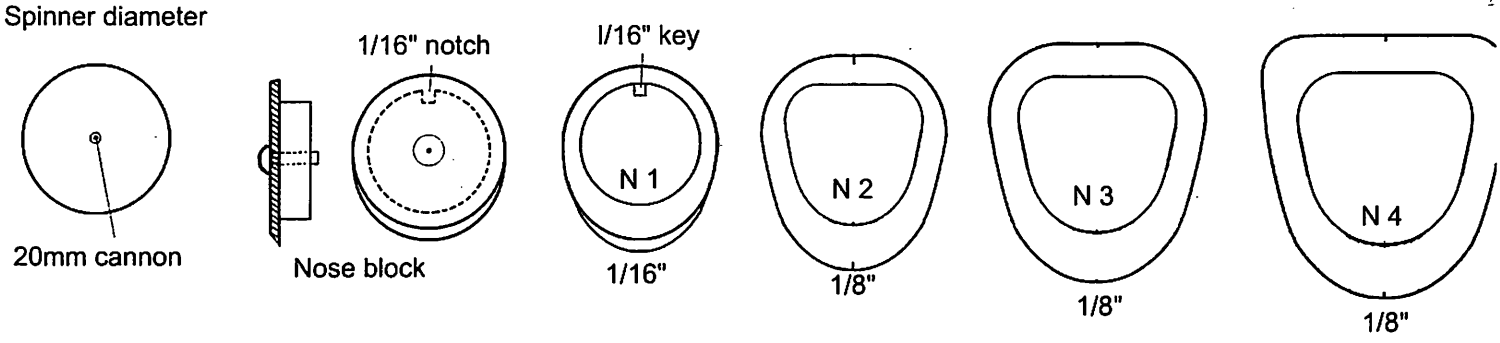
Dewoitine D.520 z GC I/3 w maju 1940 roku.

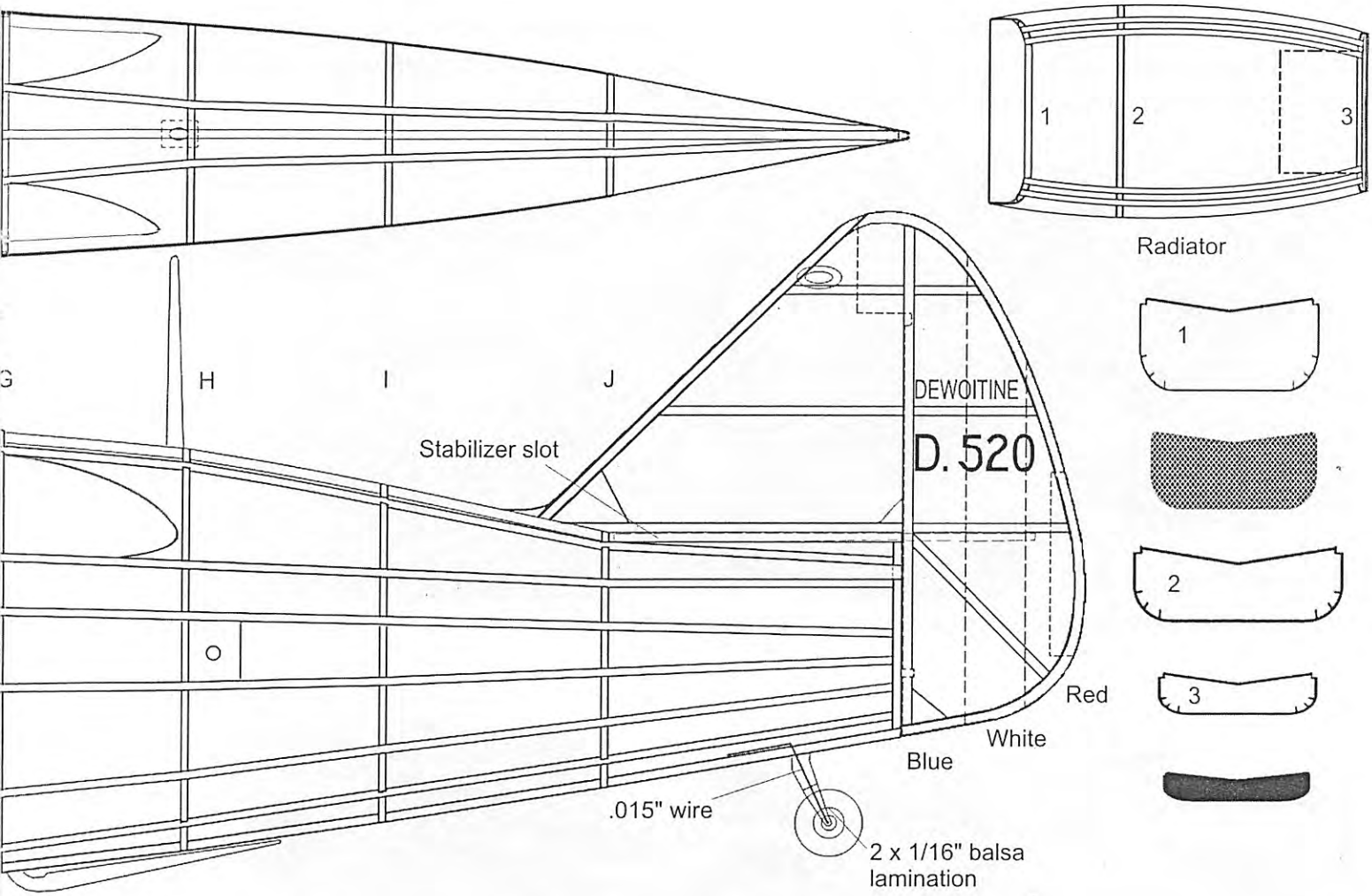


All stock 1/16" except as noted



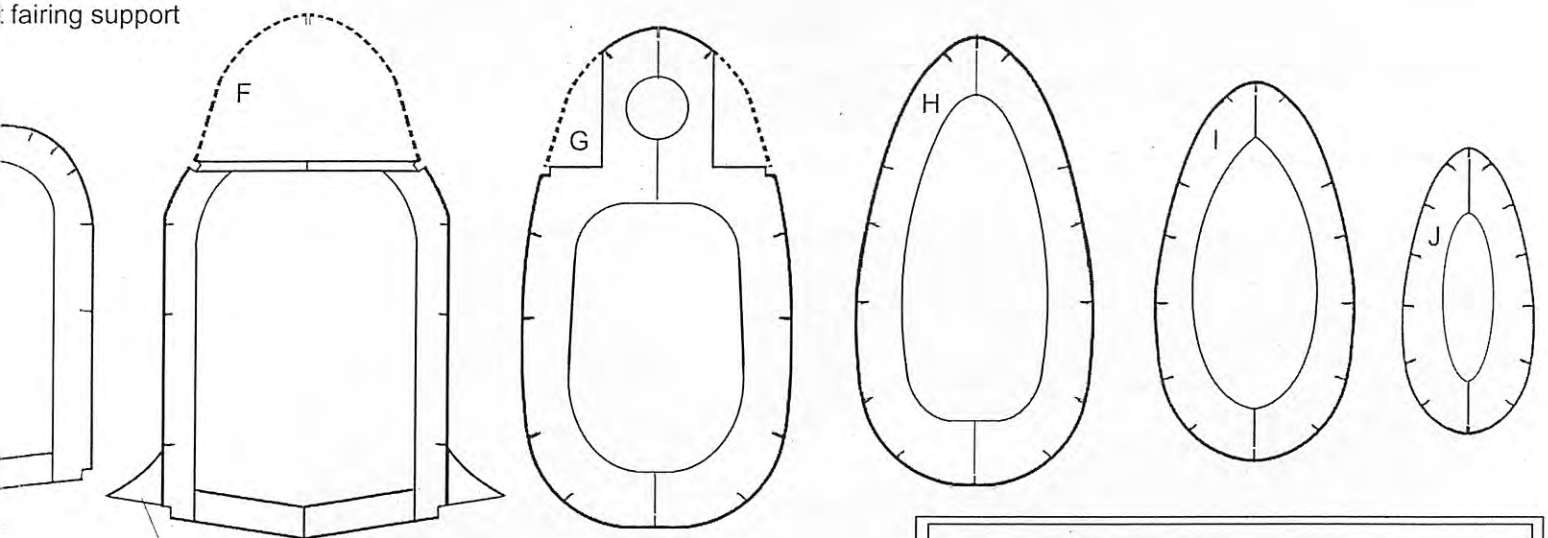




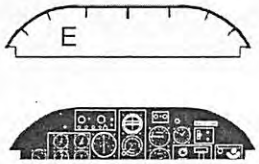


Radiator

fairing support



Wing root fairing supports are added after the wing is attached.



Dewoitine D.520

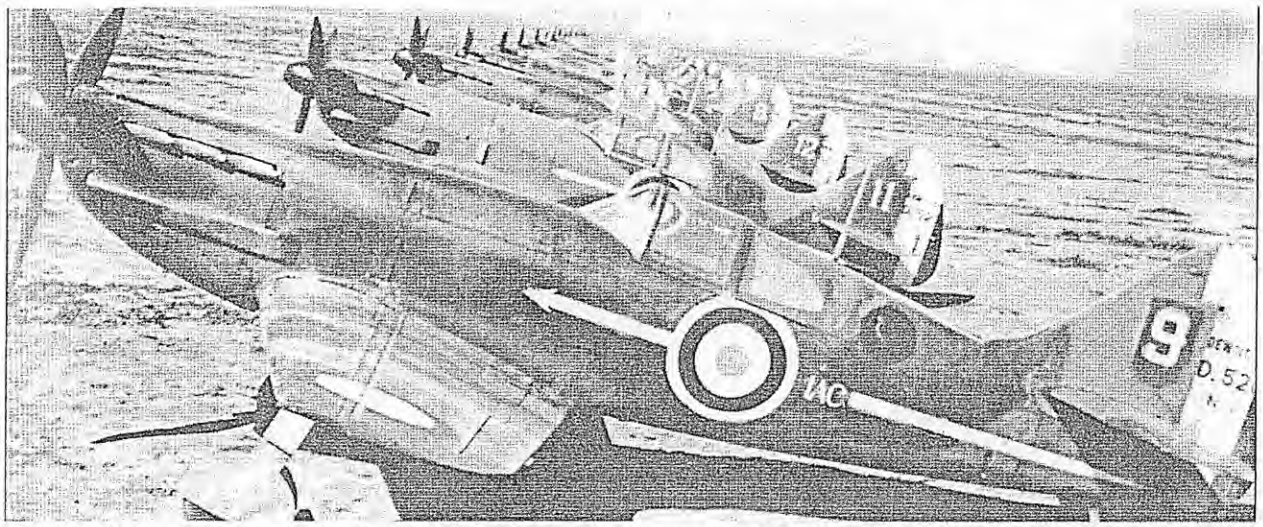
WWII French Fighter

1/24th scale **16.7" Span**

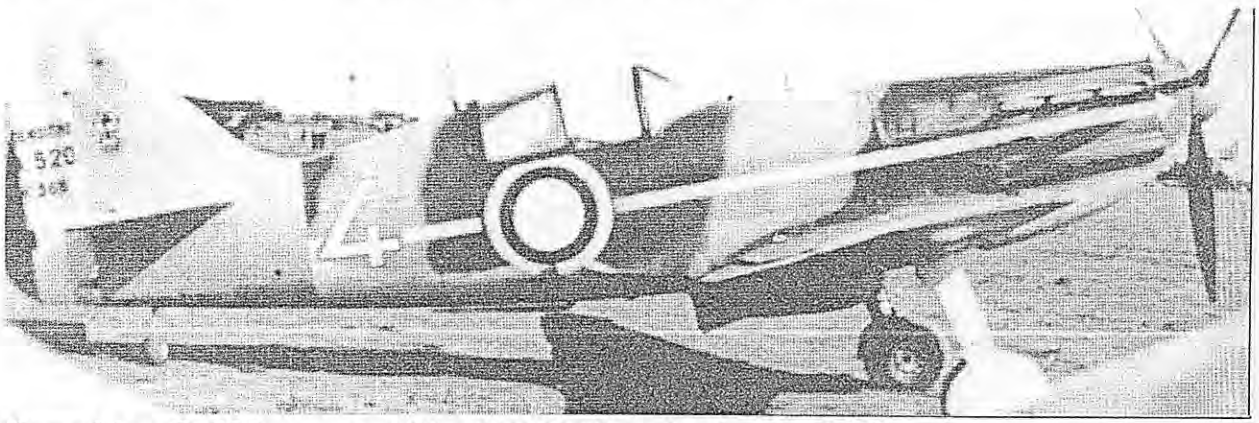
Wingnut Aero Works Rich Weber 2009

Vichy

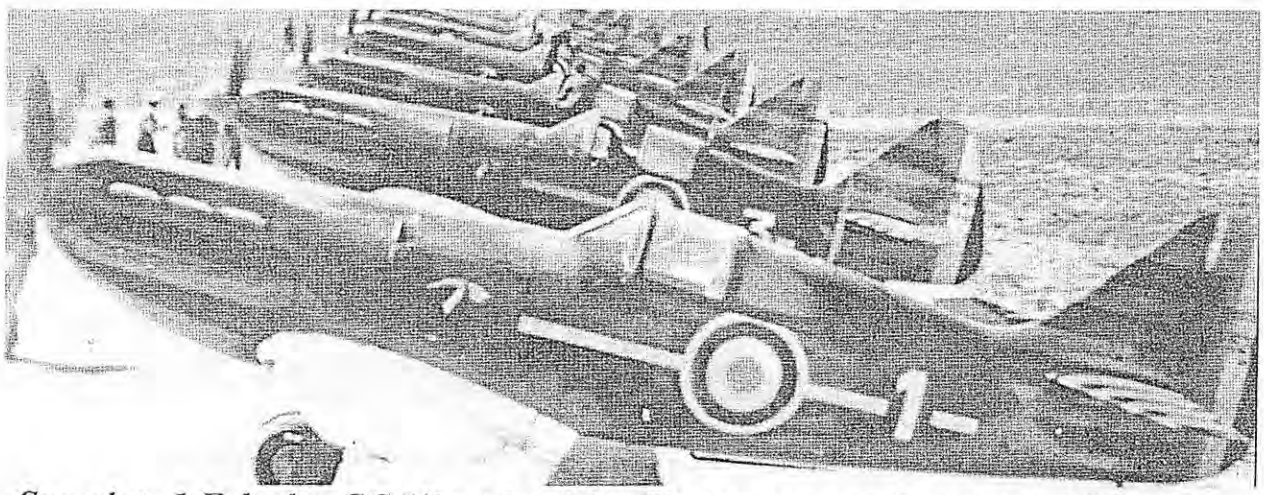
Initially, Vichy aircraft were marked with a white surround to the fuselage roundel, and a horizontal white stripe on the fuselage side. There were many variations on this stripe. Later, the tails were painted yellow, and later still, the red stripes were added and the markings were painted on the nose as well.



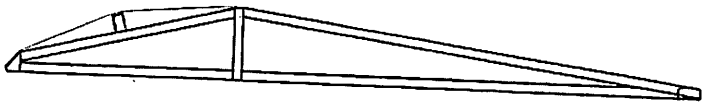
Dywizjon Aeronavale 1AC w Tafaroui w marcu 1941 roku.



Dewoitine D.520 numer 368 z GC III/6 w drodze do Syrii.



Samoloty 1 Eskadry GC I/2 na lotnisku Chateauroux w listopadzie 1941 roku.

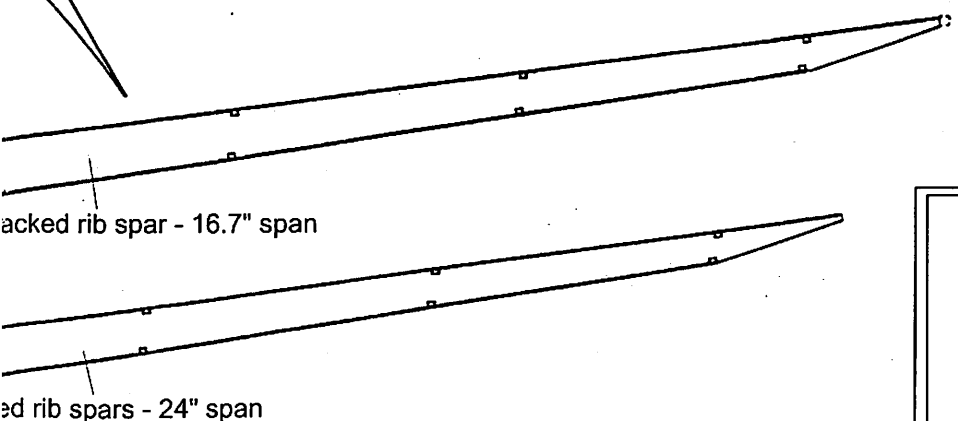


Typical cracked rib structure. Turbulator spar should be tapered in thickness from 3/32" to 1/32" to retain airfoil shape.

Curved parts laminated from 2 strips 1/16" x 1/32"

Conversion to 24" span

- Copy plan at 143.472022955% (OK, 143% is close enough)
- Increase size of LE stock to 1/8" x 3/16"
- Heavy lines on wing plan show Warren Truss spar. Use medium weight 1/20" balsa.
- Use three laminations on curved parts.
- Add former DE to the fuselage structure.
- Make N 2, 3, & 4 from 3/16" sheet.



acked rib spar - 16.7" span

ed rib spars - 24" span

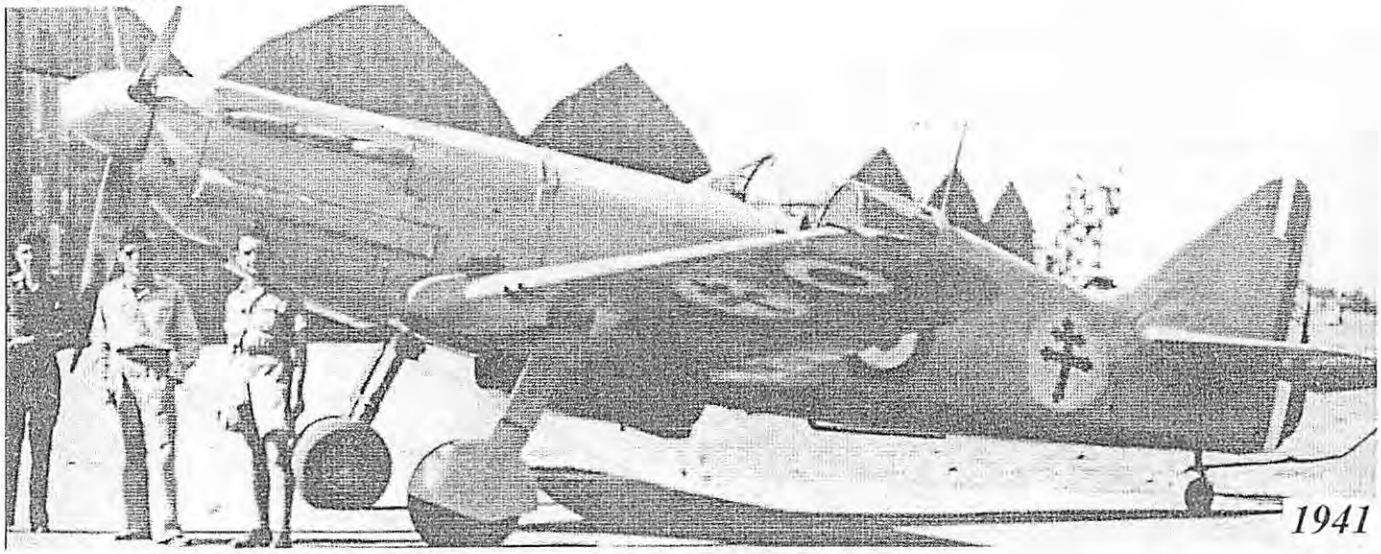
Dewoitine D.520

WWII French Fighter

1/24th scale **16.7" Span**

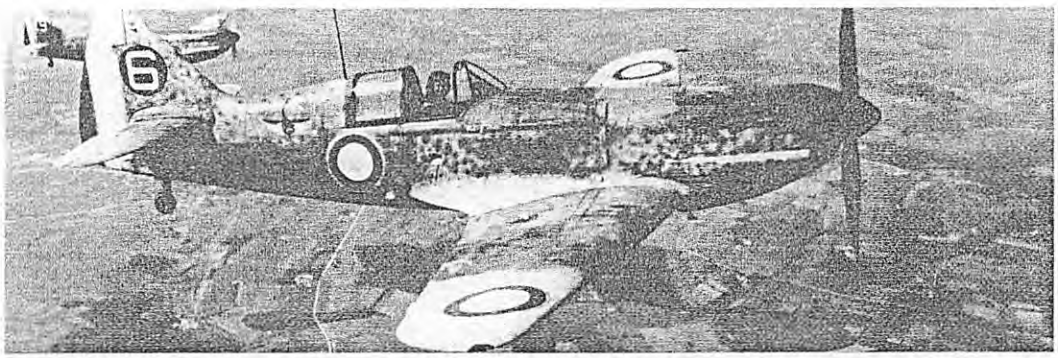
Wingnut Aero Works Rich Weber 2009

Free French

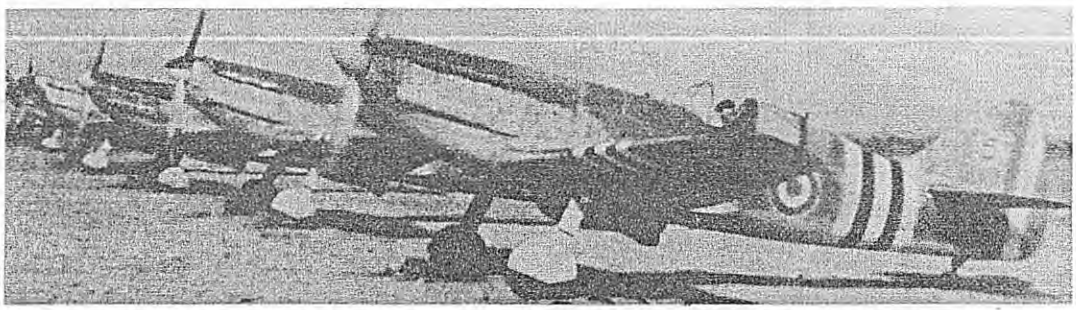


Vichy aircraft taken over by Free French forces saw service in N. Africa and Syria. Others were used in France after the invasion.

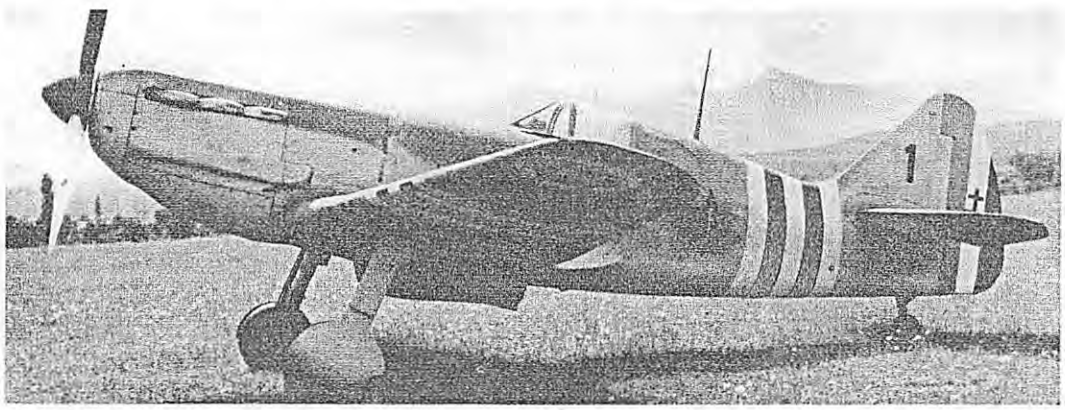
220 - Seen in the background on the previous photograph, D.520 white «6» on a black circle displays more clearly the GCII/18 insignia. The words «Vas-y Jojo» have been painted under the windscreen. The unit's first mission - an attack on Cape Vallières - was carried out jointly with Aéronautique Navale's SBDs in December 1944. (SHAA)

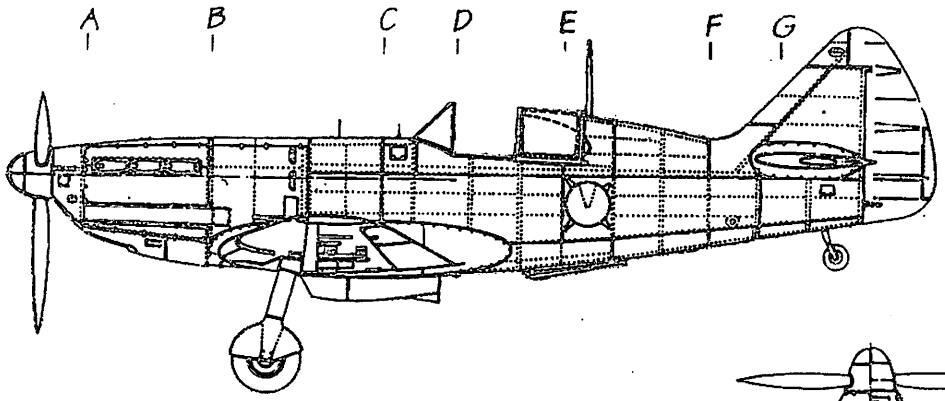


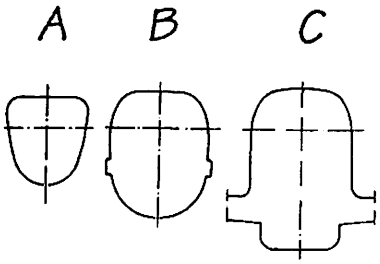
222 - Six D 520s of Groupe Doret at Toulouse in October 1944. Note the camouflage variations between individual aircraft. The «5» on the fin is black on a white circle. (SHAA)



217 - D.520 of Reserve Captain Cliquet (Morane-Saulnier's chief test pilot) seen at Tarbes-Ossun in August / September 1944. The German camouflage is dark grey and mid-grey RLM 74 / 75 and the markings are those of Corps Franc Pommiès (blue «C», white «F», red «P») on a black star. This group only received five D.520s and later joined the Groupe de Chasse Doret in Toulouse. Note the red Cross of Lorraine on the underwing roundel and the absence of folding aerial under the fuselage. (Y. Le Gal coll.)

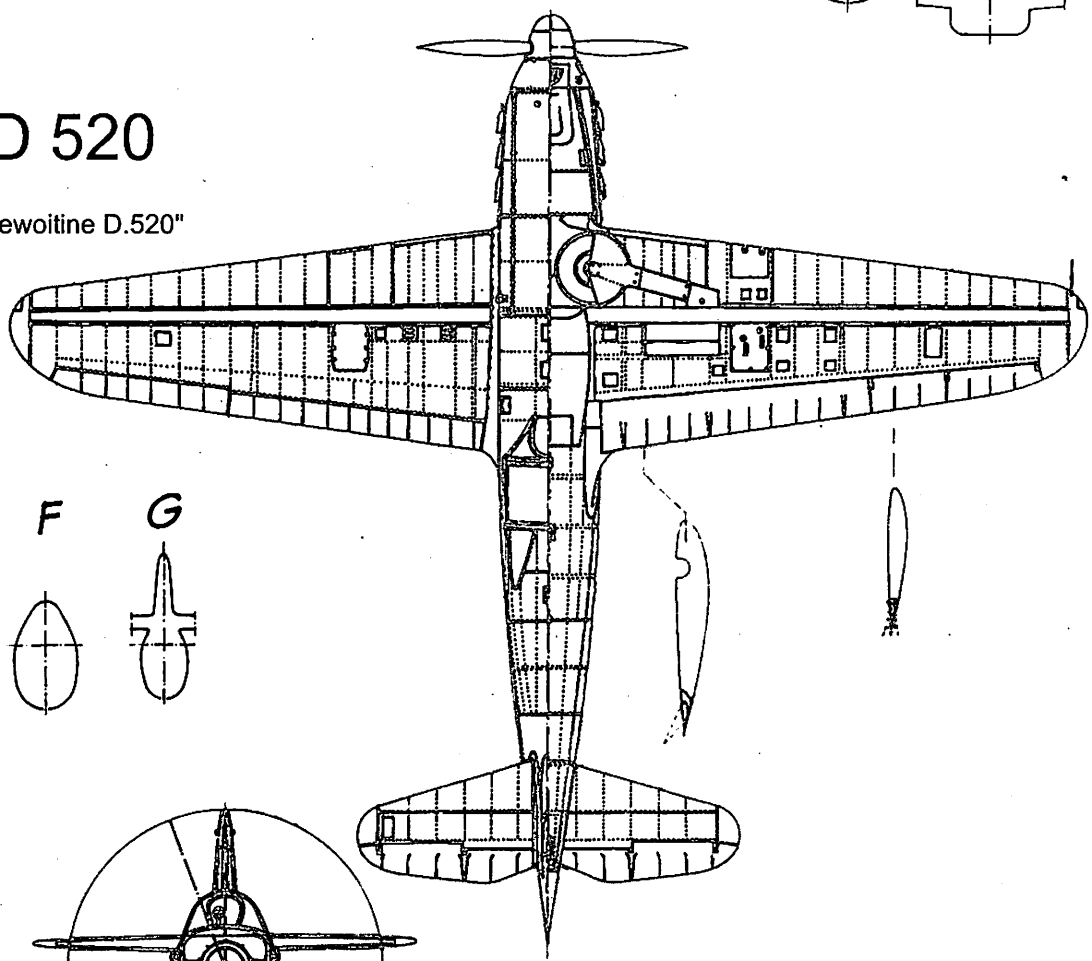


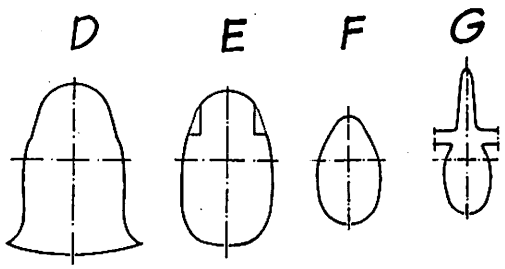


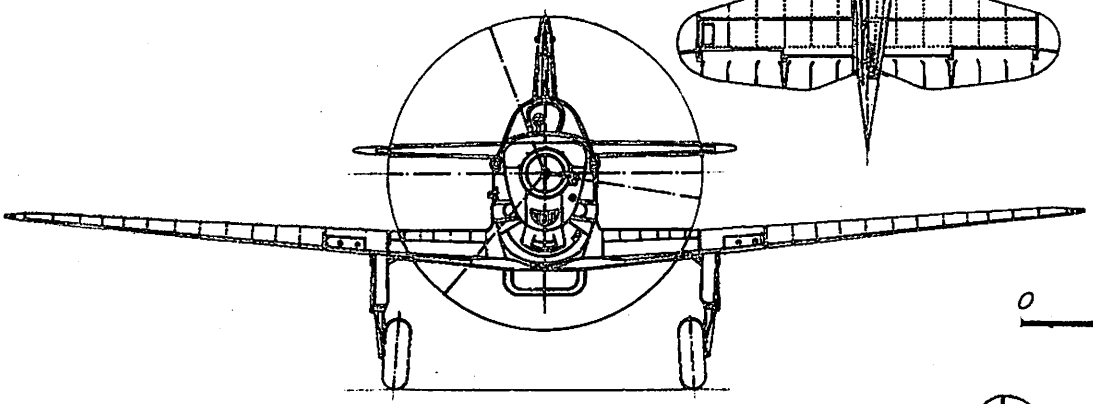


Dewoitine D 520

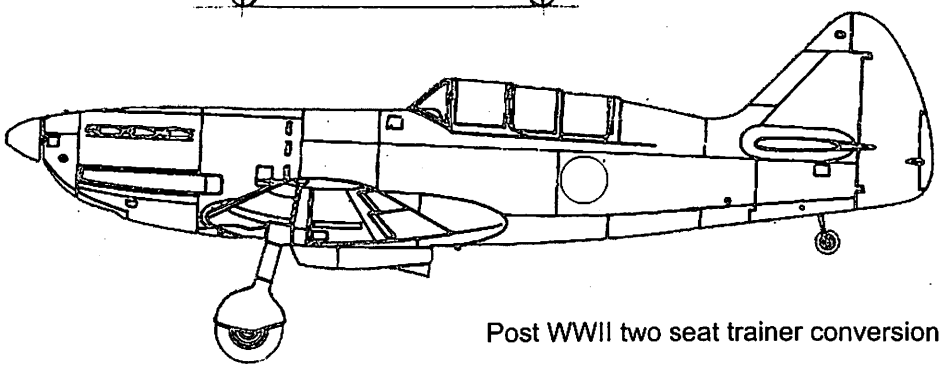
Drawing adapted from "Dewoitine D.520"
by W. Baczkowski





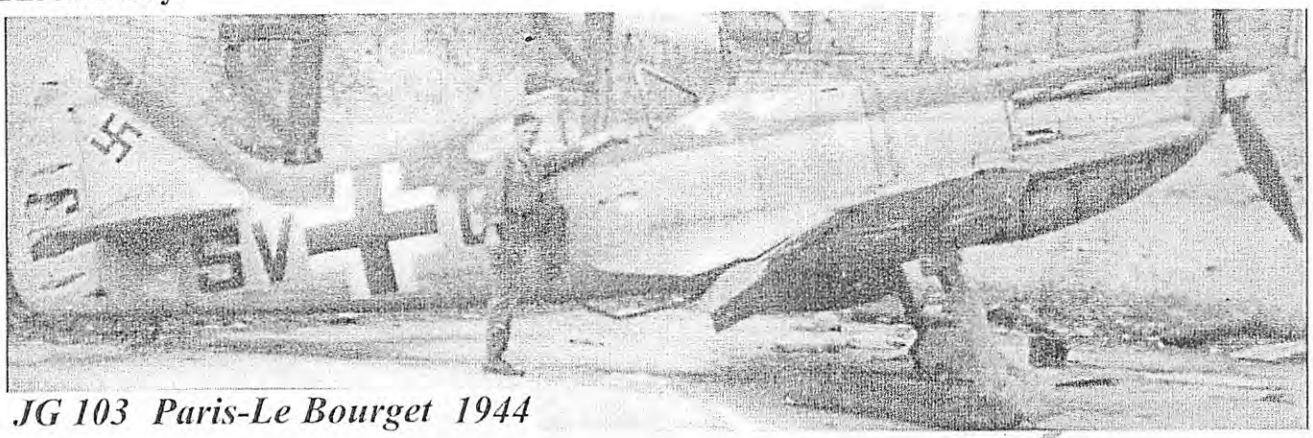




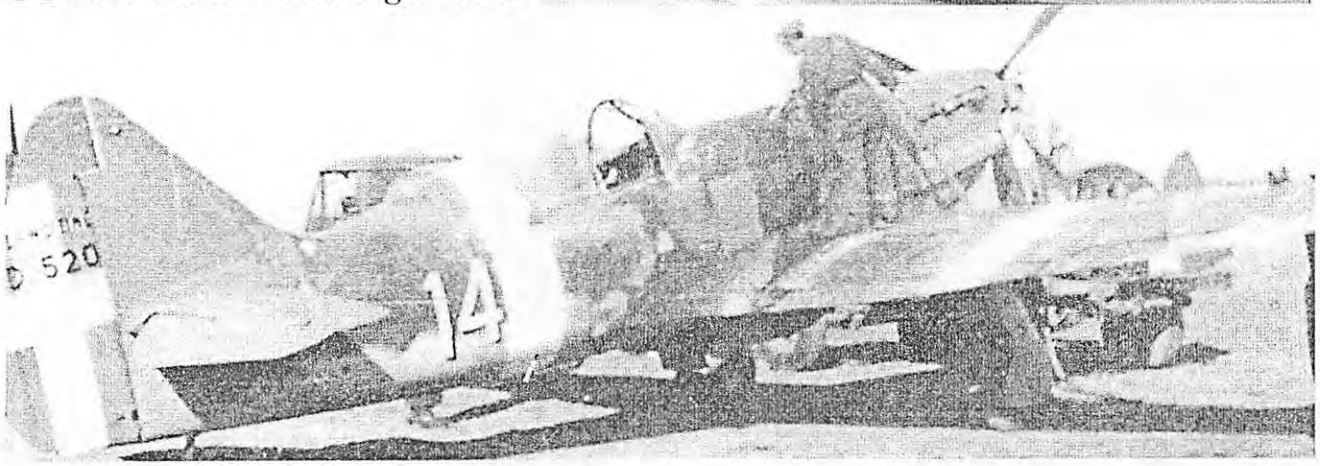


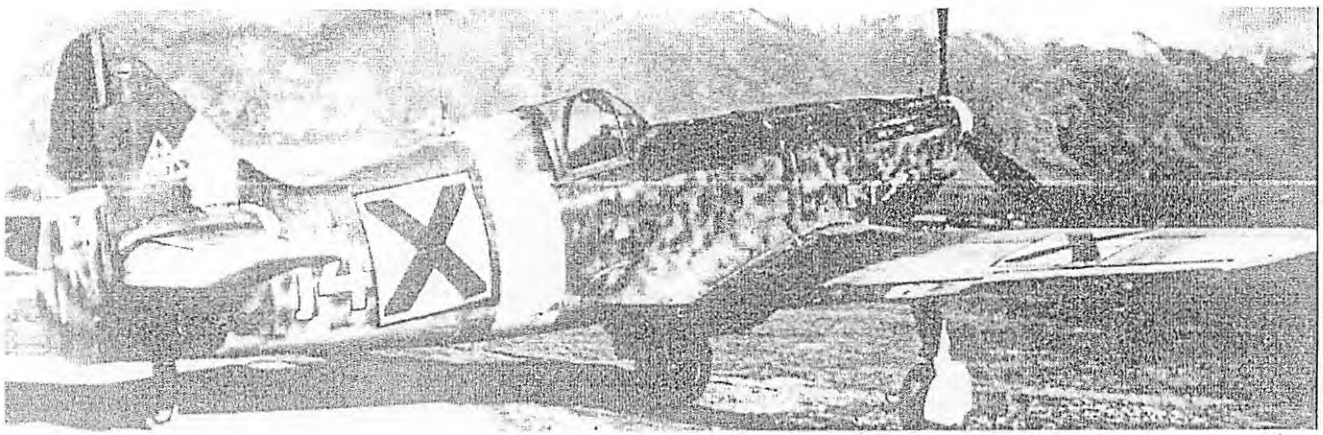
Post WWII two seat trainer conversion

The Bad Guys



JG 103 Paris-Le Bourget 1944





References:

- **Dewoitine D.520** by W. Baczowski, Books International, Polish language, Excellent drawings and photos.
- **Dewoitine D 520**, by a long list of contributors, Published in Belgium by DTU, French/English, outstanding photos, museum walk around, and color profiles.
- **Profile No 135** by Ramond Danel.
- **Scale Aviation Modeler Vol 4 No 11** article by Richard Caruana, good drawing and color profiles.
- **Aero Journal No 6**, articles by CJ Ehrengardt, E Schrider, JY Lorant, W Bock, & G Carlesi, Aero-. Editions, French language, excellent color profiles

All structure 1/16" stock
except as noted

Roundels all four wing positions

Red

White

Blue

r mount on
irface

1

2

3

4

5

al break

o bays with
ke framing with
ff paper.

Tailwheel mounting plate

Blue

White

Red

9

8

7

8

9

e two radiator sides, cover
om with stiff paper.

Dewoitine D.520

16" span
Neo Dime Scale

"Trop peu, trop tard."

Wingnut Aero Works Rich Weber 2009

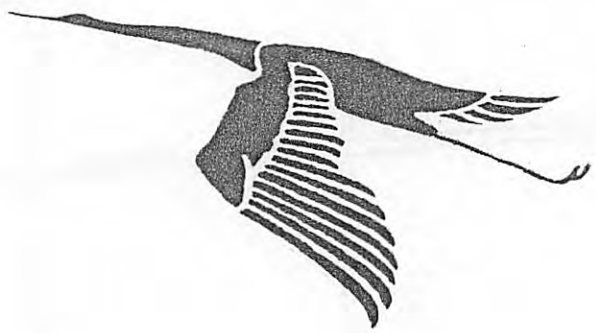
CLEVELAND FREE FLIGHT SOCIETY

ANNUAL

INDOOR CONTEST & RECORD TRIALS

A.M.A. SANCTIONED

Saturday, April 24, 2010
Kent State University Field House



7:30 AM – Building opens (test flying)

AMA Events

8:00 – 11:00
1. Hand Launch Glider
2. Standard Class Catapult Glider
3. Unlimited Catapult Glider

8:30 – 5:30
4. EZB – scoring is best of five officials
5. F1L (1.2 gram EZB)
6. Limited Penny Plane
7. Mini Stick – best of 5 officials, 20 sec minimum

9:00 – 3:00
8. Seven Gram Bostonian – AMA rules

FAC Events

9:00-4:30
9. GHQ Peanut Scale -3 flight total + scale points
10. Comet Old Time Plan/Kit Scale – 3 flight total
11. Golden Age Civil Scale – 3 flight total
12. Dime Scale - 3 flight total
13. No Cal Profile Scale 3 flight total - 6.2 grams
14. WW II Combat – 12:30 PM
15. Phantom Flash - best 3 of 6 ROG, 120 sec max. Mass launch tie breaker.

The building will remain open from 5:00PM to 6:00PM for **AMA Record Trials**

FYI:

- All events are J S O combined
- Steering of models as per AMA rulebook
- Entry Fees: Open - $30.00 Junior - $2.00
- Very Important - You must provide your own table and chair
- No Indoor RC flying permitted during the contest
- All Flyers must have a valid AMA license.
- AMA events: see rule book for information
- FAC events will use the 2010 FAC rules.

Awards

Prizes will be awarded for 1st place in each event that there are 3 flyers with official flights. There will also be certificates. There must be 3 official flyers in an event to win a prize, earn a FAC Kanone, or receive a certificate.

Contest Directors:

Michael C. Zand
5308 East Ash Road
Independence, OH 44131
216-524-3480 imzand@hotmail.com

Don Slusarczyk
868 Eaglewood Dr.
Willoughby, OH 44094
440-918-0290 don@slusarczyk.com

CROSSWINDS readers with the dreaded **RED X** at renewal code 131 or lower can send **$18 per year** to: Russ Brown 4909 N. Sedgewick, Lyndhurst, OH 44124 USA


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D.520
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