Fokker S.13 Universal Trainer Lift Here resin kit

Monoplane crew trainer

Scale 1:72

The S.13 Universal Trainer" has been developed by Fokker after the Second World Wat as a twin engine trainer. After the pre-war T.IX this was Fokker's second full metal design. Together with the F.25 Promotor, the S.11 Instructor and the "Fokhoven" F.K.43 the project was also intended to reconstruct the Fokker company after 1945 and it was supported by the NIV (Nederlands Instituut voor Vliegtuigontwikkeling, Netherlands Institute for Aircraft Development) of the Ditch Government.

The first Fokker design no. 236 was a training aircraft to replace the Oxford and Anson serving with the Dutch Air Force (Nederlandse Luchtstrijdkrachten, LSK). Fokker hoped to sell another 100 aircraft for the export, which led to the adaptation of the design to comply with the English requirements. This resulted in a weight increase of 1000 kg and required heavier engines, 600 instead of 450 horse power. Fokker named it the "Universal Trainer", that is a multi-purpose aircraft, although the name was in practice rarely used.

The construction was in aluminium and the outer wings could be easily disassembled. The control surfaces had a metal frame and were linen covered. The aircraft had a glass nose and behind the cockpit was accommodation for five students in the cabin. Behind the cabin was still room for equipment.

Mid 1948 the Dutch Air Force staff lost already interest in the type and in 1949 it became clear that the Royal Dutch Air Force (KLu) would not order the aircraft. This was strongly influenced by the loan by the U.S.A. of second hand Beechcraft T-7 aircraft under the MDAP (Mutual Defence Assistance Program).

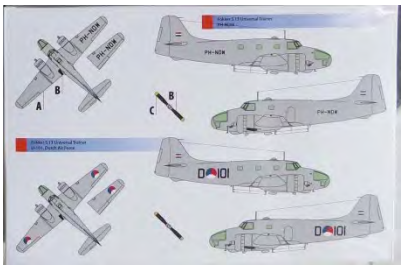
The S.13 with registration PH-NDW and owned by the NIV made its first flight on March 11, 1950. The aircraft appeared fly well. It has also flown the a "fake" Air Force registration D-101, but has never been used by the KLu, it was only tested by them. No sales abroad were realised either. The only aircraft built got on June 15, 1951 the new registration PH-NEI and another, attractive colour scheme. It was hired in 1954 from the NIV by Schreiner for target towing. In 1957 the aircraft was formally transferred to Fokker and it became part of the study collection of the TH Delft, Aeronautical Engineering, were it was dissected to expose the construction. At this moment some parts are in storage in the Aviodrrome Museum. The cockpit section was owned by the Airfield Museum in Texel, but is now privately owned by a collector in Alphen a/d Rijn, because the Dutch museums could not pay the high asking price.

Characteristics of the S.13 are:

	references	*1:72*	*model*
Span	19,20 m	266.7 mm	272.0 mm (102%)
Length	13,60 m	188.9 mm	192.0 mm (102%)
Height	5,50 m	76.4 mm	80.4 mm (105%
Engines	Two Pratt & Whitney Wasp S1H1-G, 600 HP		
Crew/passengers	2/5		

The model is slightly oversized, especially the height.

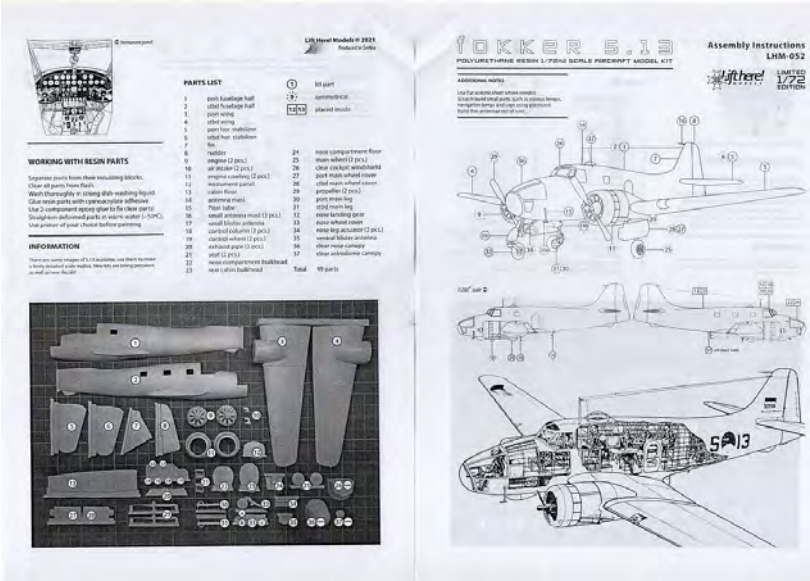
The kit



The kit is contained in a nice, but not very sturdy box. On the rear side the painting scheme of the S.13 as PH-NDW and as D-101 is shown, as it was demonstrated for the LKS/KLu. On the sides a short history of the aircraft and paint numbers are printed and -

rather unusual- basic tips for building a resin model.

In the box a double sided sheet A5 is included, containing a parts list, a picture of the numbered parts, a drawing indicating the location of these, two side views and an exploded view of the aircraft.



The 49 resin parts are separately packed, as well as the clear plastic, vacuum formed nose, cockpit windows and roof and observation dome.

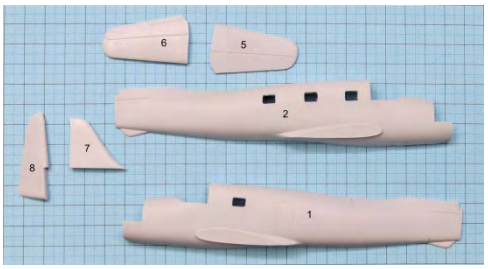
Two copies of nose and cockpit are present, offering the opportunity to recover from errors.

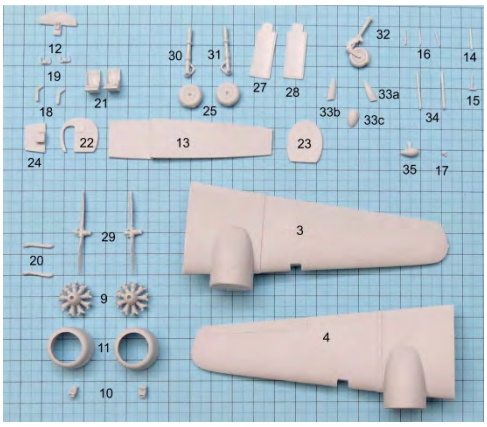
The decal sheet contains the registrations for the PH-NDW and the D-101, KLu roundels, the Fokker logo and S.13 type designation and Hamilton Standard propeller logo's. The markings for emergency rescue, present on the D-101 are not included.

It is difficult to build the model with the instruction sheet alone, the place of some parts is not evident. On the website of the IPMS Netherlands is an exploded view present explaining the assembly in more detail. A copy is included in the appendix.

Parts

The resin parts are very nicely casted without air bubbles and very little flash. Have used a razor saw to separate them from the sprues, it is difficult to do that with a knife. Separating the wheels leads to a flat surface. This is no problem for the main wheels (they can be mounted with the flat side down), but the nose wheel is attached at the side, so the flat piece must be repaired afterwards. The nose w heel doors (33) are casted in one piece, and should be very carefully separated from the sprue. I did not pay attention and lost parts of 33c.





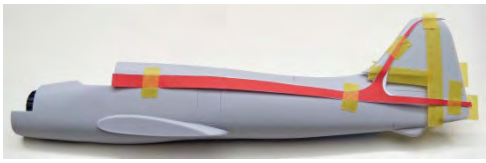
There are some minor inaccuracies in the model. The port side window is one millimeter to much forward and the rear fuselage is 1 mm too low at the top and 1 mm too high at the bottom. Also it looks that the top of the rear fuselage should be less wide. The diameter of the port and starboard cowlings differs almost one millimeter. The main wheels are mounted off center in the original; this is not modeled correctly. I have had a copy casted of the smallest diameter cowling and of the nose wheel doors, which I destroyed in removing them from the sprue.

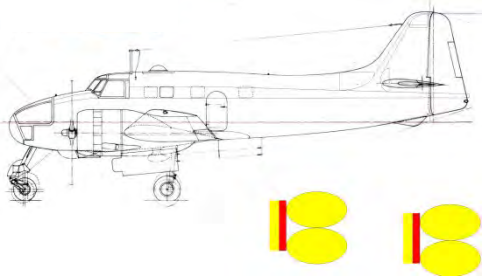
Decals

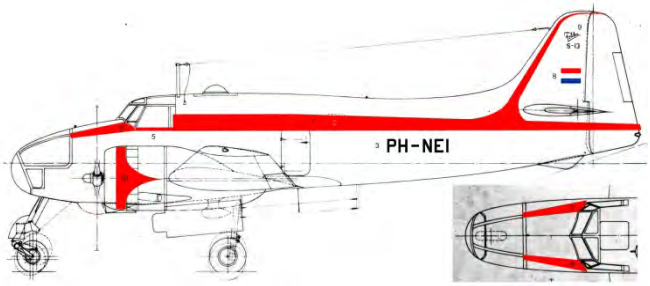
As I wanted to build the S.13 in its final configuration as PH-NEI, I had to draw new decals. There are no color photographs of the original, but some

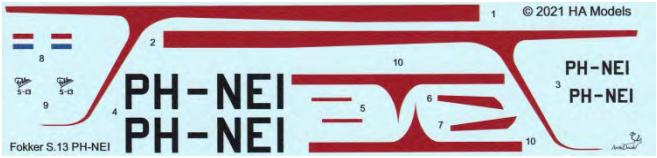
parts of the prototype have been kept. The cockpit section and the tail show some traces of the color scheme, although the first one probably has been repainted.

I have drawn the red cheat lines over the scaled side view in CorelDraw, printed them on paper, have cut them out and fitted them on the fuselage and wing parts. After a couple of iterations they fitted well. The registrations PH-NEI I have modeled on the those in the kit, but with slightly bolder characters. The Fokker logo and model name, which were different on the NEI, came from earlier decal drawing I have made.







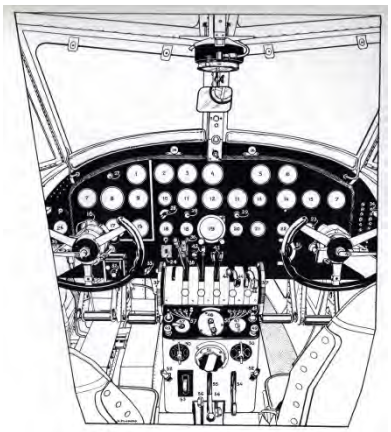


The final drawing I have sent to Mika Jernfors, who finalized them for printing. To complete the exercise I have made a drawing indicating the place of all decal elements. The decal set will also be available at the Aviation Megastore.

Building the model

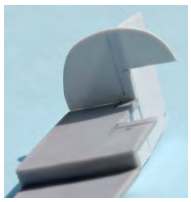
Fuselage

The first problem to solve was to create access for the navigator to the glass nose. A photograph of the nose section in the Texel museum showed that there is a direct view from the co-pilot seat to the gangway to the nose section and the nose itself. There is a plank mounted under the rudder paddles, which is not original (it does not allow to use the rudder paddles. A drawing of the instrument panel shows this access also, and suggests that there is a large opening in the forward part of the floor.



I have modified the cockpit floor of part 13 accordingly. The photograph shows also that the mid console in the kit is a bit too simple. I have added some pieces of styrene to the lower part of the instrument panel.

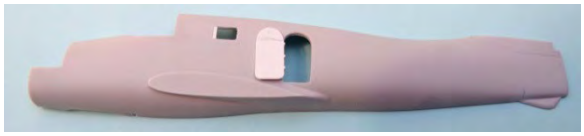
Next the entrance to the glass nose had to be constructed. I have first drawn the center line on the aft cabin bulkhead and the nose bulkhead and have glued the aft bulkhead to the floor. By aligning the aft bulkhead with the line casted on the port fuselage half I could determine the correct position of the front end of the floor and the position of the instrument panel relative to the floor.



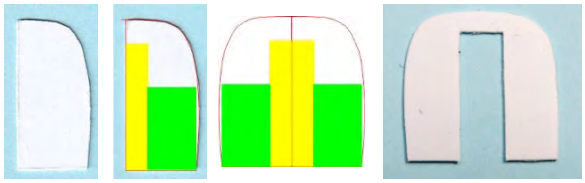
I have trial and error made from 0.5 mm styrene a forward bulkhead that will be positioned just before the instrument panel. The wall between the narrow gangway to the nose and the nose wheel well I have again made trial and error from the same material. The picture at the right shows the dry fit of the floor-bulkheads assembly in the port fuselage half.

I have made an access door to the aft equipment room from 0.25 mm styrene sheet and have glued it in place. The aft bulkhead of the glass nose has been glued to the wall and floor of the gangway. The cabin floor is not straight, which make it hard to fit the floor assembly in the fuselage halves, so I have given it a warm bath to straighten it.

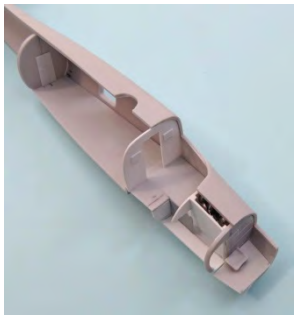
The window of the port fuselage is placed 1 mm too far forward. I have glued a piece of 1 x 1 mm strip in the window opening and have removed one millimeter from the aft side of the window opening, The windows at the starboard side of the fuselage are on the correct place. I have also removed the door from the fuselage half and have made a new one from 0.5 mm styrene.



The aft wall of the cockpit is missing in the kit. From carton I have made trial and error a well-fitting half wall, scanned it in and have copied it in CorelDraw. I have drawn the pilot seat in it (green) and have drawn a half width door and mirrored the image to obtain the full wall. A print has been glued on 0.5 mm styrene and the cockpit rear wall has been cut out.

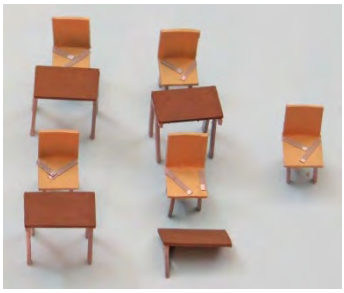


I have also glued the floor of the observer's compartment in the nose to the front bulkhead. Even after the warm bath to straighten the cabin floor it was still rather difficult to fit the floor and bulkhead assembly in the fuselage halves, but in the end it has worked. As the tail of the model is rather heavy, I have filled all available room between the forward bulkhead and the instrument panel bulkhead and under the cockpit floor with fishing lead, fixing it with white glue.



The best illustration of the cabin interior is a sketch, showing a seated instructor and four students seated at desks. One desk is attached to the port fuselage wall, the other desks are positioned along the starboard fuselage wall. I have made five seats and four desks from 0.5 mm styrene sheet.

I have marked the upper edge of the floor on the starboard fuselage half and have glued a strip of 1 x 1 mm styrene 1 mm blow the line to provide a firm support of the floor. The photograph of the cockpit and nose shows that the walls were dark green, a finish that was also used for the structure parts of the Fokker F.27. It seems to me unlikely that also the cabin has been painted dark green, so I have chosen light grey for the cabin walls. All floors have been painted dark grey.

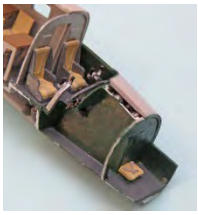


Next I have painted the parts that form the interior of cockpit and cabin. The table tops have been painted natural wood, the frames of tables and seats light grey and the seat bottom and back crème. Seat belts have been made from light grey painted Tamiya tape with aluminium fittings. I have glued the seats and tables to the cabin floor, arranging them in a logical configuration. There is little room between them; probably this has also been the case in the original.

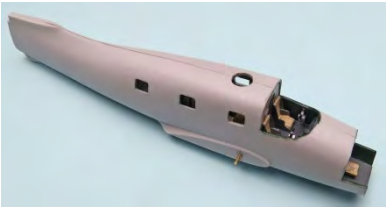
The cockpit parts are shown in the picture at the right. The seat cushions have again been painted crème, the structural parts dark grey. The instrument panel has been painted black, dry brushed with white. This was not very successful, as the instruments casted on the panel had very little relief.

I have glued the rudder pedals under the instrument panel at approximately the height I could deduce from the photograph.

Next I have glued the instrument panel to the front bulkhead. Dry fitting the other fuselage half against it showed that the position and dimensions were correct. When the glue had set, I have glued the two pilot seat in place and the two control sticks. To place the starboard stick in a correct position I had mounted a small piece of styrene rod against the cockpit floor.



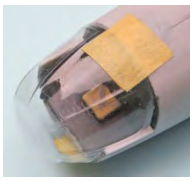
I still wonder how the access to the glass nose could be combined with accommodating a comfortable position of the co-pilot. Possibly part of the cockpit floor was hinged as a trap door, because without a floor under the rudder pedals it is not possible to actuate them properly.



I have drilled a 1.2 mm holes in the wing root at the wing side and at the fuselage side and have glued a brass pin of 1.2 mm in each fuselage half to provide a strong wing connection. I have checked whether all parts glued in the port fuselage half were attached well and have closed the fuselage. This still required some effort and the joint required quite some correction to achieve a smooth surface.

I have attached the vertical tail plane to the fuselage. Here some sanding and putty application was needed too to obtain a smooth surface. The bottom of both fuselage sides behind the nose wheel bay showed considerable damage, probably the result of forceful removal of a sprue, which was needed for the casting. In fact this was the only part that showed some damage.

I have removed the excess plastic from the clear vacform parts and fitted them to cockpit and nose. This was a deception; both were too small and the glass nose had a fold. Fortunately the kit contains two copies of each but some modification was needed anyhow. The first one was the addition of two pieces of 1 x 1 mm strip on the horizontal edge of the nose, the second one was to add 0.4 x 0.5 strip to all edges where canopy and glass nose had to fit. I have also left ample material around the edges of the glass work. Bit by bit I have removed some more plastic until I got a “best fit” for the parts. Nevertheless, I still had to remove almost 1 mm from the lower edge of the nose to achieve an acceptable fit. I have painted the strips green and light grey.

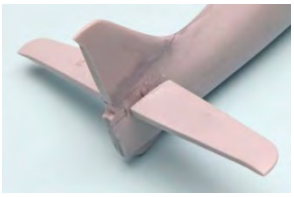


On the photograph of the S.13 in the assembly hall a console is visible in the nose against the port wall. I have modeled than from pieces of styrene sheet and some slices of styrene rod.

I have covered the windows in the canopy and the glass nose with pieces of masking tape and have painted the window frames first with gray primer and the with dark green (with the exception of the ceiling of the canopy, which got a coat of light grey), finishing with some layers of white for the canopy and mid grey for the glass nose. The top two window frames of the nose got a layer of red.

Tail

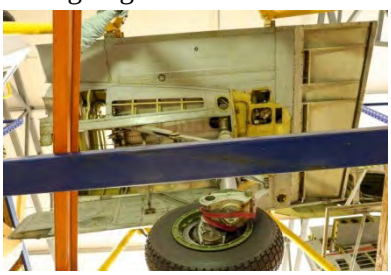
I have separated the elevator halves from the horizontal tail plane and marked them. The elevator with the trimming surface should be at the port side.

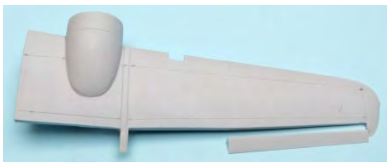


I have glued the two halves of the horizontal tail plane to the fuselage, fixing them with 0.5 mm brass pins. This left a rather large gap between tail plane and fuselage, which I have filled with putty.

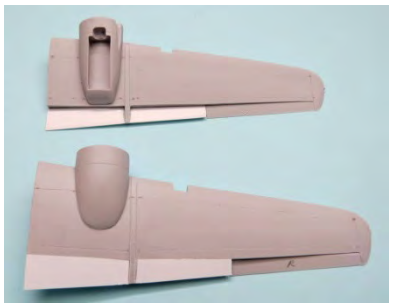
Wing

I am going to build the S.13 with extending flaps. The nacelle with the main landing gear[1], present in (the storage of) the Aviodrome in Lelystad, as well as the drawings of the S.13 show that the flaps are of simple construction. The flap, probably an aluminium skin stiffened by ribs, has been removed, so the ribs and wing skin are shown.



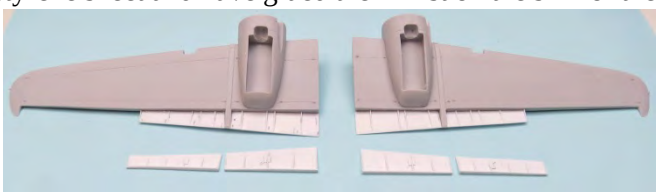


I have removed the flap sections and ailerons from the wing by cutting the flap and aileron area with a razor saw and panel line scriber. I have also engraved the panel lines showing the location of the wing spars.



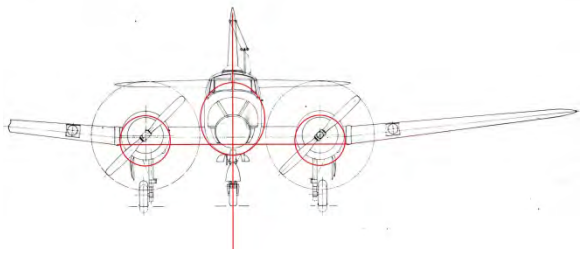
Next I have cut pieces of 0.5 mm styrene sheet to the correct size and glued these in the against the wing, keeping the top surface equal to that of the wing. As the port and starboard side had slightly different dimensions, this had to be done trial and error. The ailerons have been marked with their position.

I have made half height ribs for the flaps from 0.25 mm styrene sheet and have glued them first on the skin of the wing according to the configuration of the inboard flap I could deduce from the photographs. I have assumed the outboard flaps had about the same configuration. Next I have cut a set of flap surfaces from 0.5 mm sheet and have cut the ribs on logical locations on the flaps. I have sanded the trailing edge of all parts into a sharp ending.

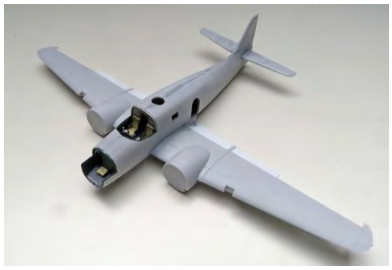


I have dry fitted the wings to the pins in the fuselage to check the alignment of the wings. They were correctly aligned vertically.

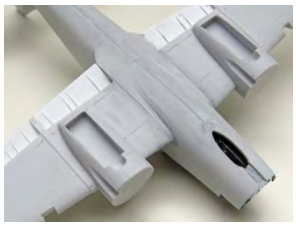
That did not apply to the dihedral of the wings. The mounting surface to the fuselage was not vertical, hence when mounting the wing the middle wing section would not be horizontal as it should be. So I made a carton jig based on the front view of the S.13 in the original Fokker drawing, copied in CorelDraw. However, the first template did not fit at all on the model; the engine nacelles of the model were too low and their diameter too large compared to the drawing. After some iterations I arrived at a jig made from the lower half of the print of the drawing on carton.



I have glued the wings to the fuselage, using the carton jig to align them well. I have kept the top surface at the wing root equal to the top of the fairing casted with the fuselage. As a consequence the lower side of the wing fuselage fairings had to be treated abundantly with putty and required a thorough sanding job.



The joints at the top I have also filled with putty and sanded well.



The assembly has been given a coat of grey primer and the joints have been sanded until a smooth surface resulted.

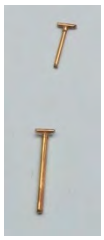
I have applied masking tape for the separation between the white top and the bottom of the fuselage about in the middle of the windows, where the red cheat line will be applied and have given the top several layers of white and the bottom and the wings a layer of mid grey. The wheel bays and the inside of the flaps have been painted light grey.

I have used canopy and glass nose to determine the position of the anti-glare panel in front of the canopy and have painted the panel matt black.

I have glued the canopy in place with white glue after adjusting it very carefully to achieve a good fit. The gaps have been filled with white glue too.

As the glass nose, which I had painted, did not fit very well, I have also painted the second glass nose, again after adjusting it very carefully until it fitted well. I have kept the top side as much as possible flush with the nose, so the difference in size shows up mainly at the underside. The remaining gaps have been filled up with white glue. I have mounted the air inlet under the nacelles and have painted them.

There is still some small stuff that has to be painted and glued in place, mainly for the antennae and their supports.



I have replaced the resin antenna mast behind the cockpit a piece of messing streamline profile and glued a small piece of brass rod to the top of it to accommodate the double antenna wires. The support at the fin has been made the same way from 0.5 mm brass rod; a resin equivalent for it is not included in the kit. The two supports for the belly mounted antenna wires have been made from 0.5 mm brass rod as well. All small parts have been painted dark grey to obtain some contrast with the mid gray fuselage.

Engine

I have also painted the engines black and have dry brushed them with gun metal. The two cowlings in the kit have different diameters, which shows clearly up when fitting them to the nacelles, so I have had copies made of the smallest one.

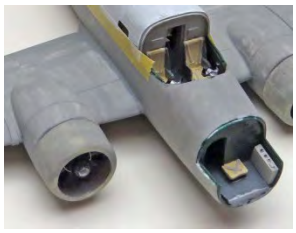
The propellers have the wrong shape (pointed blade instead of a parallel blade) and the diameter is a bit smaller than the original (40 mm instead of 42 mm). The blade width is about correct (3.6 mm instead of 3.9 mm). The hub diameter is about correct (2 mm instead of 2.5 mm), but the original has a rounded point and is missing the two small discs.

I have decide to modify the original propellers by cutting 11 mm from the blades and replacing it by a blade of rectangular dimensions. The remaining part was 0.8 mm thick at the location of the cut. I have sanded a 4 mm wide strip of 1 mm thick styrene down to 0.8 mm and have sanded a streamline profile in it. I have cut sections of 13 mm wide from the strip and have glue these to the central part of the original part. I have also removed the two small discs and have rounded the end of the propeller hub and have enlarged it slightly by dipping it in thick cyanoacrylate glue.

When dry I have sanded the props well and have thinned the blade towards the tip. I have also made a ring from 0.25 mm metal wire and have glued it around the hub. The photograph shows the final result prior to painting..

I have painted the propellers gloss black. This made imperfections of the joint between the central part and the two new extension appear well. I have sanded the propellers until the joints were really flat. I have finished the painting work, the blades black and the hub aluminium. I have applied the logos, given the propellers a matt varnish coat and have painted the tips yellow[2].

When the engines are placed against the firewall, they are lying too deep in the cowlings, so I have glued a piece of 1 mm thick styrene in the center of the nacelle and have glued the engines on it, keeping them well on the centerline and placing one cylinder pointing upwards.

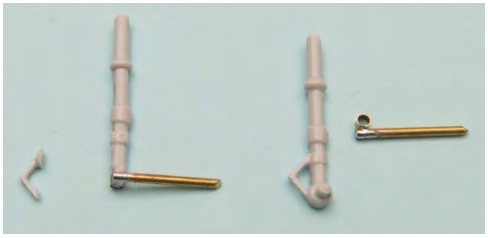


Next I have glued the cowlings in place, filling the gaps with the nacelle with thick cyanoacrylate glue. I have also painted the console for the glass nose light grey and glued it against the port wall in the nose.

Undercarriage

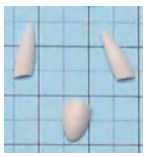
The configuration of main undercarriage legs included in the kit is not correct; the wheel axle is placed directly under the leg, while in reality it is off set to the front, as shown in the photograph. In the model this cannot be achieved by simply gluing a new axle forward of the leg, as this has to support the full weight of the model and a joint made with cyanoacrylate glue would not support that. I could have used epoxy glue, but I have chosen a more fundamental solution.

I have cut two 2 mm slices of 1.8 mm brass tubing and have soldered a piece of 1.2 mm brass rod to each of them. I have removed the scissor mechanism from the landing gear leg and thinned the lower end of the leg to a bit less than 1.6 mm, just fitting in the tube.



I have glued the tube to the legs, making sure I got two mirrored undercarriage legs. The hole in the wheels has been enlarged such that the brass rod fitted in it and the rod has been shortened to achieve the correct configuration.

The nose wheel doors are casted as one piece. I did not pay attention and have cut off part of the middle door, attached to the nose wheel landing gear leg. I have corrected that with a piece of 0.4 mm styrene, which has been used as a master to cast resin copies. The casted middle door was still slightly too short, so it has been lengthened with a piece of 0.5 mm thick styrene sheet material.

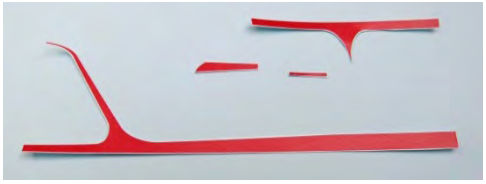


The landing gear legs, the wheel wells and the inside of the landing gear doors have been painted light grey. The tires of the main landing gear I have given transverse cuts with the razor saw to simulate the square pattern of the original tires. The tires have been painted tank grey, the hubs and the legs themselves light grey and the shock absorbers aluminium.

The photographs show support struts for the landing gear, which are not included in the kit. I have produce these from brass tubing, fitting smaller tubes into the wider ones. They have been painted light grey and chrome.

Final assembly and decal application

I have given the fuselage top and the fin a last coat of white paint in preparation for the application of the decals. First I have cut out the long cheat lines, saying as close as possible to the red shapes. I have fitted them on the fuselage side and have cut off the piece of decal that has to go on the rudder.



I have applied the large cheat line decal on the port side with ample water and Microscale Set., starting from the last cockpit window frame, just over the fuselage windows. This went quite well. Next I have applied the small decal over the lower cockpit window frame. The last cheat line decal has been placed between the cockpit windshield and the red painted frame of the glass nose. The red of the paint and of the decal matched very well. I have repeated the procedure on the starboard side.

I have carefully aligned the decals on the rudder with those on the fuselage sides. The cut bottom part of decal on the rudder was slightly too short, or better: I had cut too short a piece of the large decal. This has been repaired with a bit of red paint. Finally I have placed the decals with the Dutch flag, the type name and the Fokker logo on the fin and the registration on the aft fuselage and have put the model aside to dry well.

I have given the fuselage a coat of gloss varnish to seal the decals. When dry I have mounted the red bands on the cowlings. They fitted well with a small overlap at the inner side. However, to apply them correctly, again an ample quantity of water was needed, otherwise one risks breaking them, like I did with the starboard one.

I have also applied the registrations on the upper and lower wing. However, as I had applied them directly on the satin painted surface, they showed some silvering, even after applying Microscale SOL. So I have removed them a couple of days later with ample water and have applied the registration from the second set of decals that I had. Next I have given wings and nacelles a coat of gloss varnish to seal the decals.

I have cut the window and the door openings in the cheat line with a sharp scalpel. This worked quite well. I have repeated this exercise for the windows at the starboard side.

I have given the edges of the door and window an extra coat of gloss varnish to ensure that the decals would not come loose when I would fill the windows with Microscale Kristal Klear. I have filled the cabin windows by applying the Kristal Klear with a toothpick.

I have removed the excess Kristal Klear on the decal and white and grey painted area carefully with a humid cotton stick. I have also glued the observation cupola on top of the fuselage. I have used Kristal Klear for this, as it dries more transparent than white glue. The

exhausts have been painted gun metal, dry brushed with rust and the exhaust opening matt black. I have glued the exhaust to the nacelles.

On the Fokker drawing the main landing gear legs are slightly sloping forward, so I have glued the legs in that position in predrilled superficial holes of 1.5 mm diameter. The nosewheel leg has been provide with a 0.5 mm brass pin, which has been glued in a hole under the nose. The main landing gear legs have been support with the struts constructed from concentric pieces of brass tube, and the same has been done with the nose gear leg.

Next I have mounted the wheels to the axles and the wheel doors to the nacelles. The tires have been sanded a bit at the lower side to get the wing well horizontal. I have also glued a small disc of styrene covered with shiny aluminium tape in the recesses in the wing leading edge to simulate the landing lights and have filled the cavity repeatedly with Microscale Kristal Klear.

And then came the moment of truth: the comparison with the photographs. I had reversed the main landing gear legs. Time to profit of the property of cyanoacrylate glue: its brittleness, normally a disadvantage, in this case very useful. With moderate force the legs came loose from the wheel wells, but to get the wheels from the axles, as they had to change from left to right, was more difficult. One of the legs broke off just above the axle attachment, but this was relatively easy to repair. After gluing landing gear legs and wheels in the right position the model was again “flight standard”.

I have fixed with small drops of thick cyanoacrylate glue the flaps under the wing, giving them a deflection of about 50 degrees.

On some photographs of the S.13 a black panel is visible on the wing in front of the cabin door. I have masked an area on the wing and have painted it with Vallejo metallic black. Unfortunately the paint crept under the tape, which was difficult to remove.

Next I have mounted all antennae under the fuselage. That has to be done first, because now the model can still rest on its back.

I have made the antenna wires as usual from 0.06 mm black lacquered fishing line and have glued them to the brass poles and have carefully tensioned them. The isolators have been modelled with small drops of white paint. On photographs it is also visible that wires are led from the middle of the two antenna wires to the fuselage underside.

The last item to be attached to the lower side of the fuselage was the pitot tube on its support. The original part had been lost in the long process of building this model, so I have made a new one from a piece of brass streamline profile and a small bit of brass rod. After painting the part it has been glued in place.

Now the antenna on the upper side of the fuselage could be placed. First the antenna mast and the antenna support at the fin leading edge have been glued in place, and at the same time the pitot tube on the fin. When dry, I have glued two ends of black lacquered fishing line to the transverse part of the antenna

past and have let them dry. I have tensioned them and glued them to the support on the fin. The excess fishing line has been cut off when dry.

When mounting the rudder and elevator halves the model appeared to be tail heavy, even with all the lead I had put in the nose section. I have just managed to correct that by filling the nose wheel bay completely with lead pellets, leading to some damage to the antenna wires and the elevator. After repair the propellers have been glued in place. I have finished the antenna installation by gluing a small piece of fishing line between the antenna wires and the top side of the fuselage to finish it off. I have mounted small discs of aluminium tape in the landing light recesses and filled them with Kristal Klear. The navigation lights have been given a small drop of red and green paint.

Summary

In general the kit is reasonably easy to build, but alignment of wings and tail planes is not straight forward. The cowlings have a different diameter, which can only be camouflaged by opening up the cooling fins on the cowlings. The propellers included in the kit are the wrong type[3].

It is a pity that the glass parts are of such a bad quality. At the price of this kit it would have been justified to spend a couple of euro's extra on good quality parts. Reproducing the main landing gear correctly would have required to model them in white metal or brass, which of course yields again extra cost.

It would have been welcome to include an indication of the quantity of lead to be placed in the nose in the instructions. When you find out that the model is tail heavy, possibilities to correct that are limited.

The modifications I have made to the model are relatively easy to do. The results is a rather convincing model of the Fokker S.13 aircraft.

Below some pictures of the completed model are shown.


PH-NEI


PH-NE


PH-NEI


PH-NEI


PH-NEI
PH-NEI

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Appendix Fokker S.13 documentation

Modifications & corrections

M = modification, C = correction

Change	*Location/part*	*Modification or correction*
M01	Cabin	Chairs and tables
C01	Cockpit	Cockpit aft bulkhead added.
M02	Cockpit	Rudder pedals
M03	Cockpit	Lower part of mid console
C02	Engine	Propeller blades
C03	Engine	Smaller diameter cowling
M04	Engine	Spark plug ring
C04	Fuselage	Port window moved back 1 mm
C05	Fuselage	Slope of lower forward nose section
M05	Fuselage	Access to glass nose from cockpit.
M06	Fuselage	Door opened
M07	Fuselage	Brass antennae posts
M08	Tail surfaces	Elevator and rudder separated.
C06	Undercarriage	Main landing gear axle moved forward.
M09	Undercarriage	Support struts landing gear legs
M10	Wing	Extended flaps

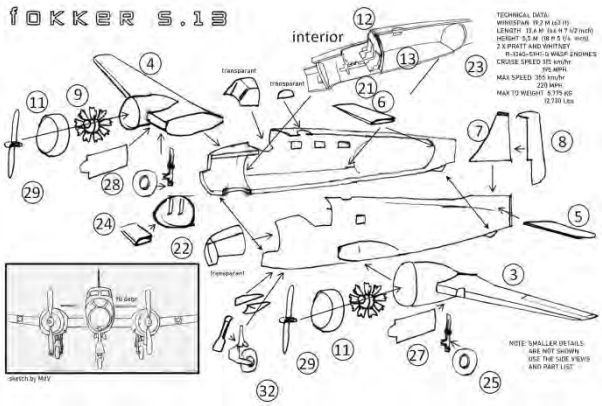
Paint table

HE = Humbrol Enamel, MI = Microscale, VMA = Vallejo Model Air, VMC = Vallejo Model Colour, RA = Revell Aqua

Code	*Colour*	*Where*
A.MIG-047	White	Top of fuselage and vertical tail plane, cockpit window frames
HE02	Green	Navigation light
HE19	Red	Navigation light
HE21	Black	Instrument panel, rudder pedals, engines
HE22	White	Antenna isolators
HE33	Matt black	Anti-glare panel
HE53	Gun metal	Engines (dry brushed), exhausts
HE113	Rust	Exhausts (dry brushed)
HE125	Dark grey	Cabin floor, nose floor, appendices to fuselage
HE128	Mid grey	Bottom of fuselage, wings, horizontal tail plane
HE129	Light grey	Cabin walls and ceiling, wheel wells, undercarriage legs
HE149	Dark green	Cockpit walls and floor, nose walls
HE153	Insignia red	Window frame along the anti-glare panel
MI-4	Clear varnish	Decal sealing, overall finish
RA36178	Tank grey	Tires
VMA71.064	Chrome	Undercarriage retraction struts, shock absorbers
VMA71.065	Steel	Rudder pedals
VMA71.073	Black metallic	Patch on wing in front of cabin door.

Photographs and drawings

If no reference is given, the pictures have been taken from the Internet/Wikipedia.



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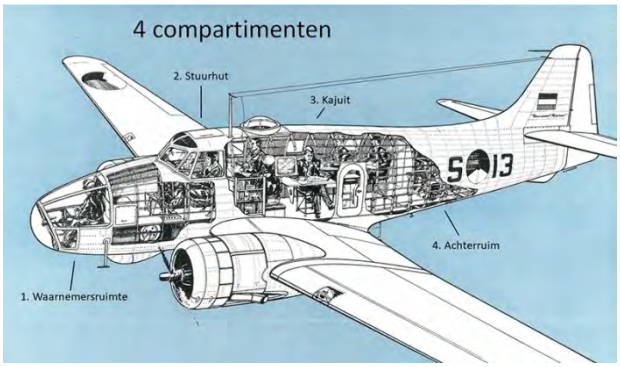

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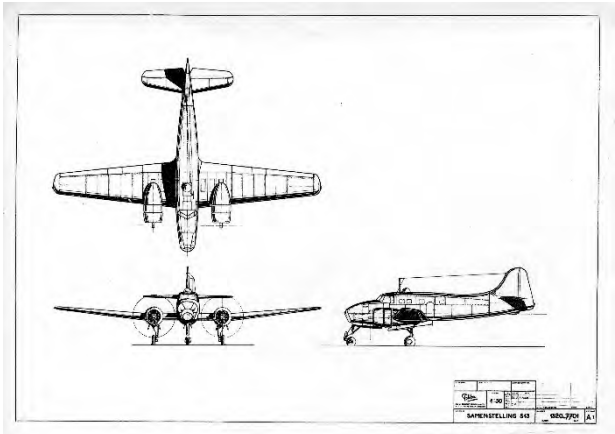

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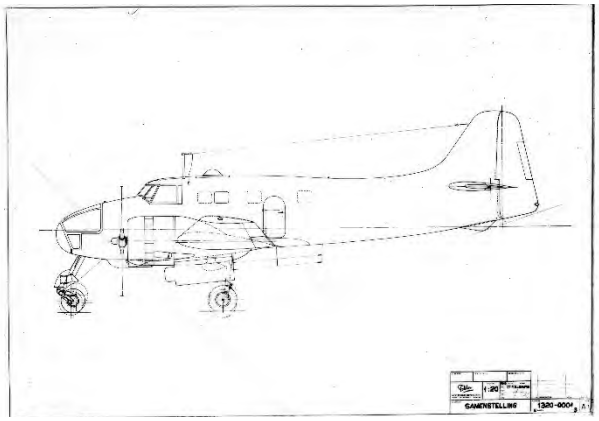

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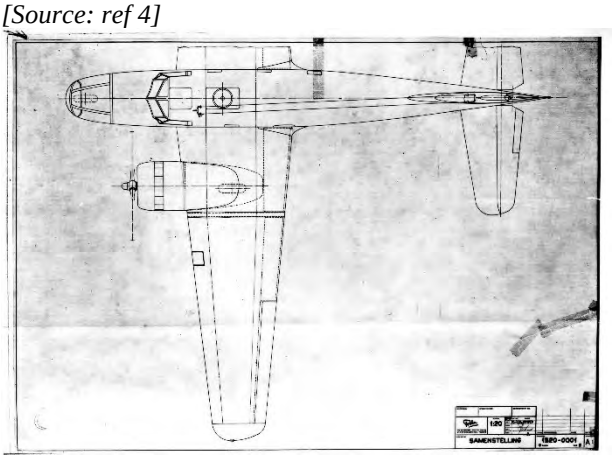

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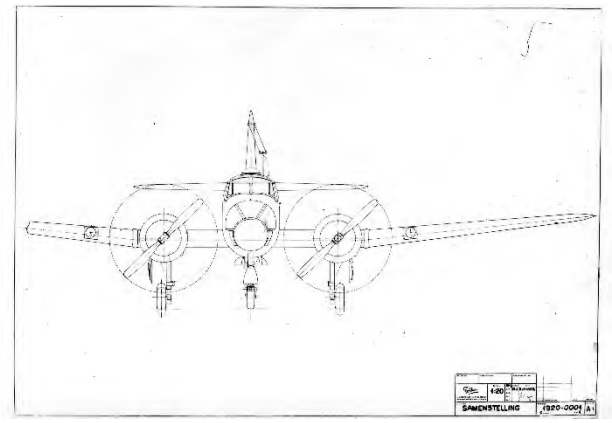

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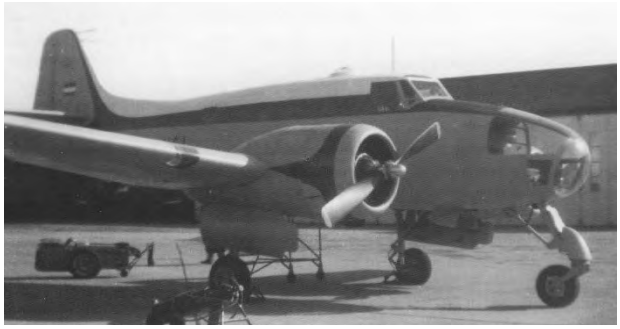

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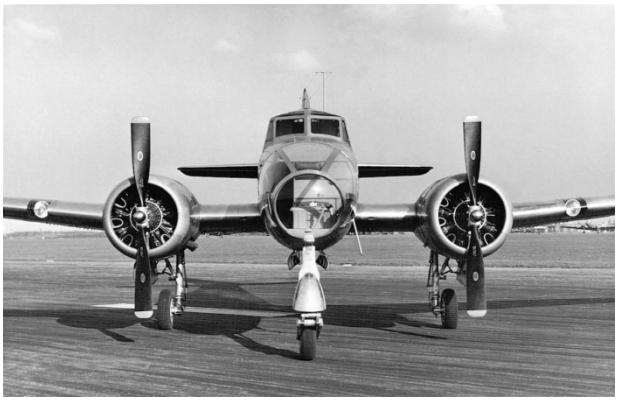

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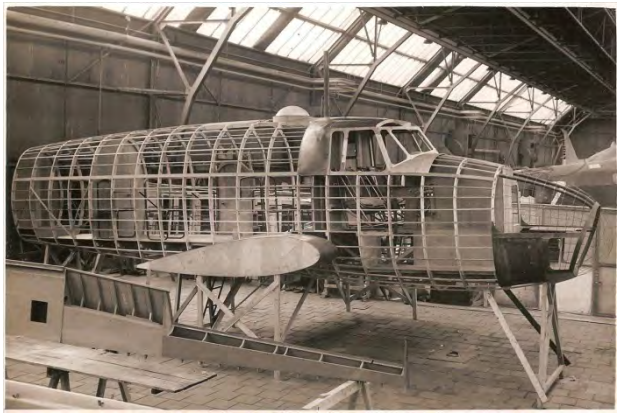

[1] One of the pictures of the landing gear shows an inconsistency. On photographs of the S.13 the wheel doors are always mounted on the outside of the nacelles, while the pictures show an outside and an inside position.

[2] As there was a reasonable demand for correct propellers and cowlings, it was decided to produce a commercially available set to replace the parts in the kit, so I had to spend some time to produce the masters.

[3] There exists an aftermarket set which includes the correct propellers and two cowlings of equal diameter.