World War One Aircraft Models

I have always held a fascination with early military aircraft. After serving for 27 years in the Royal Air Force, I became a Military Aerospace Technical Author. Although, as most modelers, I got involved in the world of construction kits at an early age, I stopped for most of my service career and for some years afterwards.

I started modeling again a few years ago and now enjoy the challenge of building aircraft of World War One. Since posting photographs of my completed models online, several people have asked if I would create a 'build log' for future builds.

I don't consider myself a 'master' of this craft, but hope to be able to pass on what I have learned. As such, here is my build log, which covers the 1:32 scale model of the Albatros D.V by 'Wingnut Wings'.

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CONTENTS

INTRODUCTION

Before I start with the build log, I'd like to show how I've set up my work area. I prefer to keep the work area as clear as I can (I've lost too many small items in the past). I think it's important to have the tools etc you need ready to hand and other, non-essential stuff tucked out of the way until needed. I'm lucky in that I have my 'man cave', which is sorted into a modelling area, airbrush spray booth in addition to my work station PC and gaming PC.

AFTER MARKET

AFTER MARKET

Figure

‘Aviattic’ Ltn Werner Voss (ATL004).

Decals

‘Aviattic’ Albatros D.V (ATT32326),
‘Pheon Models’ Albatros D.V/D.Va Volume 1 (32011),
‘Airscale’ Generic Instruments WW1 (AS32-WW1).

Resin

‘Proper Plane’ Continental 760x100 wheels (RW-002),
‘Proper Plane’ Albatros D.V spinner (RD-014),
‘Proper Plane’ Albatros D.V/D.Va louvres (RD-011),
‘Proper Plane’ Albatros D.V/D.Va inspection hatches (RD-015),
‘Proper Plane’ Morell Anemometer (Tachometer) (RD-008).

Propeller

‘Proper Plane’ Axial wood laminated propeller (WP-001).

Weapons

‘Gaspatch’ Spandau 08/15 extended loading handle (14-32061).

Rigging accessories (as required)

‘GasPatch Elite Accessories’ Turnbuckles and Anchor Points (1/48 scale),
‘Albion Alloy’s’ Micro-tube (Brass or Nickel Silver - various diameters),
‘Steelon’ or ‘Stroft GTM’ Mono-Filament (0.08 and 0.12 mm diameter),
‘ModelKasten’ 1.5 (0.2 mm diameter) and 0.6 (0.13 mm diameter) black line.

Sundries (as required)

Paints (‘Tamiya’ Acrylic, Humbrol Acrylic, ‘Mr. Metal Colour’,
‘AK Interactive’ Primer (Grey AK758, White AK759) and various black top paints, ‘Alclad II’ Lacquers,
‘Hataka’ Orange line lacquers, ‘Mig’ A-Stand Aqua Gloss (A.Mig-2503),
’Mr. Colour’ Levelling Thinners 400, PVA Adhesive (e.g. ’MicroScale’ Micro Krystal Clear),
‘MicroScale’ MicroSol/MicroSet decal solutions,
‘VMS Fleky’ CA adhesive (Slow and Thin), ‘Revell’ Contacta Professional cement,
‘Mr. Surfacer’ 500/1000/1200, ‘PlusModel’ lead wire, ‘Tamiya’ extra thin liquid cement,
‘White Spirits/Odourless Thinners’, ‘Windsor & Newton’ Griffin Alkyd oil paint,
‘EZ’ black stretch line (Heavy or Fine), ‘Ammo-Mig’ Oil brusher (Earth/Dark Brown),
‘502 Abteilung’ Smoke (ABT005) oil paint, ‘VMS’ Metal Prep 4K.

Weathering mediums (as required)

‘Flory Models’ Clay washes or Pigments, ‘AK Interactive’ (Kerosene AK-2039, Oil AK-2019),
‘Tamiya’ Weathering Master (Set C, D and E), ‘502 Abteilung’ Smoke (ABT005).

Display Base

‘Model Scene’ cut meadow - late Summer (F003),
‘Inperspective’ custom made Acrylic base and cover,
Information plaque from ‘TLS Engraving Ltd’.

THE AIRCRAFT

THE AIRCRAFT

References:
'Windsock' WW1 Modelling Special' Serial No.2 - (Ray Rimell).
'Windsock' data file No.3 - Albatros D.V (Ray Rimell).
'Kookabarra' Technical Publications - Albatros Scouts described (Charles Schaedel).
'Squadron/Signal Publications' No.46 - Albatros Fighters in Action (John. F. Connors).
'Profile Publications' No.9 - Albatros D.V (Peter Gray).
'Pheon Models' decal set booklet (32011).
Online Wikipedia.

General:

NOTE: *The following text is based on that from the 'Wingnut Wings' instruction manual.*

Johannisthal based Albatros Flugzeugwerke GmbH were responsible for some of the most graceful and effective fighters of the Great War. Their twin gun, semi-monocoque plywood fuselage Albatros D.1, powered by a 160hp Daimler Mercedes D.III engine, arrived at the front in September 1916 and achieved instant air superiority over its main opposition of Nieuport 11 and DH.2 fighters. Followed immediately by the slightly improved D.II and in December 1916 by the much improved D.III, with its V strutted sesqiplane wing greatly influenced by the successful Nieuport fighters. The D.III was more maneuverable than the D.II and its single spar lower 'half' wing afforded greater visibility for the pilot but was also the cause of numerous, frequently fatal, structural failures. Despite much effort this problem was never fully resolved. Nevertheless the D.III remained in production well into late 1917.

Even as the excellent D.III went into production plans were underway for its successor, the Albatros D.V. Retaining the wings of the D.III but with aileron controls routed through the upper wing and with a redesigned fuselage completely oval in section, the D.V was arguably the best looking of all Albatros designs. Unfortunately the D.V inherited the lower wing structural failure problem of the D.III and turned out to not be any real improvement over it performance wise either. Despite this, the Albatros D.V and the D.Va (with aileron controls cables reverted to D.III configuration), were manufactured in greater numbers than any previous German fighter of the war (only surpassed later by the Fokker D.VII, of which Albatros manufactured the great majority).

The empty weight of the Albatros D.V increased from when production commenced in April 1917 due to strengthening and before production of the D.Va started in August 1917. While Johannisthal built D.Va remained the same throughout production, those ordered from Ostdeutsche Albatros Werke (OAW) in September-October 1917 were heavier empty, almost 100kg heavier than the initial D.V. When the Albatros D.V started appearing at the front in May 1917 it was effectively outclassed by the improved SE.5a, Sopwith Camel and SPAD fighters being fielded by the allies at the time. Even after the introduction of the superb Fokker D.VII the Albatros D.V and D.Va could still be found equipping front line Jastas, although most had been relegated to training or home defense duties by the time of the Armistice.

Albatros D.V/D.Va fuselages were usually clear varnished resulting in a yellowish plywood colour. The fabric covered wings and tailplane were finished in either of 2 ways, painted (with medium grey green & mauve or dark grey green and lilac on top with light blue below) or covered in pre-printed lozenge camouflage fabric, some of which was almost certainly overpainted with a transparent (brown?) glaze to tone down the vibrant colours. Metal fittings were painted in pale grey-green, as was much of the engine bay. Exterior metal panels and fittings were usually painted in this same pale grey-green colour. There was considerable freedom for German units to apply their own colour schemes to their aircraft with some using drab camouflage paints, usually applied with a 'loofah' type sponge, while others preferred highly visible colours to aid identification at a distance. Additionally individual pilot's markings were also applied in a fashion dictated by the unit commander.

General specifications:

Length - 24’ 1” (7.33m)
Wingspan - 29’ 8” (9.05m)
Height - 8’ 10” (2.7m)
Empty weight - 1,515 lbs (687 kg)
Maximum weight - 2.066 lbs (937 kg)
Engine - Daimler-Mercedes D.III/IIIa or IIIaü (160/180 or 200hp)

Performance:

Maximum speed - 116 mph (186 kph)
Service ceiling - 18,700’ (5,700 m)
Range - (350 km)

Weapons:

Two 7.92mm LMG 08/15 ‘Spandau’ machine guns.

Aircraft colour scheme:

The aircraft modelled is the Albatros D.V, Serial No: D.2006/17 as flown by Ltn.der.Reserve Bernhard Kilian of the Royal ‘Saxon’ Jasta 21b during September 1917.

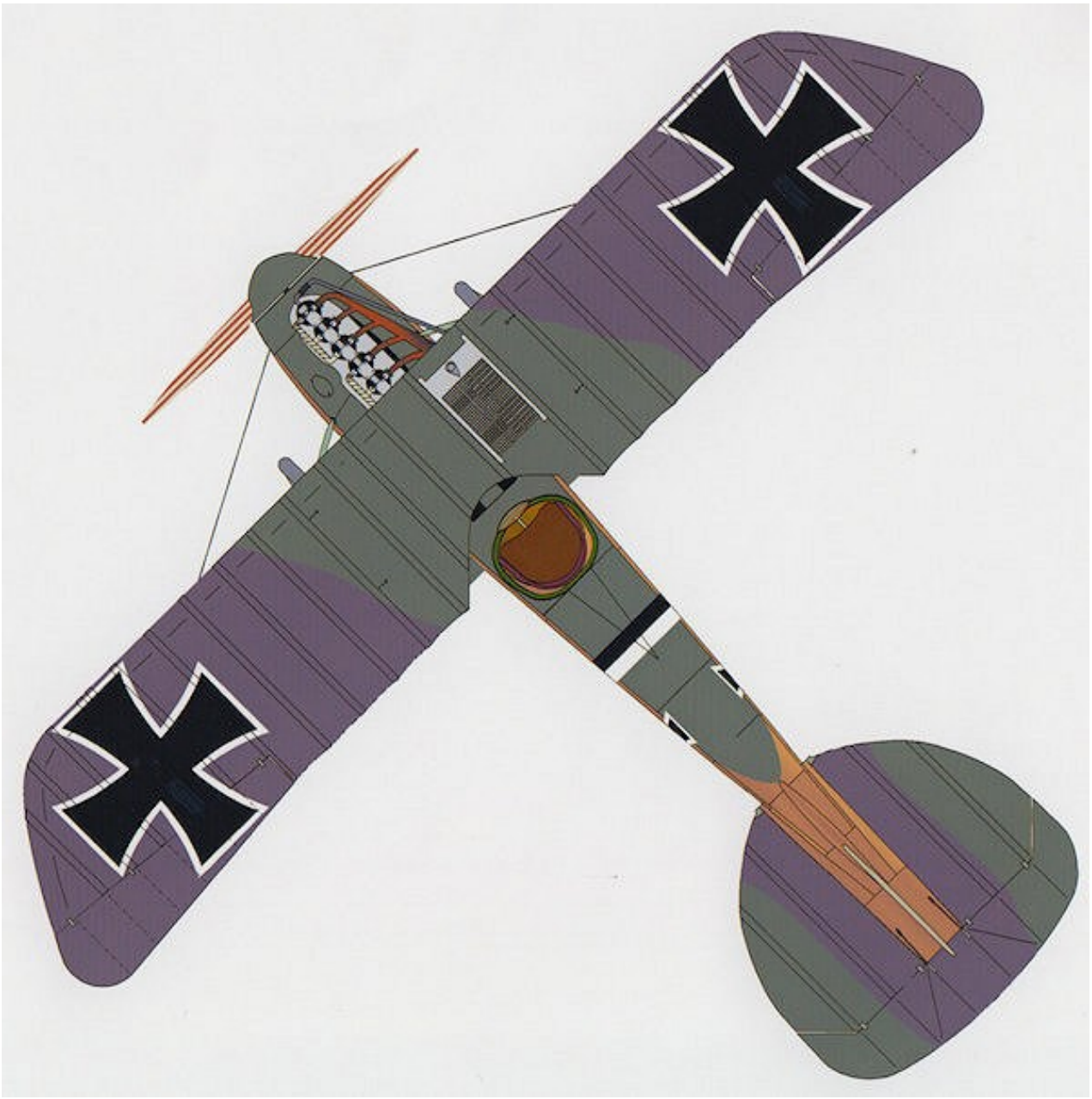
Royal Saxon Jagdstaffel (Jasta) 21 was formed on the 25th of October 1916, with personnel taken from FA 40 and Kagohl 7. The Jasta was mobilized on the 6th of December 1916 and operated as part of the Luftstreitkräfte, the air arm of the Imperial German Army during World War I. The Jasta began operations working on the 3rd Armee front.
The Jasta suffered its first casualty on the 10th of February 1917, but scored its first victory on the 24th of March 1917 and would continue in service until the end of hostilities. Two members of the Jasta would eventually become General's in the Luftwaffe.
As one of the original German fighter squadrons, the unit would score 148 verified aerial victories, that included the destruction of at least thirty enemy observation balloons.
The Jasta flew both the Albatros and Pfalz fighters and would begin to switch to the Fokker D.VII in the early summer of 1918. By July 1918, it had joined Jagdgruppe 5 where it remained until the Armistice.

NOTE: *The following illustrations and text are based on that supplied in the ‘Pheon Models’ decal set 32011 and ‘Windsock’ WW1 Modelling Special’ Serial No.2 by (Ray Rimell).*

The reference for his markings is a single ‘line-up’ photograph in the ‘Over the Front’ publication Volume 14, Number 3.
This particular aircraft was built in the second production batch in May 1917. The black and white fuselage bands were applied to all aircraft in the Jasta. The number 4 is purely guesswork, as it cannot be seen in the photograph and it could easily have been number 1 to 12, as it seems all of the aircraft this Jasta had individual numbers on the fuselage. Likewise the colours of the nose-thumbing character are based on conjecture. Black is probable although it could also have been red, as both shades look similar in the black and white photographs taken at that time. The colour illustrations for this model are based on how this aircraft probably looked. It’s possible it may have been repainted later to align with other aircraft in the Jasta, including that of Jastaführer von Schleich, who’s aircraft had the Bavarian lion insignia.

Albatros D.V 2006/17
Ltn Kilian
Jasta 21
Source: via GVW

(c) R N Pearson 1999/2017

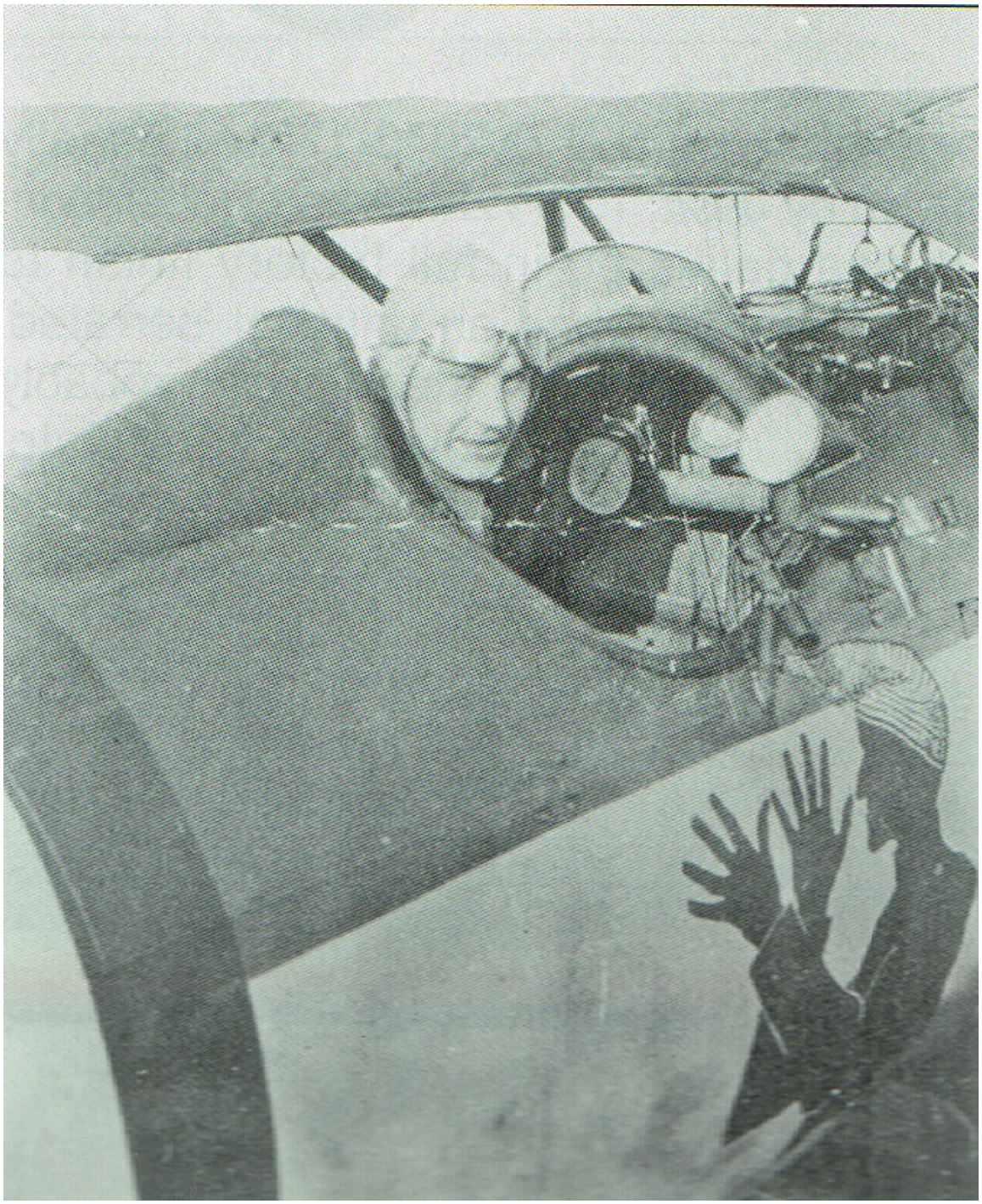


THE PILOT

THE PILOT

References:
'Windsock' WW1 Modelling Special' Serial No.2 - (Ray Rimell).
'Pheon Models' decal set booklet (32011).
Online Wikipedia.

Little information is recorded for Ltn.der.Reserve Bernhard Kilian, other than he was born in Neideburg in 1894. He served with Jasta 21 until his death in a flying accident at Pauvres airfield in December 1917. He was not reported to have been awarded any combat victories.



PART 1
MODEL
DESCRIPTION

PART 1 - MODEL DESCRIPTION

('Wingnut Wings' - Kit No:32009)

This kit is from 'Wingnut Wings' and was built using the kit instructions with the three correction pages issued on the 'Wingnut Wings' web site.

Normally here I would write a basic description of the model, noting any points of interest or flaws. However, there is a good review of a similar kit online. Paste the link below into your internet browser to view the review.

https://www.hyperscale.com/2010/reviews/kits/wingnutwings32015reviewbg_1.htm

When researching a particular aircraft, it's quite often found that some changes to the model may be required. These can be modifications to enhance the model to better represent the particular aircraft. Also some squadron aircraft had 'in-the-field' modifications made to improve the aircrafts operational capability. The following are changes that I found that were needed to enhance and reflect the particular aircraft being modelled.

Decals:

The decals provided with the kit does not include the markings required for the aircraft being modelled. Therefore the decals used for the pilot's markings are from the 'Pheon Models' Albatros D.V/D.Va Volume 1 (32011) set.

Propeller:

The kit supplies four types of propeller, one of which is the 'Axial' propeller. I chose not to use the kit supplied propeller and to replace it with a 'Proper Plane' Axial wood laminated propeller (WP-001).

Weapons:

The kit supplied machine guns were replaced with the 'Gaspatch' LMG 08/15 'Spandau' machine guns.

Other:

Other model details will be addressed as and if required, using 'After Market' parts if necessary.

PART 2
WOOD EFFECTS
(General)

PART 2 - WOOD EFFECTS (General)

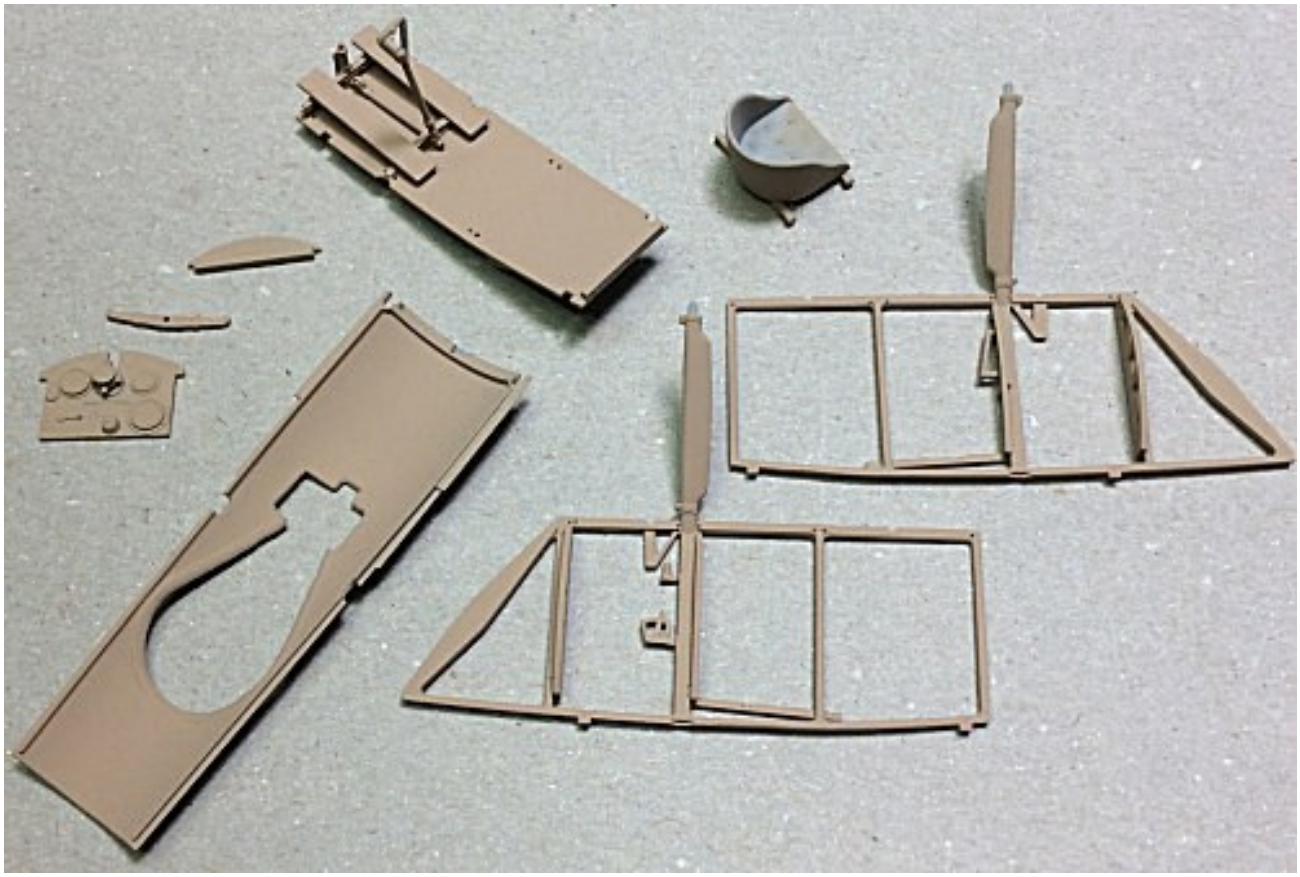
A basic technique:

Parts of the model that are supposed to be made of wood can prove to be a challenge to replicate a wood finish to the part. Some after market companies produce accurate wood decals, which can be used to cover larger areas, such as cockpit decking and fuselage panels. However, decals can't easily be used to create realistic wood finish to smaller items or parts that don't lend themselves to having decals applied. To do this requires brush painting, using such as oil paints, which can be enhanced with various washes or filters.

The first thing to do is to ensure the model parts are cleaned, normally with warm water with washing up fluid and something like an old tooth brush. Once cleaned and thoroughly dried, the primer coat can be applied. I use 'AK Interactive' Grey (AK758) or White (AK759) primer.
Once the primer is dry, you can start applying the wood effect to the applicable cockpit items, such the cockpit framework, decking, seat supports, rudder bar, instrument panel and of course, the wing struts. With practice, this method can also be used on fuselage panels and propellers.

To start, apply a suitable base colour. For most painting I use an airbrush and only resort to brush painting when dealing with small items, when I add a few drops of 'Mr. Colour' Levelling Thinner', which aids brush painting. For most wood effect, I airbrush 'Tamiya' Wooden Deck Tan (XF78) or Dark Yellow (XF60), suitably thinned with 'Tamiya' Thinners (X20A). Allow this base coat to fully dry (if you can't smell the paint, then it's dry).

Example of base coat using 'Tamiya' Wooden Deck Tan (XF78).



Wood effect - Method 1:

DecoArt Crafters Acrylic' paints:

For the next step I use 'DecoArt Crafters Acrylic' paints, either Burnt Umber or Burnt Sienna. These are similar to standard acrylic oil paints, but are water based instead of oil based. This paint is not as thick as oil based paint and is more creamy, so can be brushed and controlled more easily. Also, as it is water based, it's easy to clean your brushes, and if really necessary, can be thinned slightly with water.
In addition, the paints dry as quickly as normal acrylic paints, avoiding the disadvantage of using true oil paints, which can take days to fully dry.

Place a small amount of the oil paint onto a non-absorbent surface and using a suitable oil paint brush (I use a slightly curved brush), wipe a small amount of the paint onto the brush. For larger areas, such as decking or panels etc I use a small piece of fine sponge to apply the paint.

Apply the paint to the applicable item, using light strokes and in the required direction. Apply the paint along struts and across instrument panels and other smaller items. This gives variation to the wood effect and for the wing struts, is correct for the direction of the wood grain. If you apply too much paint, just brush or sponge it off immediately before it dries. Although the paint is water based, don't try to thin any applied paint with water as it will lift the paint, which builds up into clumps. If required, a second light coat can be applied. Always wait until a first coat has fully dried before applying a second coat, otherwise the first coat will 'drag' and lift from the surface.

Once painting is complete, clean the brush in water.

Below is an example of the Burnt Sienna oil paint applied to a cockpit side frame.

Wood effect - Method 2:

Windsor & Newton' Griffin (Alkyd) oil paints:

NOTE: *The wood effects can also be achieved using 'Windsor & Newton' Griffin (Alkyd) paints.*

Mask off the area as required.

NOTE: *When airbrushing 'Tamiya' acrylic paints, I thin the paints using 'Mr. Colour' Self-Levelling Thinners (400), which is commonly referred to as 'unicorn tears' or just 'MLT'.*

Airbrush the areas with 'Tamiya' Dark Yellow (XF60) or similar.

Brush a covering coat of the 'Windsor & Newton' Griffin Alkyd paint , such as Burnt Sienna**,** over the areas.

Leave the oil paint to settle for about ten minutes.

Decant a small amount of White Spirits or 'AMMO Mig' enamel odourless thinners (A.Mig-2019), into a suitable dish.

Dip a broad flat oil brush into the thinners then wipe the brush on a sheet of kitchen roll, which should not deposit any fibres in the oil paint.

Brush the oil paint over the area, in the desired direction of the wood grain, wiping the brush on the sheet of kitchen roll to remove residual oil paint.

Repeat dipping and wiping the brush in the thinners and brushing the oil paint until the desired density and finish is achieved.

Leave the oil paint to fully dry, which normally takes approximately 24 hours.

If desired and once the oil paint is fully dry, airbrush a semi-gloss clear coat, such as 'Alclad' Satin (ALC312-60) or similar, with a few drops of 'Tamiya' Clear Orange (X26) to give a varnished look to the finish.

Surface finish:

Once the oil paint layers have dried, the final top coats can be applied to give the final effect of varnished wood.

'Tamiya' have 'Clear' coloured Acrylic paints, which are intended to be mixed with either Flat Clear (XF86), Semi-Gloss Clear (X35) or Clear (X22), to give the required finish but with a tint of the added 'Clear' colour. I use the Clear Yellow (X24) or Clear Orange (X26) to add a varnished tint to the clear coat.
If using the 'Tamiya' Clear I add 'Mr. Colour' Levelling Thinners, which does improve airbrushing and avoids pooling. Otherwise I use 'Alclad' Light Sheen (ALC-311).

Although it's a lacquer, I've found that it will accept 'Tamiya' 'Clear' coloured Acrylics without any separation, which can happen with other paints. The 'Alclad' lacquers dry fast and provide a good sealing layer over the painted surfaces. When using 'Alclad' sealing coats, the golden rule is to allow the various painted surfaces to dry fully before applying 'Alclad' lacquers.

In the following example, I added a few drops of Clear Yellow (X24) into the 'Alclad' Light Sheen (ALC -311) and thoroughly mixed it. Only add small amounts to the 'Alclad' in order to control the amount of tint you desire. I increased my airbrush air pressure to around 20 psi to airbrush the sealing coats over the various cockpit items. The first coat usually dries to a more matte finish, which I assume is due to being sprayed onto the oil paint, rather than onto straight acrylic paint. Once this first coat has dried, I airbrushed several coats of just 'Alclad' Light Sheen (ALC -311), which added not only more sealing coats, but more importantly gave the desired semi-gloss 'varnished' finish I was after.

Below is an **example** of the applied ‘Alclad’ lacquer/X24 mix on the propeller.

NOTE: *Once you are confident using this method of replicating wood finishes, you can vary both the colour of the acrylic base coat and tinting of the sealing coat, to replicate other types of wood used in aircraft construction.*

Once the lacquer coats are thoroughly dry, any detail painting, decals or final weathering can be applied to the parts, as required, prior to fitting them to the model.

PART 3
WEATHERING
(General)

PART 3 - WEATHERING (General)

There are many different types of weathering mediums available now to modellers of aircraft, ships, vehicles and figures, in model of any type. These weathering mediums can be washes based on enamel, clay or ink. Weather pastels, applied by sponge' as well as oil paints of various sorts are also plentiful. Some modellers have even used water colour paints, and pencils. The following are the basic weathering mediums I tend to use on most of my models.

Flory Model clay washes:
The washes I tend to use are the 'Flory Models' Clay Wash 'Grime' and 'Dark Dirt', which come in various shades and consist of a suspended and very fine clay pigment. They are brushed over the surface to be weathered and dry in around 30 minutes. When dry, use either a piece of good, absorbent kitchen roll or a soft brush to remove as much of the clay wash as you need to achieve the desired effect. Once dampened, the dried clay is re-activated and the clay wash can be removed or worked as required.

First I seal the surface with airbrushed 'Alclad' Light Sheen (ALC-311), which dries quickly. A gloss coat tends to stop the clay wash 'gripping' the surface when it is applied and it can run off or just puddle. A matte coat can cause the clay wash to 'grip' too much, making it difficult to remove or even to wash it off completely.

NOTE 1: The more glossy the applied sealing coat is, the more the chance there is that the applied 'Flory' clay wash will not spread fully, but rather form puddles or beads of wash. If this happens, add a few drops of ordinary kitchen washing up liquid to the clay wash. This will break the surface tension of the wash, allowing it spread fully.

NOTE 2: Always decant the amount of clay wash you need, rather than dipping the brush directly into the wash bottle. Dipping into the wash bottle can transfer contaminants from the brush into the wash, will can cause the wash to become thick and unusable.

NOTE 3: When a sealing coat is applied over areas treated with clay wash weathering, the intensity of the applied wash tends to darken. This should be considered when removing the clay wash, otherwise the final effect may appear too dark.

To apply the clay wash is just a matter of brushing all over the surface to be weathered. It doesn't matter really how much is applied as it can be left on for any period, as it is easily removed without any effect on the surface underneath. If you don't achieve your desired effect, you can wash it all off and start again. I use a soft brush, which has been very slightly dampened, to brush off the clay wash. For smearing effects, a very slightly damp brush or absorbent paper should be used, but even then I dab them onto a dry piece of the paper, until it's almost dry. Any wetter and you'll find that you are removing too much of the clay wash. If that happens you would have to re-apply the wash and start again. That said, if you're not happy with the final effect, you can easily remove the clay wash by brushing with a wet brush or even airbrush water over the surface. Dry off the surfaces washed and then re-apply the clay wash and try again until you are satisfied. The technique is to 'damp' brush or wipe over the surface to re-activate the clay wash and at the same time, to smear it over areas that had no clay wash. It'll dry more or less straight away. Then I'll very lightly brush and/or use a piece of damp absorbent paper to remove as much as I want until I get the desired effect. If I remove too much I just reapply clay wash to that area and repeat the removal procedure. Once finished, just run the brush under a tap to rinse out any residual clay pigments. Finally I usually seal the surface with airbrushed 'Alclad' Light Sheen (ALC-311), which will seal in the applied clay wash.

NOTE 4: 'Flory' current range of washes are: Dark Dirt, Grime, Black, Light (white), Mud, Sand, Rust and Concrete. All of these washes can be used as-is or mixed to create many colour shades for weathering.

Chipping effects:

To give the effect of chipped and weathered paint/varnish to metal engine cowls and forward fuselage panels etc, chipping fluids can be used. To achieve this effect, first prime the areas with a suitable primer then airbrush the metallic finish desired. Once dry, a chipping fluid, such as 'AK Interactive' Medium Chipping fluid or 'Vallejo' chipping fluid is airbrushed over the painted areas. An alternative is to use a cheap hair spray. This forms a barrier which will allow the top coat to be chipped off. Finally the required top coat colour is applied.
Once fully dry, moisten the top coat with water, which softens the paint. Then with a cut down (stiff) brush and wood cocktail stick, gently teased off the top coat paint. Take care when doing this as 'too much chipping' can't really be covered up. In that event you would have wet the top coat and remove it all with an old toothbrush or similar and then when dry, re-spray the top coat and try again. Once the desired effect was achieved, I sealed the surfaces with an airbrushed coat of 'Alclad' Light Sheen (ALC-311).

'Tamiya' Weathering Master sets: Each of these 'Tamiya' produced weathering sets contain three 'tablets' of different colours and an applicator, which has a brush on one end and a sponge on the other. The tablets have a wax look and feel and can be applied onto painted surfaces to reproduce various finishes. It's best to use these as the final surface treatment, as being a 'Wax', any treated surfaces can't be painted or sealed.

Pigments: Pigments, such as those produced by 'Flory Models' or 'Humbrol' are effectively very fine 'dusts', which can be applied to a model to re-create dust, dirt, stains etc. They can be applied by dry brushing or mixed with other mediums to create paintable solutions.

Washes: Washes can be applied to either enhance panel lines etc or to add a 'filter' of colour onto a painted surface. They can be purchased ready made from various manufacturers or can be 'home made' using such as oil paints with a suitable thinning agent. I tend to use 'AK Interactive' products.

Water colour pencils:

Water colour pencils can be used to add weathering detail. The colour s applied to the model part then brushed gently with a brush, slightly dampened with water. This dilutes the pencil marking, allowing it to be faded as desired. 'AK Interactive' produce these 'weathering' pencils, which are marketed specifically for the modeller, although other artist water colour pencils can be used, such as 'Derwent' Inktense 24 ink pencils.

Oil paint:

A technique used more frequently now is oil paint ‘dot and drag’. Basically an oil paint of the desired colour is placed onto a piece of cardboard, which over a hour or so, soaks out the oil in the paint, leaving a drier pigment. The pigment is ‘dotted’ onto the painted surface where it is required then dragged with a brush previously wetted with ‘Tamiya’ X20 enamel thinners then wiped virtually dry.

Softly ‘flick’ the brush to drag the pigment in the direction required, which will blend it in a thin layer.

The amount of pigment left showing depends on the effect you require. Always keep the brush wiped clean to avoid a build up of pigment and remoisten and wipe dry often. The more paint you drag, the less pigment is left showing. Blending different coloured pigments can create stains from smoke/ gun blast, rain marks/runs, dirt/dust and oil/fuel stains.

A good quality oil paint and thinners are essential to produce a good finish.

Some oil paints can be too ‘gritty’ once leached of the oil, so I use ‘Abteilung 502’ oil paints thinned with ‘Tamiya’ Enamel thinners (X20).

PART 4
DECALS
(General)

PART 4 - DECALS

'Pheon' decals (standard type decals:

NOTE: *The following is **applicable only** for decals on a **painted surface**. If decals are to be placed on top of previously applied decals, the decal setting solutions may 'eat' into the previous decals. In this case a sealing coat of either 'Alclad' Aqua Gloss (ALC-600), Tamiya' Clear (X22) or similar should be airbrushed over the first decals, to provide a barrier against the setting solutions.*

Ensure the painted surface is smooth and free from any surface imperfections.

Airbrush a clear gloss sealing coat, such as 'Alclad' Aqua Gloss (ALC-600), 'Tamiya' Clear (X22) or similar to provide a smooth surface.

NOTE: *'MicroSet' solution softens the decal to allow it to conform to the painted surface. Do not attempt to move the decal too much or it may tear.*

Wet the area using a light coat of 'MicroScale' **MicroSet** solution.

Apply the decal after it has soaked in 'warm' water enough to start to loosen the decals from its carrier backing.

Carefully move the decal into the correct position.

Carefully press out any residual water from the decal by either pressing with a tissue or by gently rolling over the decal with a cotton bud.

NOTE: *'MicroSol' solution will soften the decal to allow it to conform fully to the painted surface. The solution usually causes the decal to wrinkle, but this is normal as the decal semi-dissolves to the surface. Once the solution has been applied, never try to disturb the decal as it will tear. Leave the solution for several hours to do its job, after which the decal will return to a smooth surface, but conformed fully to the painted surface.*

Wet the decal surface with a light coat of 'MicroScale' **MicroSol** solution.

Leave the solution for several hours to fully dry and set the decal.

Once fully dry and set, airbrush a sealing coat over the decal, dependant of your desired finish. I tend to use either 'Alclad' Light Sheen (ALC-311) lacquer or 'Tamiya' Semi Gloss (X35).

Once the decal is correctly positioned, use a flat brush to brush the water out from under the decal, working from the centre of the decal out towards the edges. I then use a dry cotton bud in the same manner. Finally, wearing cotton gloves, I apply slight pressure and slide my fingers across the decal to finally push the decal onto the surface.

Once the decals have been applied I airbrush a sealing coat of either 'Alclad' Aqua Gloss (ALC-600), 'Tamiya' Clear (X22) or similar over areas of decals where more decals are to be applied.

Once the decals have been applied and are dry I airbrush a final sealing coat of 'Alclad' Light Sheen (ALC -311) or 'Tamiya' Semi-Matt (XF35) over the decals.

To 'knock back' the sheen for applying weathering effects (refer to Part 3 of this build log), for example 'Flory' clay washes or oil paint, I airbrush a sealing coat 'Alclad' Light Sheen (ALC-311) mixed with Flat (ALC-314) at a 3 to 2 ratio.

'Aviattic' decals:

The 'Aviattic' decals are different in both production techniques and application to those of the more traditional decal manufacturers. Traditional decals are normally created using processes such as silk screen printing and are pre-shaped for the particular model markings. When placed in warm water they will detach from the backing sheet and can then be slid onto the model surface and when they are correctly positioned, wiped with a semi-dry brush or cotton bud etc, to expel any water from under the decal. Once fully dry, decal softeners, such as 'MicroSol' and/or 'MicroSet' can be applied, if necessary, to 'weld' the decal to the model surface. Finally a sealing coat of acrylic or lacquer gloss, semi-matt or flat is applied over the decal, to seal and protect the seal and protect the decal.

The ‘Aviattic’ decals are laser printed onto a very fine carrier film and although this film is thin, the decals are remarkably resilient and somewhat ‘stretchy’ when being applied. This allows them to be more easily moved and positioned before being finally applied. Also with most other decals, I’ve used softeners to help the decals conform to surface irregularities and contours, which is something I’ve found is not really required for ’Aviattic’ decals, due to the nature of the carrier film. In addition, unless the decals has been printed pre-shaped (‘cookie cut’), the decals will need to be cut out from the sheet, so care is required to cut the decals accurately to avoid leaving gaps, especially at the edges, where the white base colour will show. That said, minor gaps may be able to be covered with weathering. For more information, refer to the ‘Aviattic’ instruction sheet supplied with the decals.
Aviattic’ decals are laser printed onto either ‘clear’ or ‘white’ backing, the ‘clear’ being dependent on the base coat you apply and the finished effect you desire. The decals are supplied with very clear instructions on their application, including when to add pre-shading to the base coat, where desired, before you apply the decals.

Application:

First airbrush the parts to have decals applied with a primer coat of such as ’AK Interactive’ White (AK759) or Grey (AK758) or similar light colour for ‘clear’ backed decals or ’AK Interactive’ Grey (AK758) for ‘white’ backed decals. Appropriate base colours can be applied over the primer coat under ‘clear’ backed decal.

NOTE: *‘Silvering’ is caused by air being trapped in the rough surface of the paint, such as on a matte (flat) finish, which after the decal is applied and dries, causes silver sheen patches showing in the decal (’silvering’).*

Once dry, check the surfaces for any imperfections, such as trapped dust or raised areas of paint, which will cause ‘silvering’ under the decals. Any surface imperfections found should be carefully sanded or polished out.

Airbrush at least two light sealing coats of a clear coat such as ’Alclad’ Aqua Gloss (ALC-600) or similar over the painted surface to form a gloss surface for applying the decals.

NOTE: *The surface must be pre-wet with like warm water with. Care needs to be taken when you slide the decal from the backing sheet and onto the model surface, as the thin decal can fold over on itself.*

Soak each decal in warm water for approximately 20 seconds.

Wet the surface of the model where the decal is to be applied.

Carefully slide the decal onto the wetted surface. Make sure the decal does not fold over on itself.

Align the decal to the shape of the model part.

Using a broad, soft brush, brush the decal from the centre outwards to remove any water from under the decal.

Adhere the decal to the model part surface by either pressure rolling over the decal with cotton buds or, as I do, by wearing lint free cotton gloves and rubbing the decal with your fingers.

Check to make sure the decal is in full contact with the surface of the model part and that there are no areas exhibiting ’silvering’ (trapped air under the decal). If so, gently prick through the decal and apply water then press out the water to adhere the decal back onto the model part.

Also check that there are no lifted decal edges around the model part.

Allow the decal to fully set, preferably overnight. Where decals have been applied to large areas, gentle heating using a hair dryer can accelerate the decal setting time.

Where decals cover location holes or other openings, prick or cut through the decal into the hole or opening then apply ‘Tamiya’ X20A thinners, which will soften and adhere the decal into the hole or opening. Using X20A can also conform decals around curves edges etc.

Protect and seal the decals by airbrushing a sealing coat over the decals. If more decals are to be added onto the applied decals a gloss sealing coat should be used. Otherwise a sealing coat of the desired finish can be applied, which should also be done once all of the required decals have been applied.

PART 5
RESIN (General)

PART 5- RESIN (General)

This model contains aftermarket resin parts, as opposed to the normal plastic used. The reason for creating resin kits is that in years gone by, resin kits were able to produce much finer detail on kit parts than the plastic kit equivalents. Even today, there are many producers of resin kits and particularly after market replacement parts. However, plastic kit manufacturers have come a long way now and kits, such as those from 'Wingnut Wings' and 'Copper State' are equal to, if not better than resin kits. Manufacturers of resin kits these days tend to make kits to order or have 'limited' runs, although aftermarket parts are usually readily available. Working with resin does present different challenges to the modeller, especially if it's the first time of building a resin kit.
The properties of resin differ radically to those of plastic kits. Below I have listed what I have found to be the primary differences for resin /parts kits from plastic (styrene) parts/kits:

When resin kits are cast in their moulds, a release agent is applied to enable the cast resin parts to be more easily removed, which is similar to plastic kit moulding. This release agent can leave a film on the surface of the kit parts, which, if not removed, can prevent paint or adhesives from adhering to the surfaces. The easiest way to remove this film is to carefully and fully wash all of the model parts in warm soapy water, using an old, soft tooth brush, then rinse all of the parts thoroughly and leave to dry. Alternatively wipe the parts with isopropyl alcohol (e.g. 'Tamiya' X20A thinners).

Cast or 3D printed resin, by its nature, is very brittle and can be damaged or broken easily, especially when handling small parts. This is particularly evident when separating the individual items from the resin cast. The best way to remove item is to cut them away with a razor saw, then clean them up afterwards.

Once removed from the resin cast, parts will normally have 'resin flash' around or amongst parts, especially small items. This is easily removed with a sharp scalpel blade. Heavier residue can be scraped, filed or sanded away.

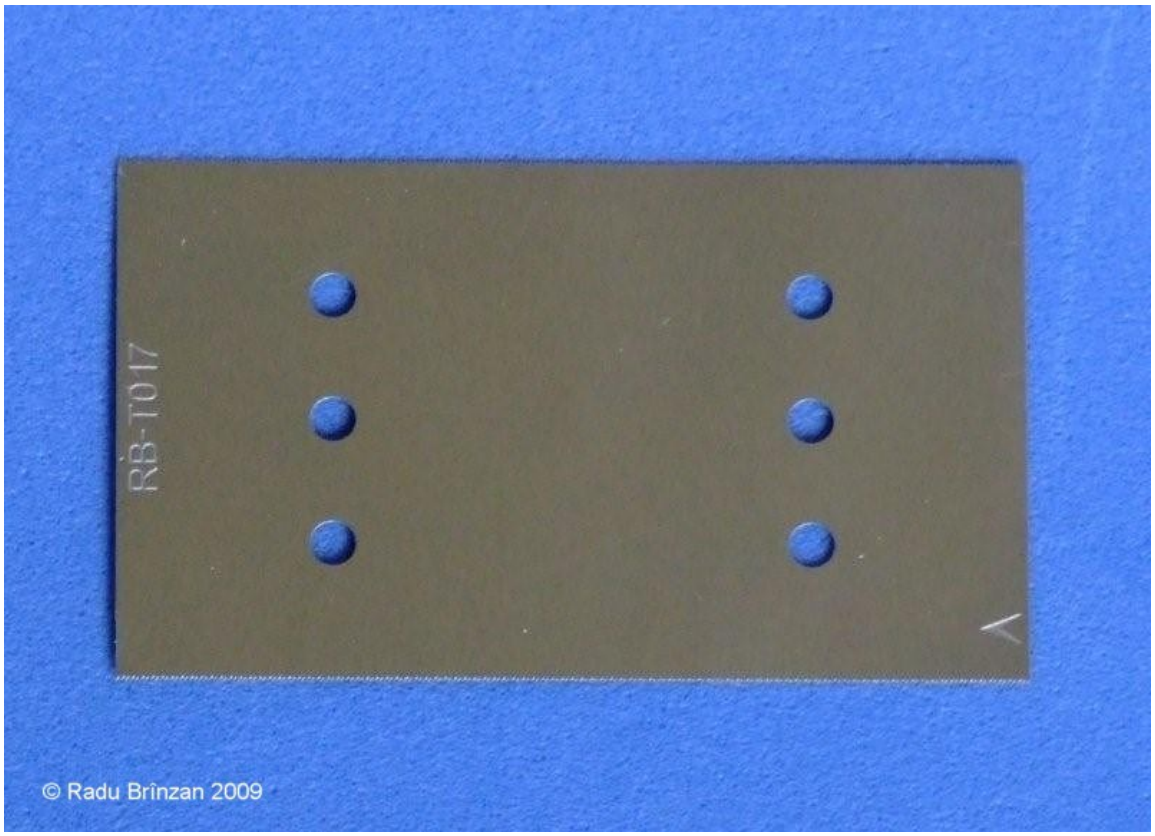
Plastic kits are assembled using solvent adhesives, which melt the surface where it is applied and 'weld' the joint together. Resin however will not react to this type of adhesive and can really only be glued using CA adhesive. This adhesive reacts to moisture in the air and on the surface to be joined. As most people know, it will also bond skin to whatever it touches, if the skin has CA adhesive on it. Obviously extreme care needs to be exercised when assembling resin kits using CA adhesive.

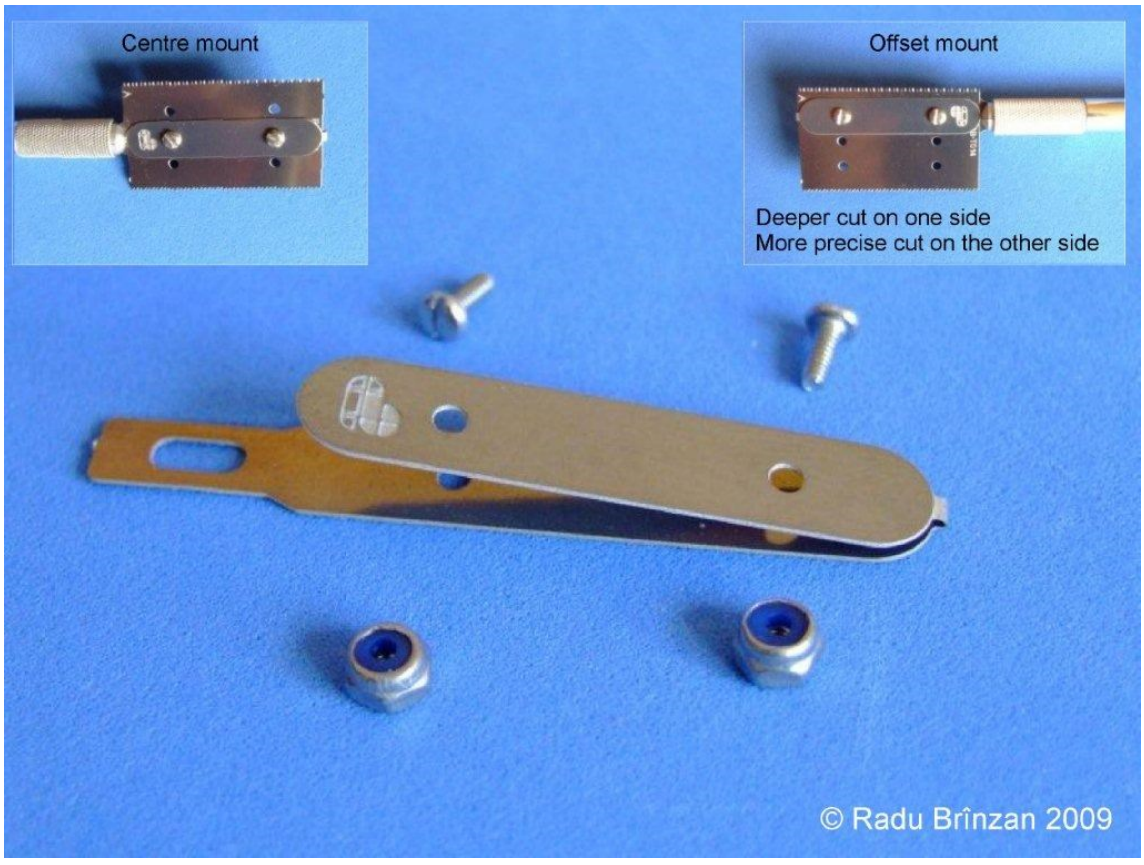
Cutting, sanding and drilling resin will create swarf and more importantly, resin dust. The dust in particular is dangerous, especially if inhaled. Therefore always vacuum the working area, and yourself, regularly. If you have a face mask or filtered respirator and find you can wear it whilst working, then do so. Resin can easily be drilled or scraped, but remember how brittle resin is when it is being handled.

It is not unusual to find imperfections in resin cast parts, such as surface blemishes, small 'blow' holes or ragged edges. This can be common on some resin kits. These imperfections can be rectified by sanding/ polishing and/or filling with modelling putty, then sanding/polishing.

Generally CA adhesive is supplied as 'instant bond' adhesive, but there are some manufacturers, such as 'VMS Fleky', that supply CA adhesive as standard, thin, slow and specific resin adhesive. Whichever adhesive is used you must ensure parts are correctly positioned and aligned before applying the adhesive. Trying to separate mis-aligned parts once the adhesive sets will prove very difficult and may result in irreparable damage to the parts.

NOTE: *To separate resin parts from the thin moulding backing sheet, use sharp scissors or a scalpel blade. To separate larger parts from the moulding base block, use a fine modellers saw. The saw I use has a double sided and fine 'drag' saw blade and with its holder is available from 'RB Productions'.*


RB-T017
© Radu Brînzan 2009


Centre mount
Offset mount
Deeper cut on one side
More precise cut on the other side
© Radu Brînzan 2009

PART 6
RIGGING
(General)

PART 6 - RIGGING (General)

References:
'Windsock' WW1 Modelling Special' Serial No.2 - (Ray Rimell).
'Windsock' data file No.3 - Albatros D.V (Ray Rimell).
'Kookabarra' Technical Publications - Albatros Scouts described (Charles Schaedel).
'Profile Publications' No.9 - Albatros D.V (Peter Gray).
'Squadron/Signal Publications' No.46 - Albatros Fighters in Action (John. F. Connors).

General:

It's important to check where the various rigging attachment points are for this aircraft. Most models have these located on the model, but it's best to carry out research in reference books or research on line before drilling. Some modellers use micro drills manufactured for drilling printed circuit boards etc and these drill bits sometimes have identifying coloured collars fitted to the drill shanks. I have found that care needs to be taken when using these drills, as they are sharp and instead of easing their way into the plastic of the model, they tend to bite in and effectively 'cork screw' their way in, which causes jamming and lots of broken drills. This is not only expensive but can leave broken drill bits in the model, which are virtually impossible to extract. An alternative is to use High Speed Steel (HSS) drill bits, which are cheaper and have less 'bite' when in use, although again, they are very fragile and can very easily be broken.
Some modellers drill through the wings etc of the model and rig by pulling through the rigging line/EZ thread etc, gluing in position and then rubbing down the exposed line 'tag' and then re-painting that area. I prefer to drill only part way into the plastic and attach the applicable rigging fixture with CA adhesive.
With your research complete the rigging can be planned for the model in the subsequent Parts of this build log.
For the primary rigging, such as flying and landing wires and cross bracing wires, I used 'Steelon' or 'Stroft GTM' mono-filament (fishing line) of 0.12 mm diameter and for flight controls and 0.08 mm for flight control cables. These are effectively transparent but do give a look of steel, without the need of painting or colouring with a gel pen. The turnbuckles used are either sintered metal or resin and can be obtained from such as 'Gaspatch Models' or 'Proper Plane'.
A good reference for this type of aircraft are the photographs of James Fahey, which can be found at the following web site URL.

https://jamesfahey.smugmug.com/Albatros-DV-Kissenberth-

NOTE: *The rigging following illustrations were adapted from those in the instruction manual for the 'Wingnut Wings' Albatross D.V model (Kit No.32009).*

Internal rigging:

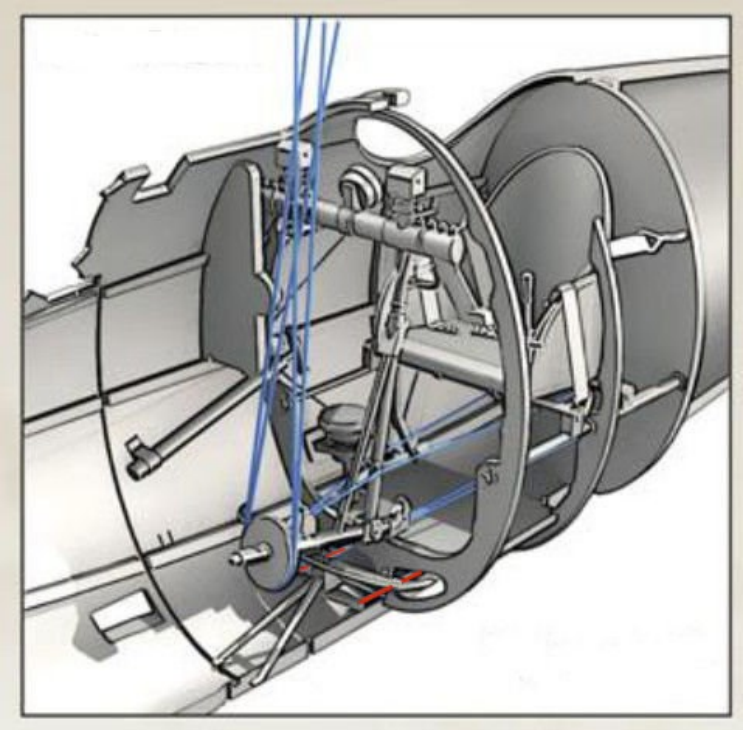
Fuselage bracing wires:

Due to the internal wood frame construction of the fuselage and its plywood covering, there was no need for internal bracing wires to be fitted, as found on fuselages of wood frame but linen covered aircraft.

Rudder control cables:

The rudder control cables were attached to each end of a control horn, located under the pilots rudder bar. The two cables were routed rearwards under the floor of the cockpit and through the fuselage to the rudder control horn, which was fitted on the rudder post within the fuselage rear. As the pilot moved the rudder bar either left or right, the control horn would pull the cables in the required direction, causing the aircraft to turn left or right (yaw).

Turnbuckles were most likely fitted in these cables at the rear of the fuselage, access being gained through inspection hatches on the fuselage rear surface.

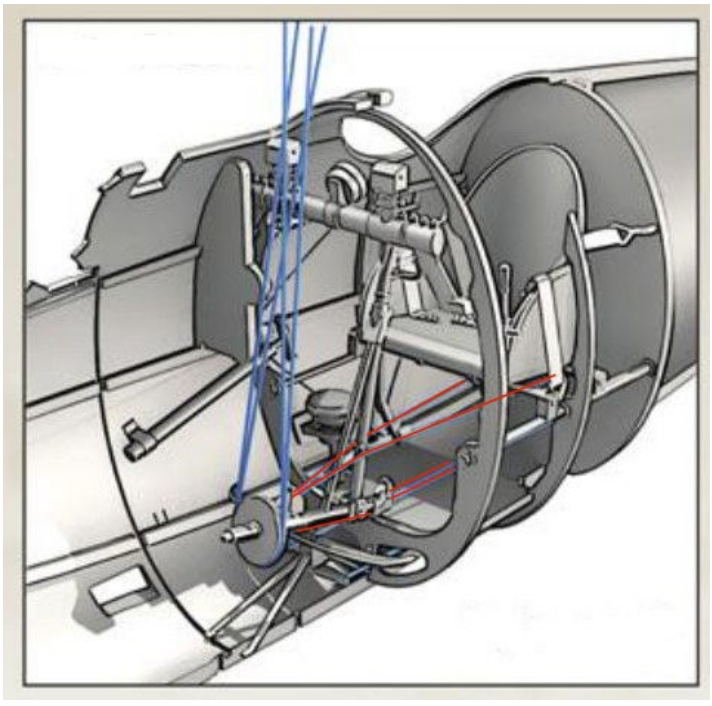


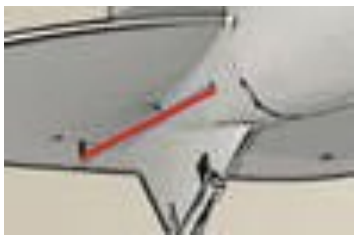
Elevator control cables:

Elevator control cables were attached to the upper and lower ends of the elevator control horn on the elevator leading edge torsion bar. These cables passed though openings in the rear of the fuselage and were routed forwards and over guides fitted to the pilots control column. The cables were then routed forwards and around a control pulley located on the front of the control column torsion bar, then rearwards through a second pulley to the lower control horns on the elevator.

As the pilot pushed the control column forwards or pulled the control column rearwards, the cables would move the elevator either up or down, causing the aircraft to either climb or dive (pitch).

Turnbuckles were most likely fitted in these cables at the rear of the fuselage, access being gained through inspection hatches on the fuselage rear surface.



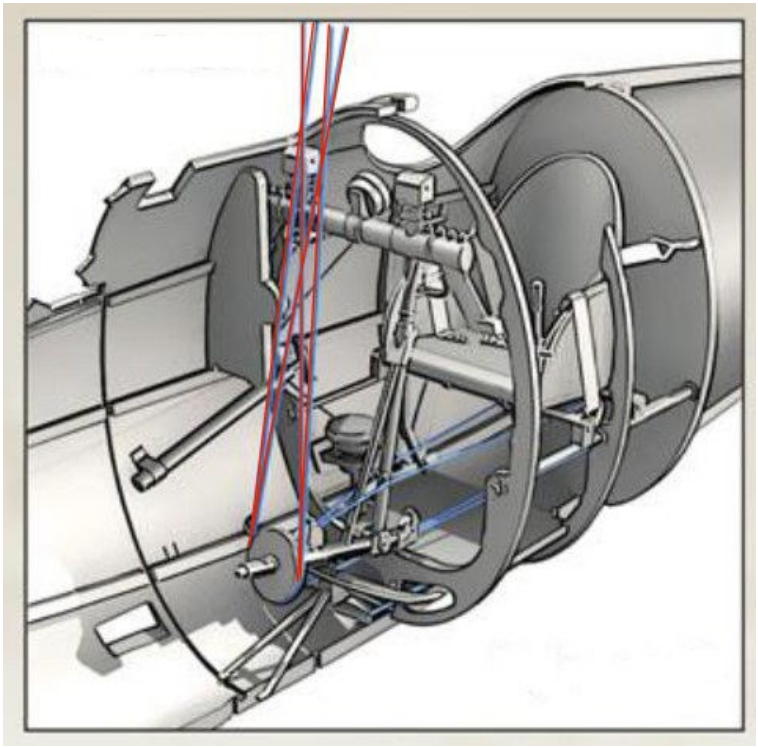


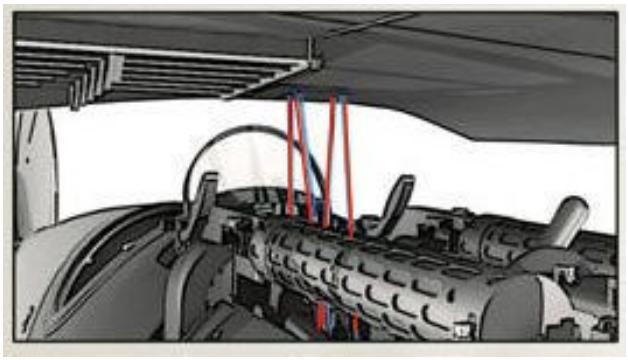
Aileron control cables:

The aileron control cables were routed around a pulley located at the front end of the torsion bar of the pilots control column. These cables were routed vertically out of the cockpit and into the underside of the upper wing centre section. The cables were then routed internally outboard, via pulleys to the bell-crank operating levers of the ailerons.

As the pilot moved the control column either left or right, the cables would move one aileron up and the other down, causing the aircraft to back left or right (roll).

A removable inspection hatch, allowed access to the control cables in the upper wing centre section, where turnbuckles may have been fitted.





External rigging:

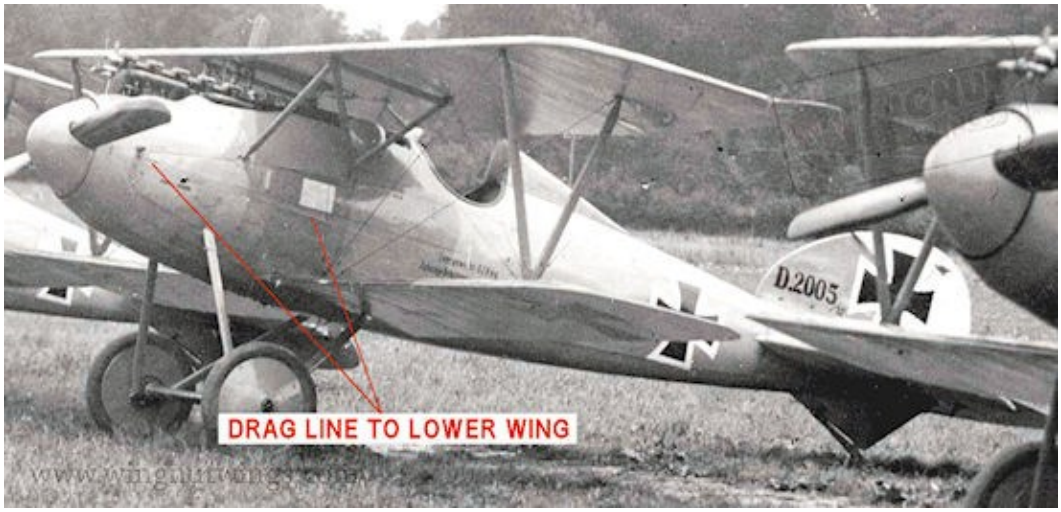
Drag wires:

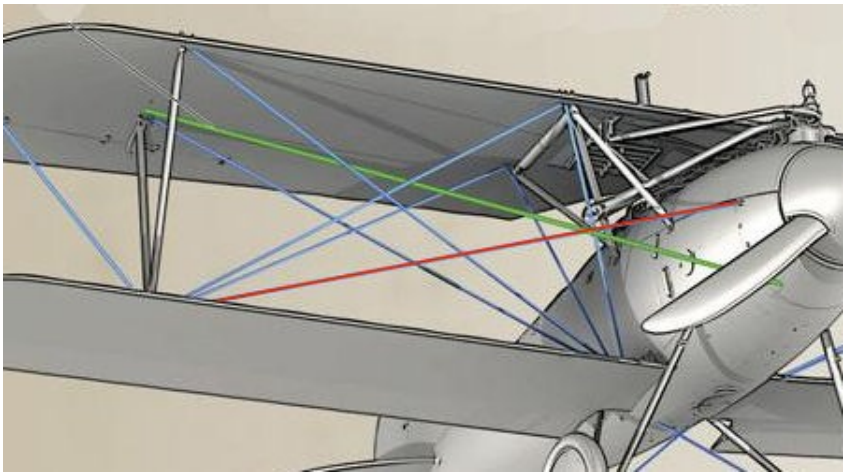
NOTE: *Upper and lower drag wires could be fitted on both sides of the aircraft, dependent on the production serial numbers of the aircraft. There is not good photograph of this particular aircraft to ascertain if one or two drag wires were fitted. Therefore I chose to add only the lower drag wire, as shown on the photograph of Albatros D.V, serial Number 2005/17.*

A drag wire was fitted to both sides of the aircraft. A wire was attached the upper side of the fuselage front and was routed across to the top surface of the lower wing at the bottom of the 'V' interplane strut.

Turnbuckles were fitted at the fuselage end of these wires.

The following photograph is of Serial Number 2005/17 (same production batch as this model 2006/17)





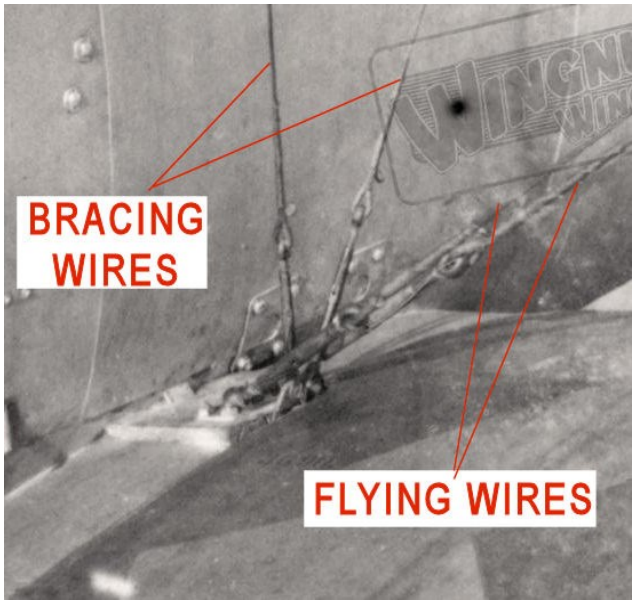
Bracing wires:

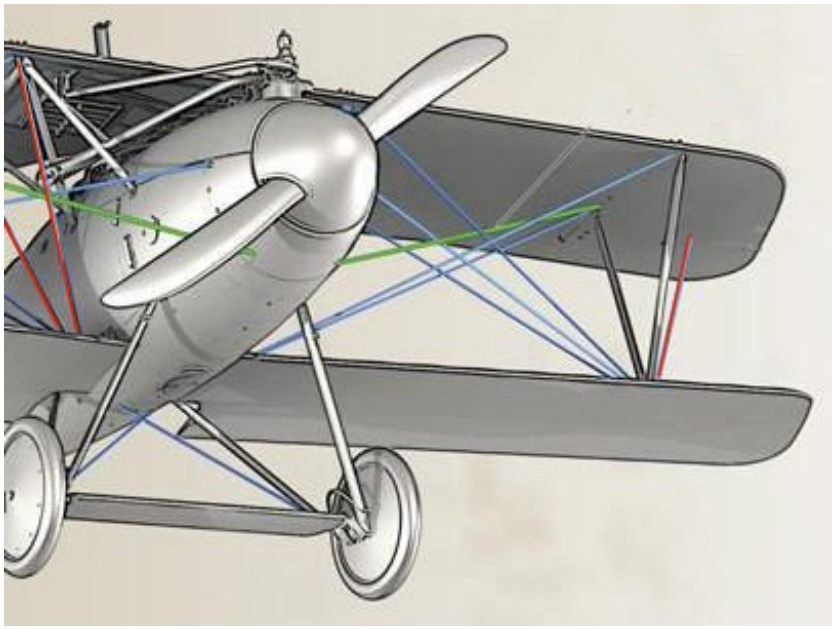
Two bracing wires were fitted on both sides of the aircraft between the lower and upper wings.

A single wire was attached between the top surface of the lower wing root and the underside of the upper wing, outboard from the top of the rear fuselage cabane strut. A second wire was fitted between the lower wing root and the underside of the upper wing, outboard from the top of the fuselage forward cabane strut.

Turnbuckles were fitted at the lower ends of the bracing wires.

Also, a single bracing wire was fitted to both sides of the aircraft, between the outboard bottom of the interplane 'V' strut and the underside trailing edge of the upper wing, outboard from the second aileron hinge in from the wing tip.

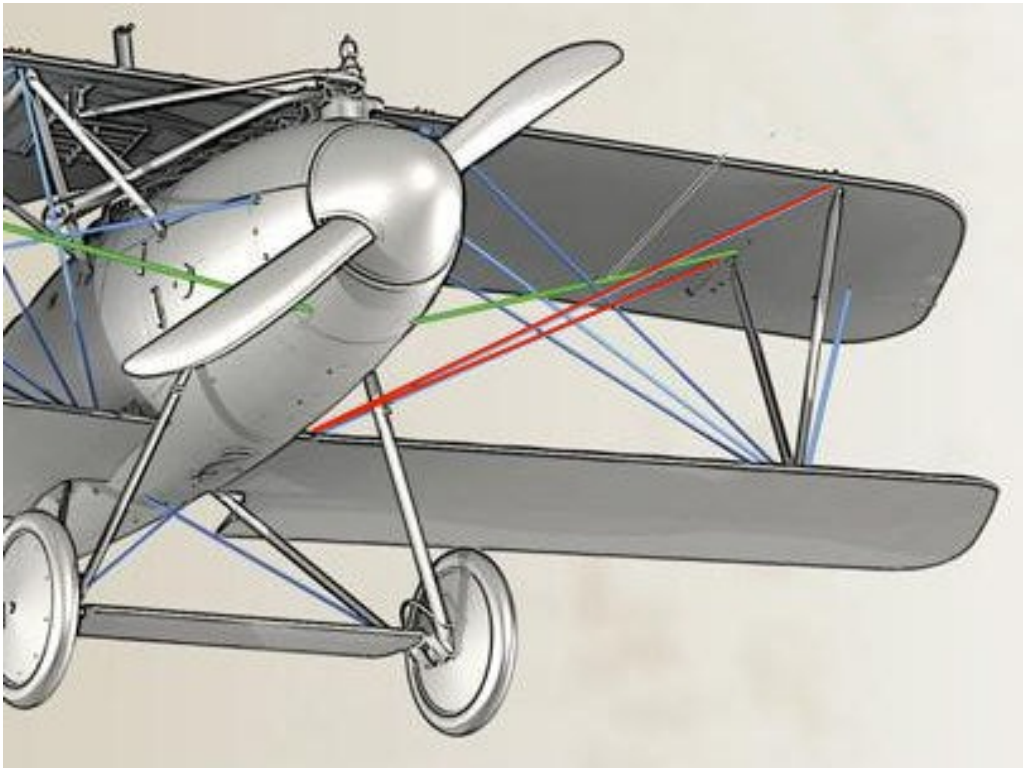




Flying wires:

Flying wires were fitted on both sides of the aircraft. One wire was fitted between the lower wing root and the underside of the upper wing, inboard from the top of the rear ‘V’ interplane strut. The second wire was fitted similarly, but to the underside of the upper wing, inboard from the top of the forward ‘V’ interplane strut.

Turnbuckles were fitted at the lower ends of the flying wires.

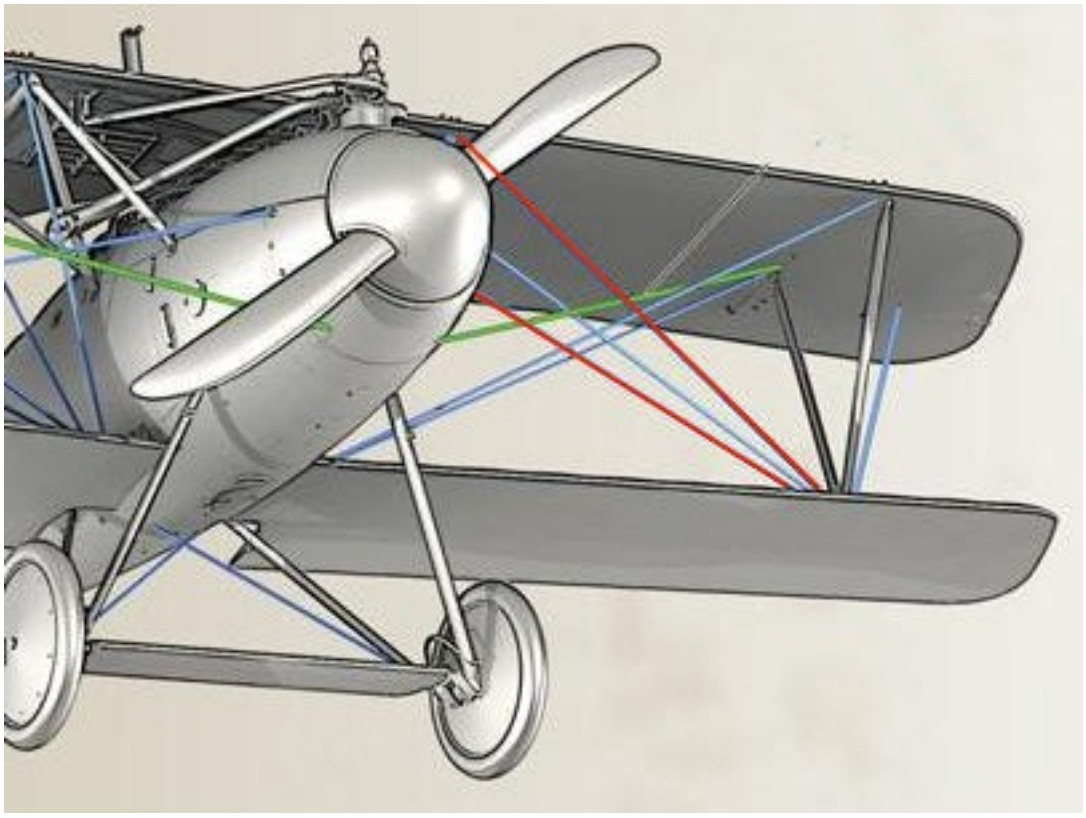


Landing wires:

Two landing wires were fitted to both sides of the aircraft.

The wires were fitted between the inboard bottom of the ‘V’ interplane struts and were routed diagonally up to the underside of the upper wing. Outboard from the top of the fuselage front and rear cabane struts.

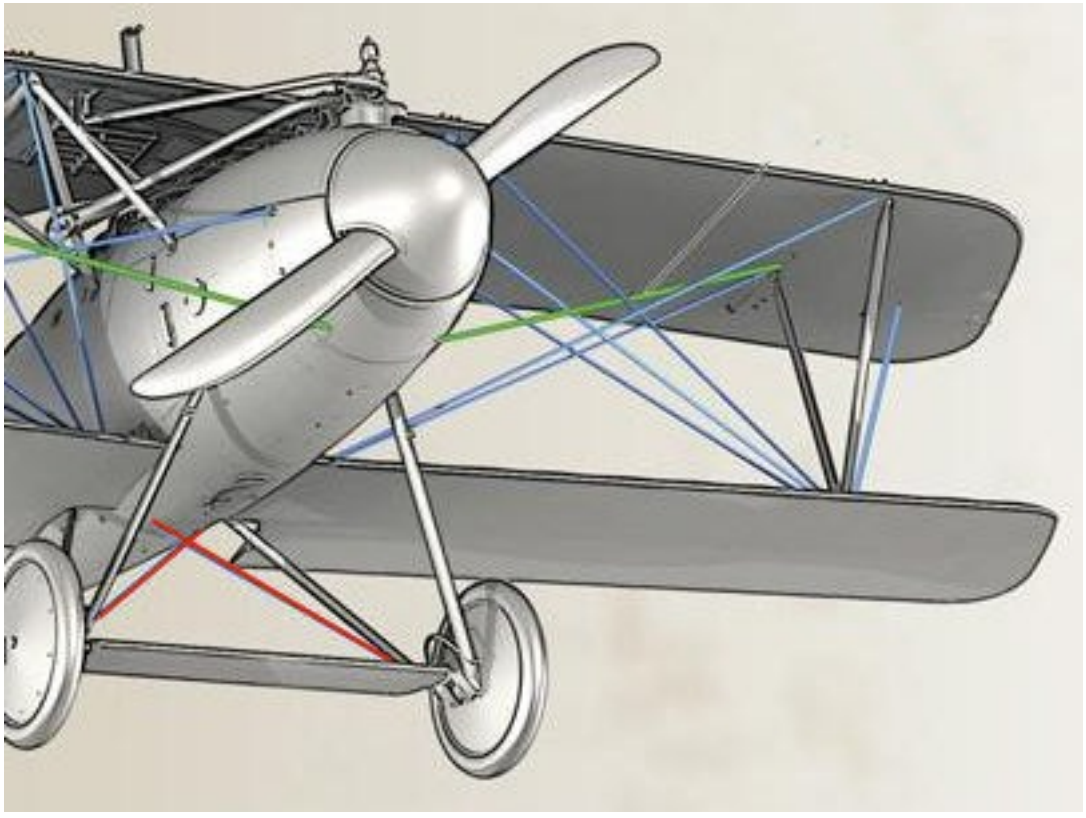
Turnbuckles were fitted at the lower ends of the landing wires.



Landing gear bracing wires:

Crossed bracing wires were fitted between the underside of the fuselage, inboard from the op of the landing gear rear struts. The wires were routed diagonally down and forward to the outer ends of the axle fairing of the landing gear.

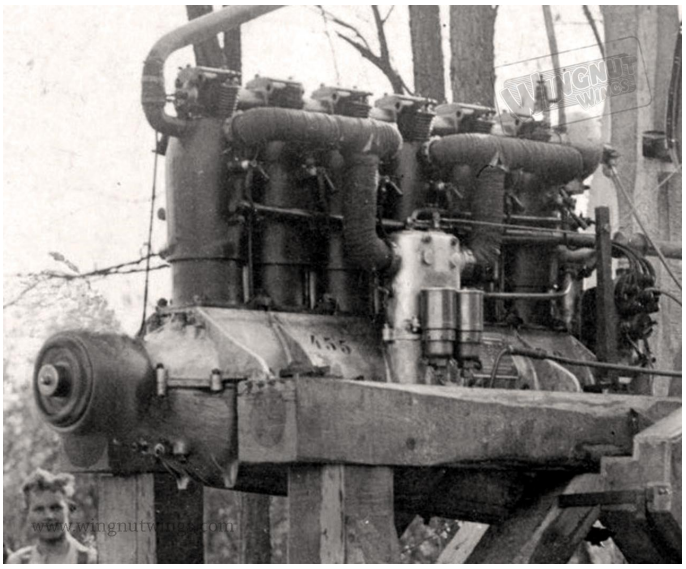
Turnbuckles were fitted at the lower ends of the flying wires.

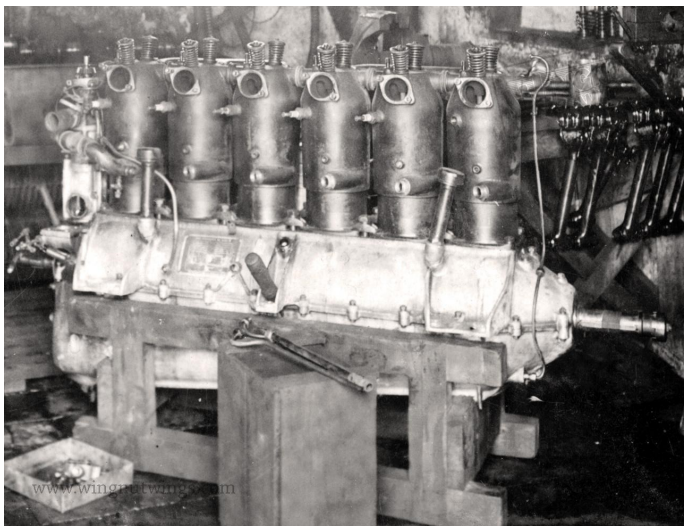


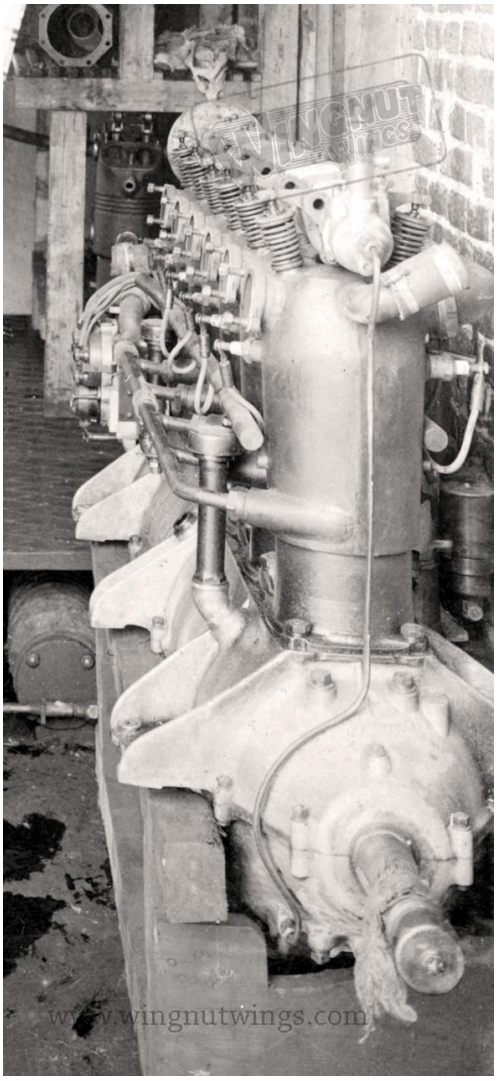
PART 7
ENGINE

PART 7 - ENGINE

The Albatros D.V aircraft was powered by either the Daimler-Mercedes D.III inline, six cylinder water cooled engine (160hp) or the 180hp D.IIIa or 200hp D.IIIaü engine. This particular Albatros D.V was powered by the Daimler-Mercedes D.III (160hp) engine.







Preparation:

NOTE: *The engine being built for this particular aircraft is the Daimler-Mercedes D.III (160hp) engine. Refer to page 7 of the kit instruction manual.*

Remove the required parts from the kit supplied parts gate E.

Remove any residual gate tags from the edges of all removed parts.

Assembly:

Following the assembly sequence on Page 7, assemble:

Propeller shaft E13 into the sump E10.

Crank case E14 onto sump E10.

Cylinder halves E2 and E16 together.

Cylinder assembly E2/E16 onto crankcase E14.

Front cover E7 onto crankcase/sump E10/E14.

Camshaft E6 onto cylinder assembly E2/E16.

Magneto drive housing E9 onto rear of sump/camshaft E10/E6.

Drive plate E8 onto rear of magneton drive housing E9.

Air valve E5 onto front of camshaft E6.

Fuel cylinders E22 onto carburetor housing E4.

Modifications:

Spark plugs with ignition leads:

Using the pre-molded spark plug holes in both sides of the cylinders as guides, drill holes of 0.5 mm diameter into each cylinder.

Cut twelve lengths of 0.5 mm diameter Nickel-Silver tube, such as 'Albion Alloy's' NST05 or similar.

Cut twelve lengths of 'ModelKasten' 1.5 (0.2 mm diameter) black line.

Using thin CA adhesive, secure a line into one end of each tube.

Ignition leads support tubes:

Use the dimples pre-molded in the ignition lead support tubesE11/E15 as guides and drill holes of 0.3 mm diameter through the tubes.

Camshaft oil pipe:

NOTE: *An oil supply pipe was located between the air valve on the front of the camshaft and the top of the engine case at the bottom of the forward engine cylinder.*

Drill a hole of 0.5 mm diameter into the right side of the air valve and also in the top, centre of the engine crankcase.

Cut and bend a length of 0.4 mm diameter Brass tube, such as 'Albion Alloy's' MBT04 or similar, to fit the tube into the two holes.

Painting:

Airbrush the engine assembly and all other parts with a grey primer, such as 'AK Interactive' or similar.

Airbrush the parts as follows:

'Alclad' Duraluminium (ALC-102) - Engine sump and crankcase

Mask off the engine sump and crankcase E2/E16

'Tamiya' Rubber Black (XF85) - Inlet manifolds E4, magnetos E19 and E20, coolant pipe E21, cylinders on engine assembly E2/E16

Remove masking from engine sump and crankcase E2/E16

'Alclad' Steel (ALC-112) - Oil filler pipes E17 and E18, coolant pipe F13

'Alclad' Copper (ALC-110) - Lower coolant pipe E3

Detail painting:

Brush paint the following details:

'Mr. Colour' Stainless Steel (213) - Air valve E5, magneto drive housing E9, rear plate E8, carburetor housing on E4, decompression lever E12, camshaft tappet covers, levers and valve springs

'Mr. Colour' Brass (219) - Ends of coolant pipe F13 at engine cylinder ends, lower cylinder on magnetos E19/E20, fuel cylinders E22, top of air valve E5, top discs on carburetor housing E4,

'Mr. Colour' Copper (215) - Bands around fuel cylinders E22

'Tamiya' Gun Metal (X10) - Camshaft bar E6

'Tamiya' Hull Red (XF9) - faces of magnetos E19/E20, handle on decompression lever E12, gaskets on the exhaust openings on the engine cylinders, ignition lead support tubes E11/E15.

Assembly (continued):

Cement the carburetor housing and inlet manifolds assembly E4/E22 into its locating recesses in the engine sump and cylinders.

Cement the coolant pipe E21 into its locating hole in the top, left of the magneto drive housing E9 and top of the carburetor housing E4.

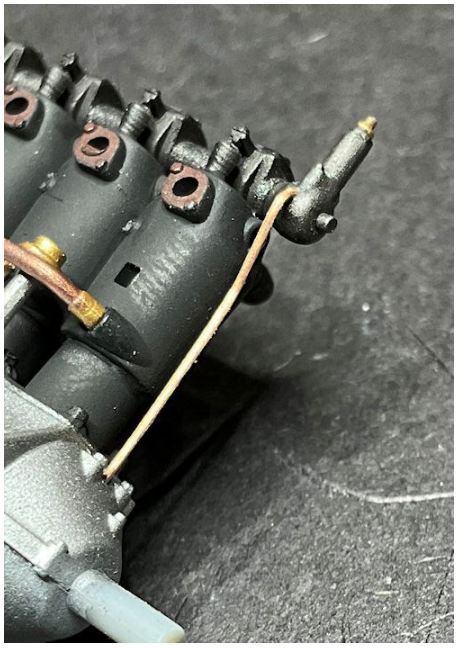
Cement the decompression lever E12 into its locating recess top, rear of the magneto drive housing E9.

Cement the oil filler tubes E17/E18 into their locating holes in the engine sump E10.

Cement the coolant pipe E3 into its locating recesses in the bottom, right of the engine cylinders and against the water pump on the magneto drive housing E9.

Cement the magnetos E19/E20 onto their mountings on the rear sides of the engine crankcase.

Secure the prepared camshaft oil pipe into its pre-holes in the air valve and engine crankcase, using thin CA adhesive.



Cement the two ignition lead support tubes E11/E15 into the location recesses in the side of the engine cylinders.

Using thin CA adhesive, secure the free end of a prepared spark plug/ignition lead tube into each pre-drilled hole in the engine cylinders, leaving 2 mm protruding.

Loop each of the spark plug ignition leads down and through their pre-drilled holes in the fitted support tubes. Secure the leads in the tubes using thin CA adhesive.

Cut away any residual leads at the underside of the support tubes.

NOTE: *At this stage of the engine build I would normally add ignition leads from the two magnetos up to the rear ends of the support tubes. However I chose not to do this on this particular model as these leads and the magnetos will not be visible on the completed model*

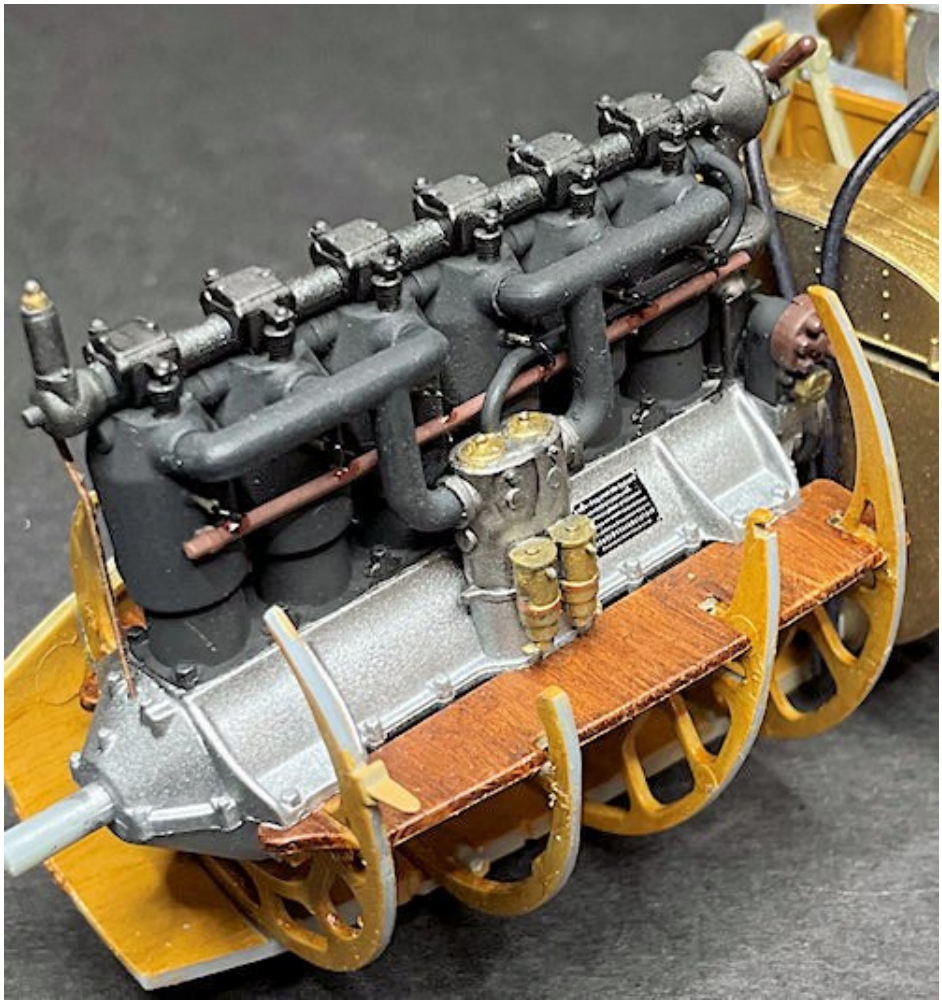
Decals:

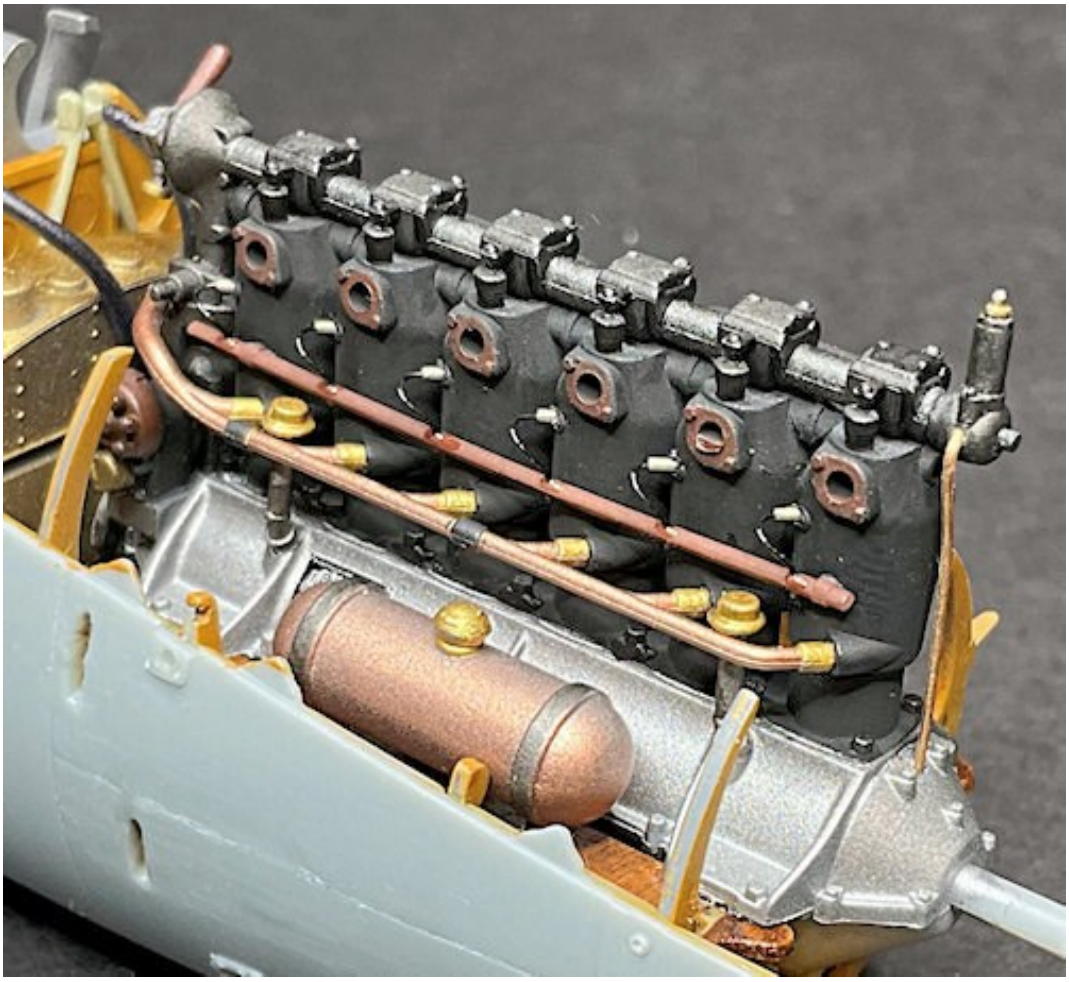
Brush a gloss clear coat of 'Tamiya' Gloss (X22) or similar over the rear, left and right sides of the engine crankcase.

Apply decal 54 to the rear, right side of the engine crankcase.

Apply decal 55 to the rear, left side of the engine crankcase.

NOTE: *The following photographs show the completed engine when fitted into the fuselage - refer to Part 10 (Fuselage) of this build log.*





PART 8
FUSELAGE

PART 8 - THE FUSELAGE

References:
'Windsock' WW1 Modelling Special' Serial No.2 - (Ray Rimell).
'Windsock' data file No.3 - Albatros D.V (Ray Rimell).
'Kookabarra' Technical Publications - Albatros Scouts described (Charles Schaedel).
'Profile Publications' No.9 - Albatros D.V (Peter Gray).

Preparation:

NOTE: *Some of the following steps are required from the kit instruction manual and correction pages for the Albatros D.V. The external access panels and cooling louvres are preferred changes using after market parts.*

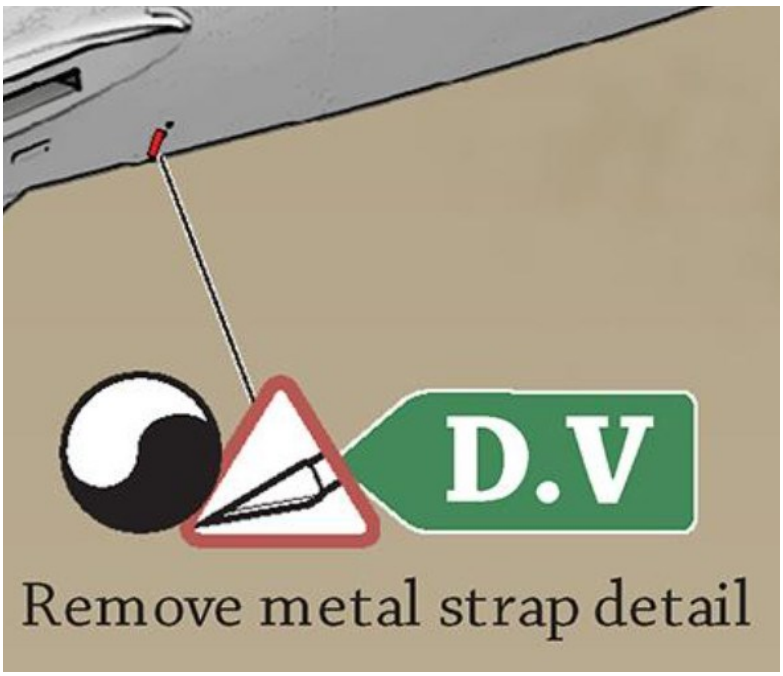
Once the various required parts are removed from their gates, remove any residual gate tags from the edges of the parts.

Internal:

Remove the small stub and panel detail from the fuselage left half.

External:

Remove the external metal strap detail on the lower, rear of both fuselage halves.



Modifications:

External access panels:

NOTE: *Although molded well, I chose to replaced the external access panel with 'Proper Plane' Albatros D.V/D.Va inspection hatches (RD-015).*

Carefully sand or scrape away the two pre-molded access panels on the forward, front of the fuselage left half.

Carefully sand or scrape away the pre-molded access panel on the left engine cover panel (F3).

Carefully sand or scrape away the pre-molded access panel on the forward, front of the fuselage right half.

Carefully sand or scrape away the two pre-molded access panels on the underside of the fuselage.

Check that one of the removed and cleaned up panels from the 'Proper Plane' set fully contact onto the areas of the fuselage halves where the pre-molded panels were located.

External cooling louvres:

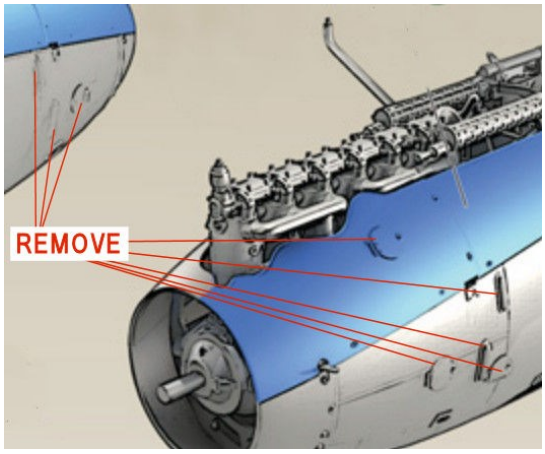
NOTE: *Although molded well, I chose to replaced the external cooling louvres with 'Proper Plane' Albatros D.V/D.Va louvres (RD-011).*

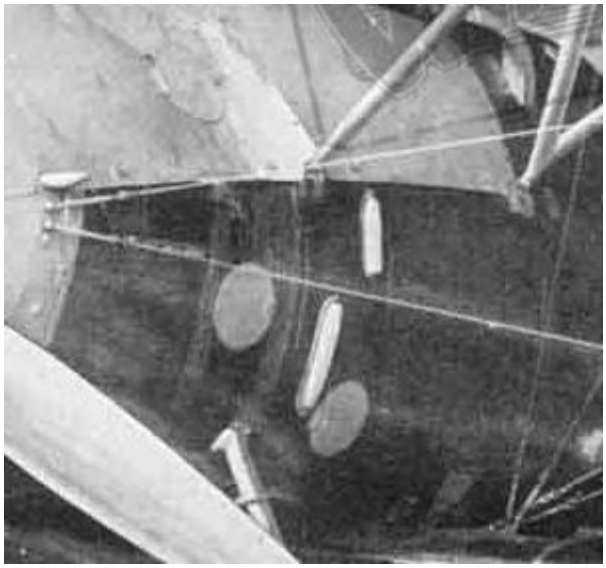
Carefully sand or scrape away the two pre-molded cooling louvres on the forward, front of the fuselage left half.

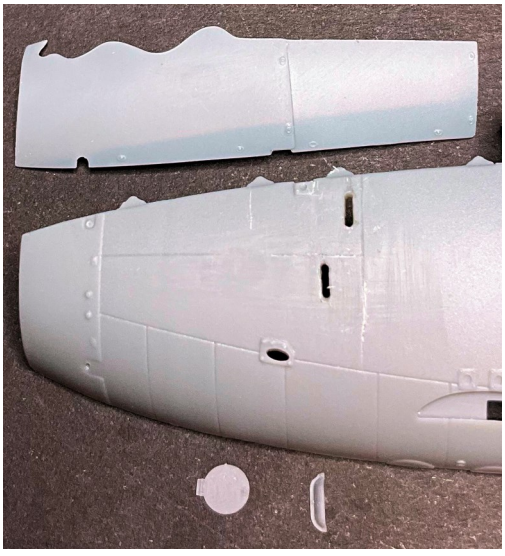
Carefully sand or scrape away the two pre-molded cooling louvres on the forward, front of the fuselage right half.

Remove a louvre from the 'Proper Plane' set and clean up the rear surface.

Position the louvre onto the fuselage halves where the pre-molded louvres were located and mark a line on the fuselage (inside the louvres) for creating slots the cooling slots in the fuselage.







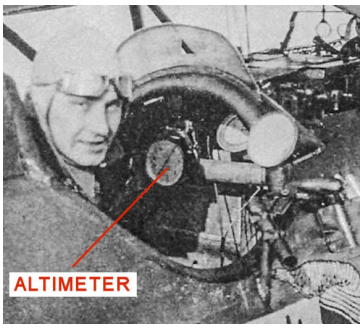
Elevator cable outlets:

Point mark along the centre of the elevators control cable outlets on the lower, rear of the fuselage halves.

Using the point marks as guides, drill holes of 0.7 mm diameter through the fuselage then angle the drill to join the holes. To smooth the edges of the slots, apply a small amount od cement. The slots will be shrouded with the 'Proper Plane' louvres are fitted.

Altimeter:

NOTE: *This particular aircraft had what appears to be an Altimeter, which was fitted in the cockpit, on the left side of the support for the machine guns (refer to photograph).*



A suitable sized instrument face was taken from my 'spares' collection.

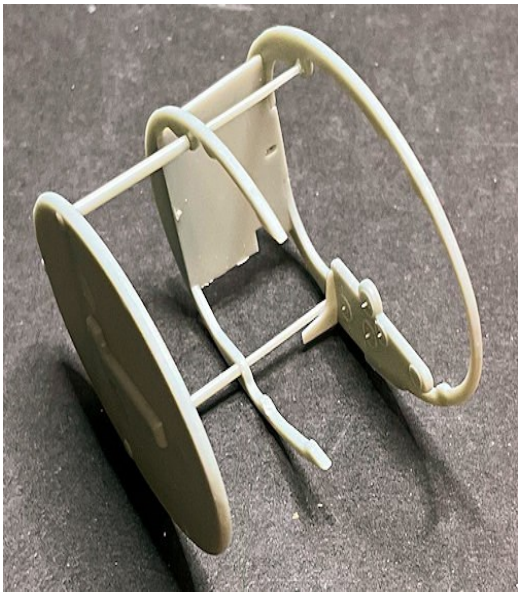
Airbrush the instrument with a grey primer, 'AK Interactive' Grey (AK758) or similar.

Airbrush the instrument with 'Tamiya' semi-gloss Black (X18) or similar.

Apply a suitable German Altimeter decal, from the 'Airscale' Generic Instruments WW1 (AS32-WW1), to the instrument.

Brush 'Tamiya' Clear Gloss (X22) onto the decal to represent the instrument glass.

Assembly:



Following the assembly sequence on Page 3, assemble:

Remove the required parts from the kit supplied parts gates A, D and F.

Remove any residual gate tags from the edges of all removed parts.

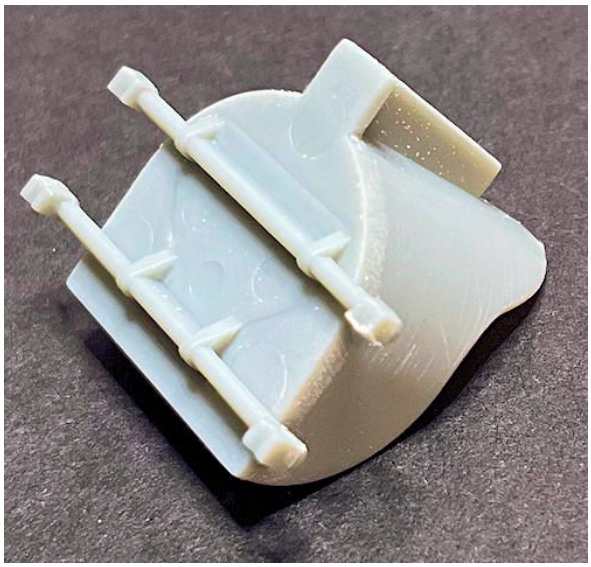
Following the assembly sequence on Page 3, assemble:

Cockpit frames A19, 21, 23 and bars D12 (x 2).

Floor panel A14 onto cockpit frame assembly.

Check fit the assembly into its pre-molded grooves in the located together fuselage halves.

Seat supports A12 onto pilots seat A11.



Hand grip A6 onto top of control column A45.

Following the assembly sequence on Page 4, assemble:

Cross bar A42 onto rear face of ammunition containers A18.

Empty rounds container A33 onto the ammunition containers A18.

NOTE: *During the following steps, light tack the parts together to avoid cementing the engine bearer frames to the fuselage halves.*

Following the assembly sequence on Page 11, assemble:

Engine bearer frames A30, 27, 29 and 29 onto the right engine bearer A8.

Allow the cement to start to set.

Cement the left engine bearer A1 in position on the frames assembly.

Allow the cement to start to set.

Locate the frame assembly into its pre-molded grooves in the right fuselage half F6.

With the frame assembly located, fully locate the fuselage left half F5 against the right fuselage half.

Make sure the fuselage halves fully contact each other and the engine bearer frames locate fully into their pre-molded grooves in the fuselage halves.

Allow the applied cement to fully set.

Separate the fuselage halves and remove the engine bearer frame assembly.

If necessary, apply more cement to strengthen the frame/bearer contact points.

Cement the filler cap A25 onto the oil tank A32.

Painting:

NOTE: *The fit tolerances on parts of 'Wingnut Wings' kits is precise and any contamination between the mating faces of parts can prevent the parts fitting correctly. The following step is intended to prevent any paint contamination in the locating grooves.*

Cut thin strips of masking tape and use them to cover the pre-molded cockpit/engine frame locating grooves in the fuselage halves.

Airbrush the inner surfaces of the fuselage halves, assemblies and all other parts with a grey primer, such as 'AK Interactive' or similar.

Airbrush the parts as follows:

'Tamiya' Desert Yellow (XF59) - Inner surfaces of fuselage halves F5 and F10, engine frame/ bearer assembly, cockpit frame assembly, pilots seat A11, rudder bar A36, frame A22, spark control lever panel A20, Barograph E47

'Tamiya' Rubber Black (XF85) - Starter magneto A5, compass A26

'Tamiya' Grey Green (XF76) - Control column A45, gun mount A2

'Alclad' Gun Metal (ALC-120) - Trigger tubes F14

'Alclad' Copper (ALC-110) - Oil tank A32,

'Alclad' Duraluminium (ALC-102) - Ammunition containers A18/A42/A33, inner surfaces of engine cover panels F2 and E3

'Alclad' Pale Gold (ALC-108) - Hand pump A16, fuel tank A17/A31.

Wood effect:

NOTE: *The light colour wood effect for the internal fuselage and frames etc was created using 'Windsor & Newton' Griffin (Alkyd) Raw Sienna paint.*

Brush a covering coat of the 'Windsor & Newton' Griffin Alkyd **Raw Sienna** paint over the following:

Inner surfaces of fuselage halves F5 and F10,

Engine frame/bearer assembly (not engine bearers A1/A8)

Cockpit frame assembly

Frame A22

Spark control lever panel A20.

Leave the oil paint to settle for approximately a minute.

Decant a small amount of White Spirits into a suitable dish.

Dip a soft brush into the White Spirit then wipe the brush on a sheet of kitchen roll (which should not deposit any fibres in the oil paint) to remove most of the White Spirit.

Brush the oil paint in the required direction of the wood grain and keep wiping the brush on the sheet to remove residual oil paint.

Repeat dipping and wiping the brush in the White Spirits and brushing the oil paint until the desired density and effect is achieved.

Leave the oil paint to fully dry. It should be touch dry in an hour or so and fully dry within 12 hours.

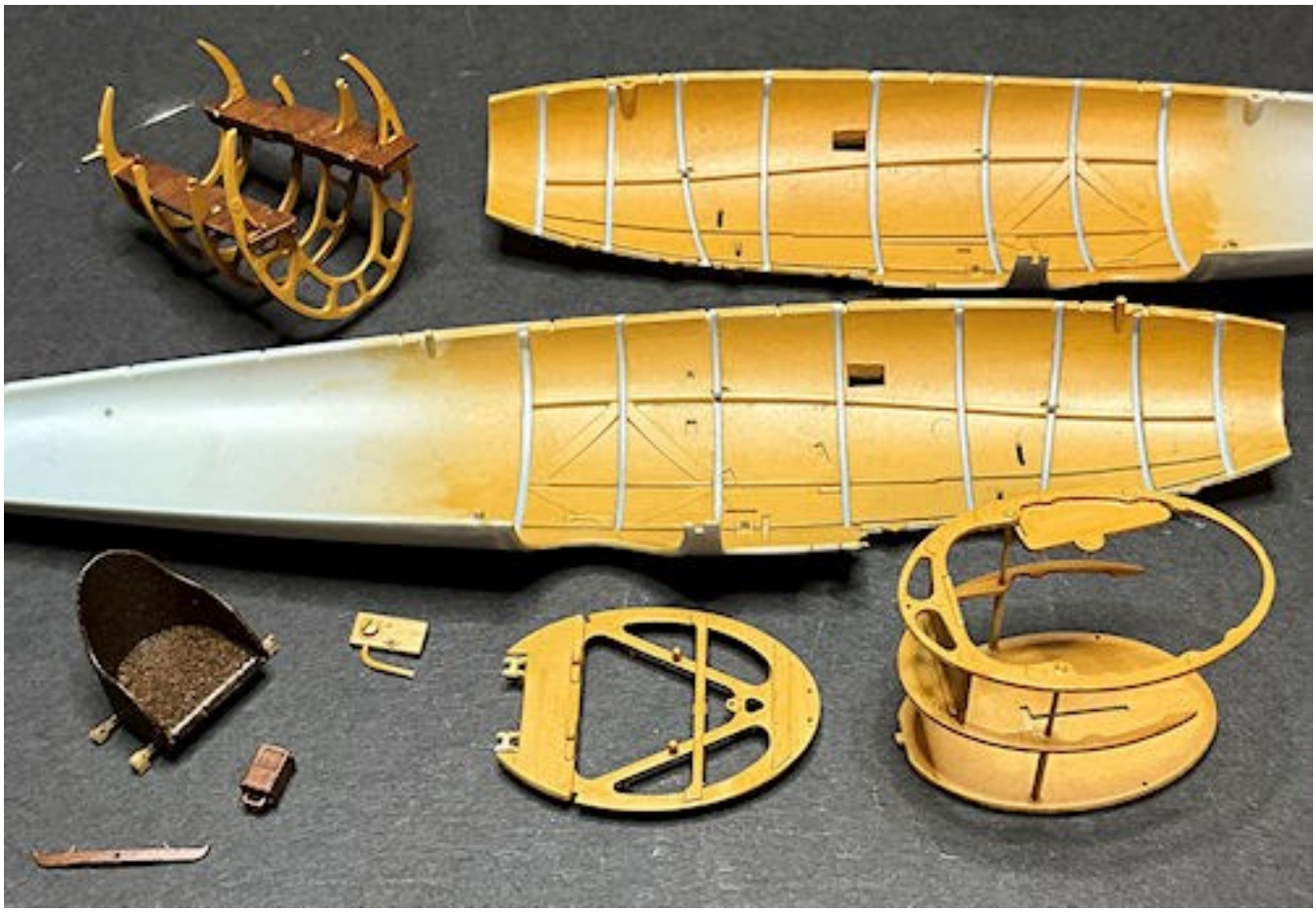
NOTE: *The dark colour wood effect for the internal fuselage and frames etc was created using 'Windsor & Newton' Griffin (Alkyd) Burnt Umber paint.*

Use the same procedure, applying 'Windsor & Newton' Griffin Alkyd **Burnt Umber** paint over the engine bearers A1/A8 and the Barograph E47.

Leather effect:

NOTE: *The leather effect was created using 'Ammo-Mig' Oil brusher (Earth/Dark Brown).*

Use the previous procedure as for applying wood effects and first apply the ‘Ammo-Mig’ Oil brusher (Earth) and when semi-dry, stipple brush on the ‘Ammo-Mig’ Oil brusher (Dark Brown).



Detail painting:

Brush paint the following details:

’Tamiya’ Grey Green (XF76) - Side bars D12 on cockpit frame assembly, pilots seat supports A12, cross bar A42 on ammunition container assembly, rudder bar support F12, spark control lever A34, gun mountings on frame A22 and its fitting plates on fuselage halves.
‘Tamiya’ Hull Red (XF9) - Hand grips on spark control lever A34/control column A6/pressure pump A16, water pump greaser A13
‘Tamiya’ Hull Rubber Black (XF85) - Selector switches on side panel A39/A15
‘Mr. Colour’ Brass (219) - Filler cap A25 on oil tank A32, starter switch on spark control lever panel A20, water pump greaser pump A13
‘Mr. Colour’ Copper (215) - Pipe from spark control lever panel A20 and inner of left fuselage
’Mr. Colour’ Stainless Steel (213) - Instruments A9, A10, straps around oil tank A32

Decals:

Brush a gloss clear coat of ‘Tamiya’ Gloss (X22) or similar over the:

The five selectors on side panel A39/A15

The instrument face A10 on the machine guns support bar A2

Compass A26 and instrument A9

Barometer E47

Starter magneto A5

Apply decal 64 onto the compass A26.

Apply decal 65 onto instrument A9.

Apply decals 67 to 71 onto their locations on side panel A39/A15.

Apply decal 66 onto the instrument face A10 on the gun support bar A2.

Apply decal 52 onto the Barometer E47.

Apply decal 62 onto the starter magnetoA5.

Assembly (continued):

Cement the fuel tank A17/31 onto its locating pegs on the forward face of frame A22.

Cement the ammunition container assembly A18/A42/A33 onto its locating pegs on rear face of frame A22.

Fit checking:

NOTE: *The following steps are necessary to make sure all of the fuselage frames locate fully into their locating grooves in the fuselage halves. Also to make sure the fuselage halves fully contact each other with the frames located.*

Make sure all primer and paint is removed from the fuselage contact edges of the following frames:

Cockpit assembly A19/A21/A23/D12

Ammunition/fuel tank frame A22

Engine bearer assembly A1/A8/A27-A30.

Locate the cockpit assembly into its fuselage locating grooves in the fuselage right half.

Locate the fuselage left half to the fuselage right half, making sure the fuselage halves fully contact each other with the cockpit assembly fully located in its grooves.

Separate the fuselage halves and remove the cockpit assembly.

Locate the ammunition/fuel tank frame into its fuselage locating groove in the fuselage right half.

Locate the fuselage left half to the fuselage right half, making sure the fuselage halves fully contact each other with the ammunition/fuel tank frame fully located in its grooves.

Separate the fuselage halves and remove the ammunition/fuel tank frame.

Locate the engine bearer assembly into its fuselage locating grooves in the fuselage right half.

Locate the fuselage left half to the fuselage right half, making sure the fuselage halves fully contact each other with the engine bearer assembly fully located in its grooves.

Separate the fuselage halves and remove the engine bearer assembly.

As a final check, locate all of the frames into their fuselage locating grooves in the fuselage right half.

Locate the fuselage left half to the fuselage right half, making sure the fuselage halves fully contact each other with all of the frames fully located in their grooves.

Separate the fuselage halves and remove all of the frames.

Assembly (continued):

Cement the cockpit assembly into its fuselage locating grooves in the fuselage right half.

Cement the ammunition/fuel tank frame into its fuselage locating groove in the fuselage right half

Cement the gun trigger tubes F14 into its locating holes on the front face of the fuel tank.

Cement the spark control lever panel A20 onto its locating recess in the fuselage left half.

Cement the spark control lever into its locating hole in the spark control lever panel A20.

Cement the starter magneto A5 into its locating recess in the fuselage left half.

Cement the water pump greaser A13 into its locating recess in the fuselage right half.

Cement the compass A26 into its locating recess and hole in the fuselage right half.

Cement the hand pressure pump A16 into its locating recesses in the fuselage right half.

Cement the instrument A9 into its locating recess in the fuselage right half.

Cement the side panel A39 into its locating recesses in the fuselage right half.

Cement the gun support bar A2 into its recess in the fuselage right half.

Locate the fuselage left half to the fuselage right half, making sure the gun support bar locates into its recess in the fuselage left half and that the fuselage halves fully contact each other.

Separate the fuselage halves

Cement the prepared engine assembly into its locating recesses on the engine/frame bearer assembly.

Cement the oil tank A32 into its locating holes in the engine right bearer A8.

Cement the engine/frame assembly into its locating recesses in the fuselage right half.

As a final check, locate the fuselage left half to the fuselage right half, making sure the fuselage halves fully contact each other with all of the frames and the gun support bar fully located.

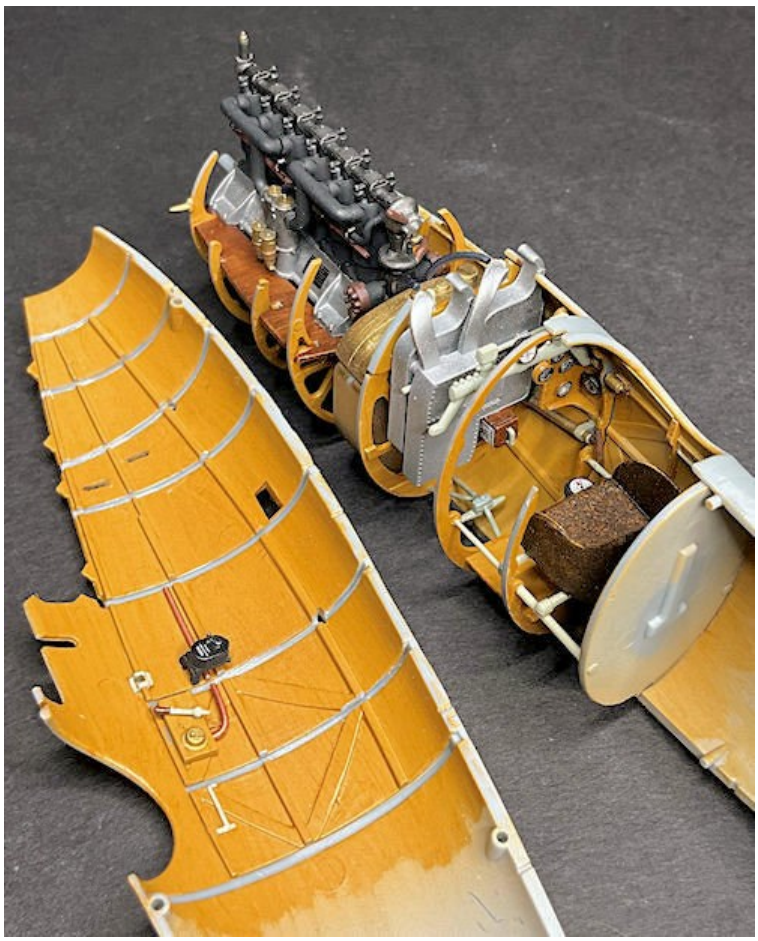
Separate the fuselage halves.

Using CA adhesive, secure the Barograph E47 to the underside of the right ammunition container.

Cement the rudder bar support F12 into its locating holes in the bottom, rear of the ammunition frameA22 and the bottom, front of the cockpit assembly.

Cement the pilots seat A11 into its locating recess in the rear bulkhead and onto the side support bars on the cockpit assembly.

Cement the Altimeter, created earlier, onto the left side of the machine guns support bar A2.



Modifications (continued):

Cut two long lengths of 0.3 mm diameter lead wire, such as ‘PlusModel’ or similar.

Starter magneto cable:

Using thin CA adhesive, attach one end of a wire up and behind the starter magneto on the fuselage left side.

Loop the wire down then forwards to the pre-molded groove for the ammunition container frame.

Secure the wire onto the surface of the fuselage left side, using thin CA adhesive.

Cut away any residual wire at the frame groove.

Water pump greaser pipe:

Using thin CA adhesive, attach one end of the second wire at the front of the water pump greaser on the fuselage right side.

Loop the wire up and through the gap between the gun support and fuselage side, then forward between the side of the ammunition container and fuselage.

Secure the wire to the fuselage using thin CA adhesive.

Flight control rigging:

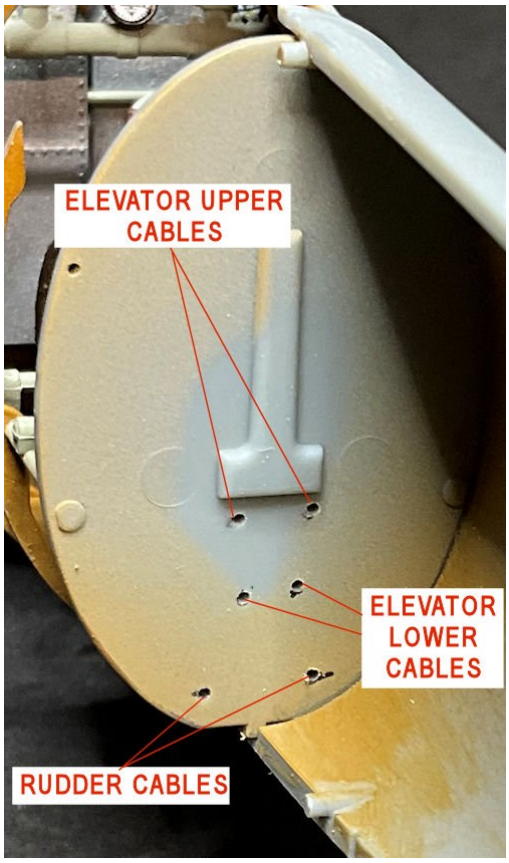
NOTE: *The following steps cover adding the parts for flight control and their associated cables (rudder, elevator and ailerons). To allow the added cables to be secured in position, it's best to drill 'pass through' holes in the cockpit rear bulkhead and middle frame. As the cockpit is already fitted in the fuselage right half, the holes will need to be drilled at an angle through the parts.*

Refer to the following photograph and drill holes of 0.5 mm diameter through the cockpit rear bulkhead.

Rudder cable holes should be drilled through below the cockpit floor

Elevator lower cable holes should be drilled through above the cockpit floor.

Elevator upper cable holes should be drilled through below the pilots seat.



Rudder control cables:

Rudder cable holes, spaced as those drilled in the cockpit rear bulkhead, should also be drilled through the bottom of the middle cockpit frame and below the cockpit floor.

Cut two long lengths of 'ModelKasten' 0.6 (0.13 mm diameter) black line.

Cut two short lengths of 0.4 mm Nickel-Silver tube, such as 'Albion Alloy's' NST04 or similar.

Pass a line through the cutout in the bottom of the forward cockpit frame.

Using thin CA adhesive, secure the end of the line under the tip of the ride side of the rudder operating lever.

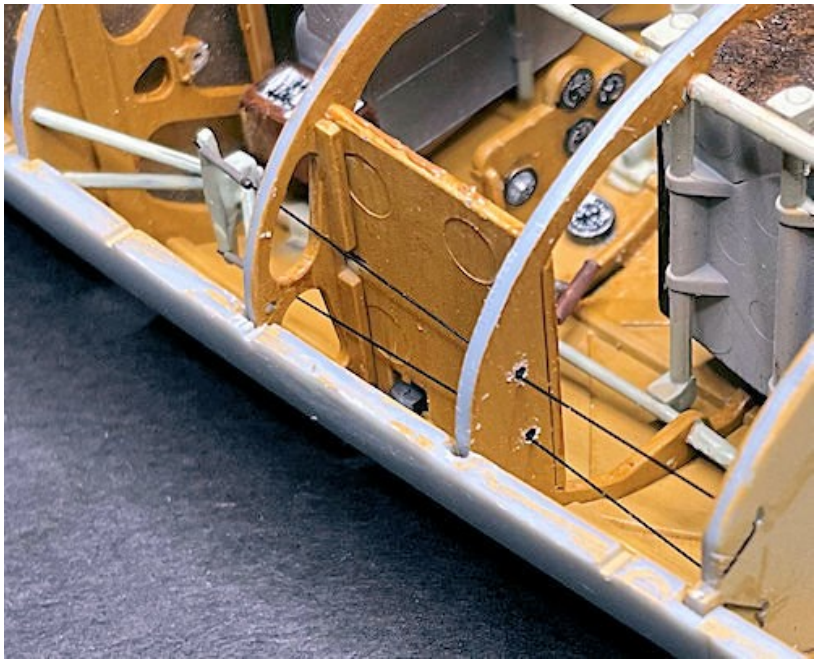
Slide a tube onto the free end of the line. Pass the free end on the line rearwards and through the pre-drilled holes in the bottom right of the cockpit middle frame and rear bulkhead.

Keeping the line taut, use thin CA adhesive to secure the line to the back of the cockpit rear bulkhead.

Cut away any residual line at the back of the cockpit rear bulkhead.

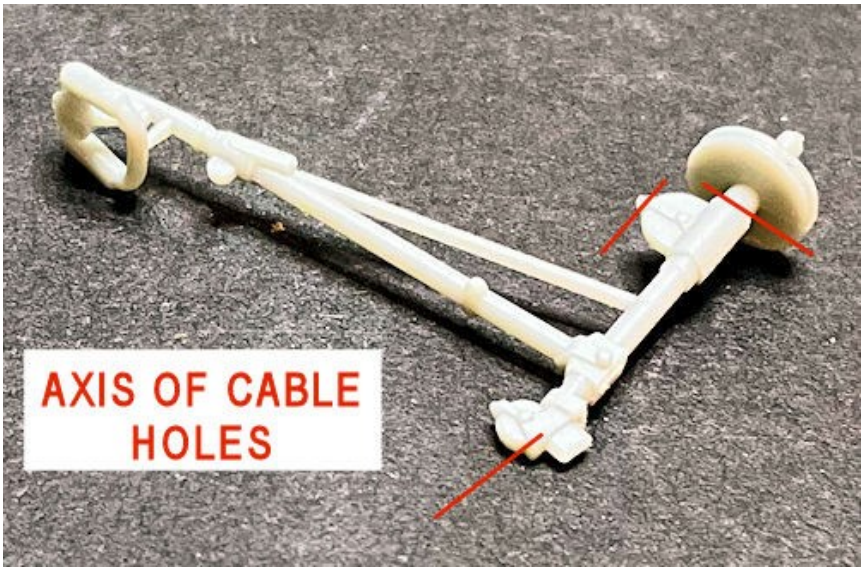
Slide the tube up to the end of the rudder operating lever and secure on the line using thin CA adhesive.

Repeat the procedure to add the rudder left control cable.



Elevator control cables:

Refer to the following photograph.



Drill holes of 0.3 mm diameter through the top of the upper control pulley and centrally down through the control column torque tube.

Drill a hole of 0.3 mm diameter into the bottom of the rear control pulley.

Cut four long lengths of ‘ModelKasten’ 0.6 (0.13 mm diameter) black line.

Pass two of the lines through the pre-drilled hole in the top of the control pulley, then down through the hole in the torque tube.

Using thin CA adhesive, secure the two lines to the underside of the torque tube.

Cut away any residual lines at the underside of the torque tube.

Pass the free ends of both lines rearwards and over their respective attachment ‘lugs’ on the sides of the control column.

Keeping the lines taut, secure the to the control column using thin CA adhesive.

Pass the ends of the remaining two lines into the pre-drilled hole in the bottom of the rear control pulley.

Using thin CA adhesive, secure the two lines in the hole in the control pulley.

Assembly (continued):

Cement the rudder bar onto its locating point on the rudder support frame.

Cement the control column into its locating recess in the cockpit floor and onto the bottom, rear of the ammunition container frame.

Flight control rigging (continued):

Pass the two elevator control lines from the bottom of the rear elevator control pulley at the control column, rearwards under the pilots seat and through their respective (lower) pre-drilled holes in the cockpit rear bulkhead.

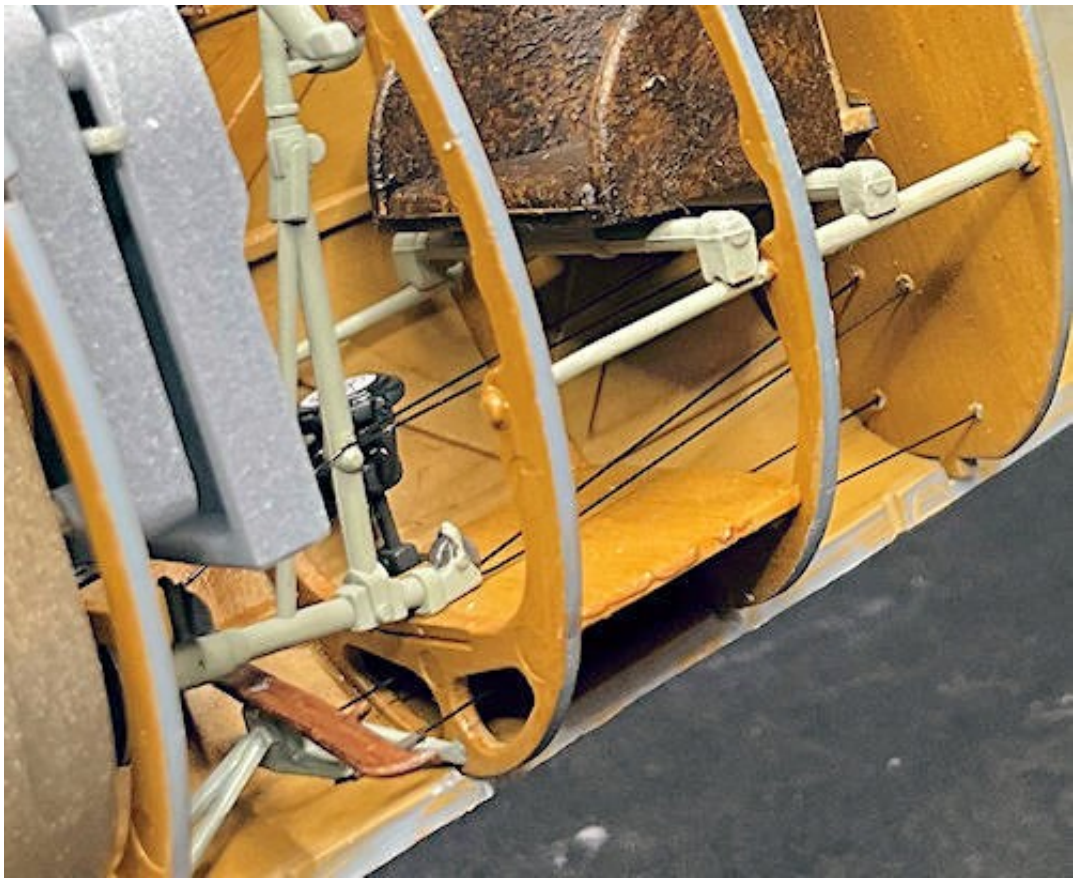
Using thin CA adhesive, secure the end of the lines to the back of the cockpit rear bulkhead.

Cut away any residual lines at the back of the bulkhead.

Pass the two lines from the sides of the control column rearwards under the pilots seat and through their respective (upper) pre-drilled holes in the cockpit rear bulkhead.

Using thin CA adhesive, secure the end of the lines to the back of the cockpit rear bulkhead.

Cut away any residual lines at the back of the bulkhead.



Aileron control cables:

NOTE: *Double aileron control cables should be routed around the large pulley on the front of the torque tube of the pilots control column and the routed up and out of the fuselage to the underside of the upper wing. However, as the cables around the pulley will not be seen in the completed fuselage, I chose not to add them around the pulley, but instead just have the cables added from the fuselage to the upper wing only.*

Modifications (continued):

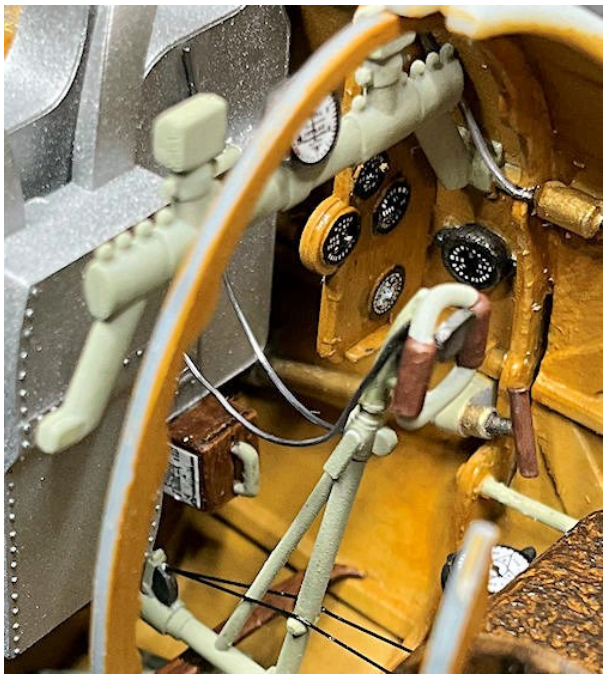
Trigger cables:

Cut two long lengths of 0.2 mm diameter lead wire, such as ‘PlusModel’ or similar.

Using thin CA adhesive, secure one end of both wires onto the top, rear face of the ammunition containers (each side of the gap between the containers).

Loop the wires down then up to the top, sides of the pilots control column at the gun trigger tabs. Trim the length of the wires as required.

Using thin CA adhesive, secure the ends of the two wires to the control column.



Assembly (continued):

Seat belts:

Remove the two lap belts and the shoulder harness from the kit supplied photo-etch sheet.

Remove any photo-etch ‘tags’ from the edges of the parts.

NOTE: *Annealing photo-etch parts is done by applying heat from a cigarette lighter or similar, along the parts until the photo-etch changes to a grey colour. Avoid melting the parts by keeping the heat source moving over the part. Also avoid heating very small parts as these may easily melt.*

Anneal (soften) the parts to allow them to be formed over the pilots seat.

Clean off any soot created by the heat source.

Brush ‘Mr. Metal’ R etch primer onto the parts.

NOTE: *The cockpit rear bulkhead has a pre-molded hole on each side, which I believe are locating holes for the ends of the shoulder harness. However, the holes are too low on the bulkhead to allow the shoulder harness to be positioned and hang correctly over the seat.*

Refer to the following photograph and drill a hole of 0.5 mm diameter through both sides of the cockpit rear bulkhead.

Carefully bend the shoulder harness the hang naturally over the seat with its locating tangs through the pre-drilled holes in the cockpit rear bulkhead.

Carefully bend the two lap straps to hang naturally over the sides of the pilots seat with their attachment fittings at the forward seat support.

Airbrush the parts with a grey primer, such as ‘AK Interactive’ Grey (AK758) or similar.

Airbrush the parts with ‘Tamiya’ Buff (XF57) or similar.

Brush paint the metal fittings on the parts with ‘Mr. Colour’ Stainless Steel (213) or similar.

Insert the end tangs of the shoulder harness through the pre-drilled holes in the cockpit rear bulkhead.

Bend the tangs against the back of the bulkhead and secure in place using thin CA adhesive.

Locate the shoulder harness over and onto the pilots seat and secure in position using thin CA adhesive.

Locate the two lap straps onto the sides of the pilots seat and secure in position using thin CA adhesive.

Bend the lap straps over the seat sides and onto the seat then secure in position using thin CA adhesive.

Carefully brush a dark pigment powder over the straps to ‘dirty’ them slightly.

Weathering:

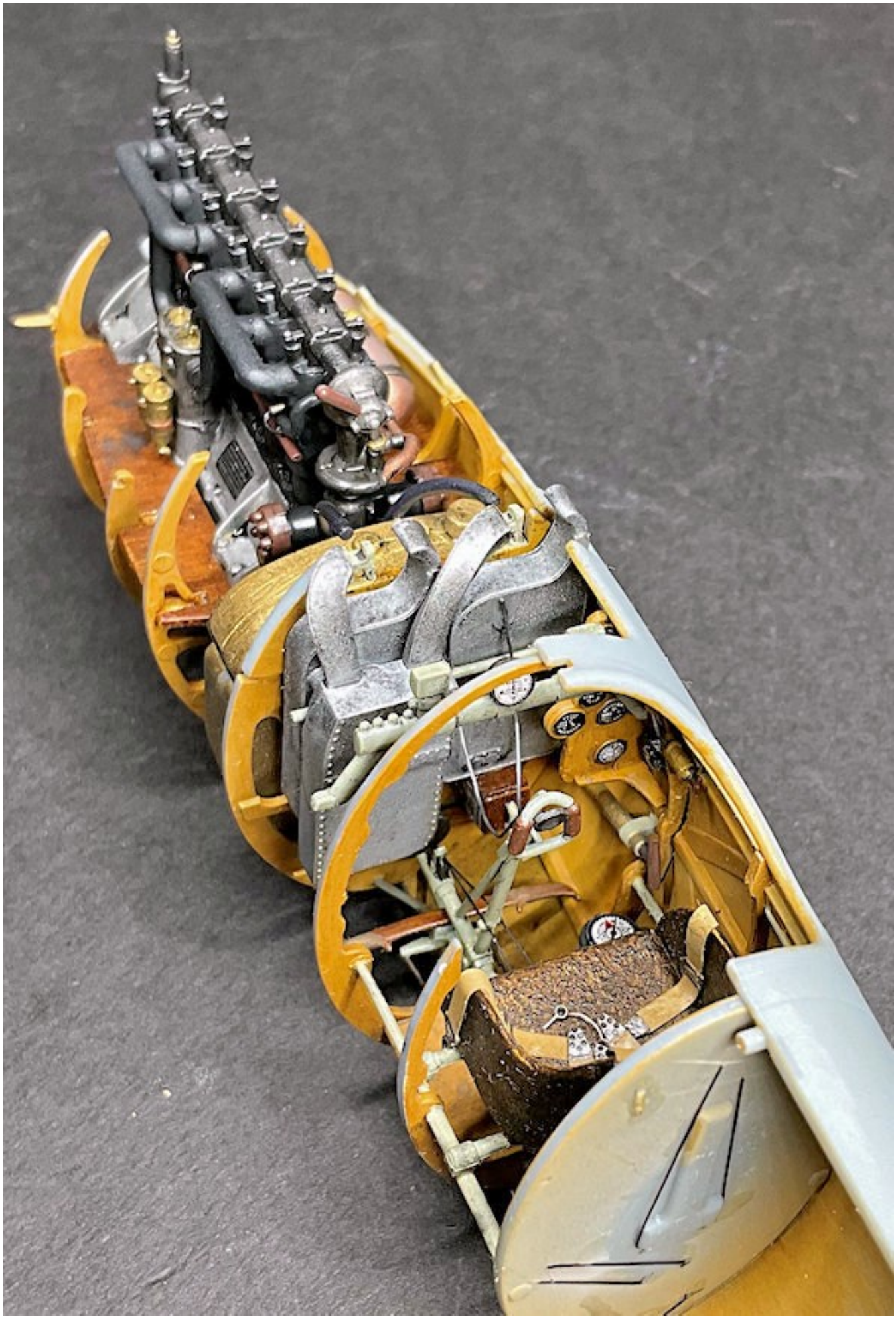
To provide a good base for applying weathering, airbrush a semi-matte clear coat, such as ‘Alclad’ Light Sheen (ALC311) or similar, over the installed engine, cockpit assemblies and components and inner surfaces of both fuselage halves and engine cover panels F2/F3.

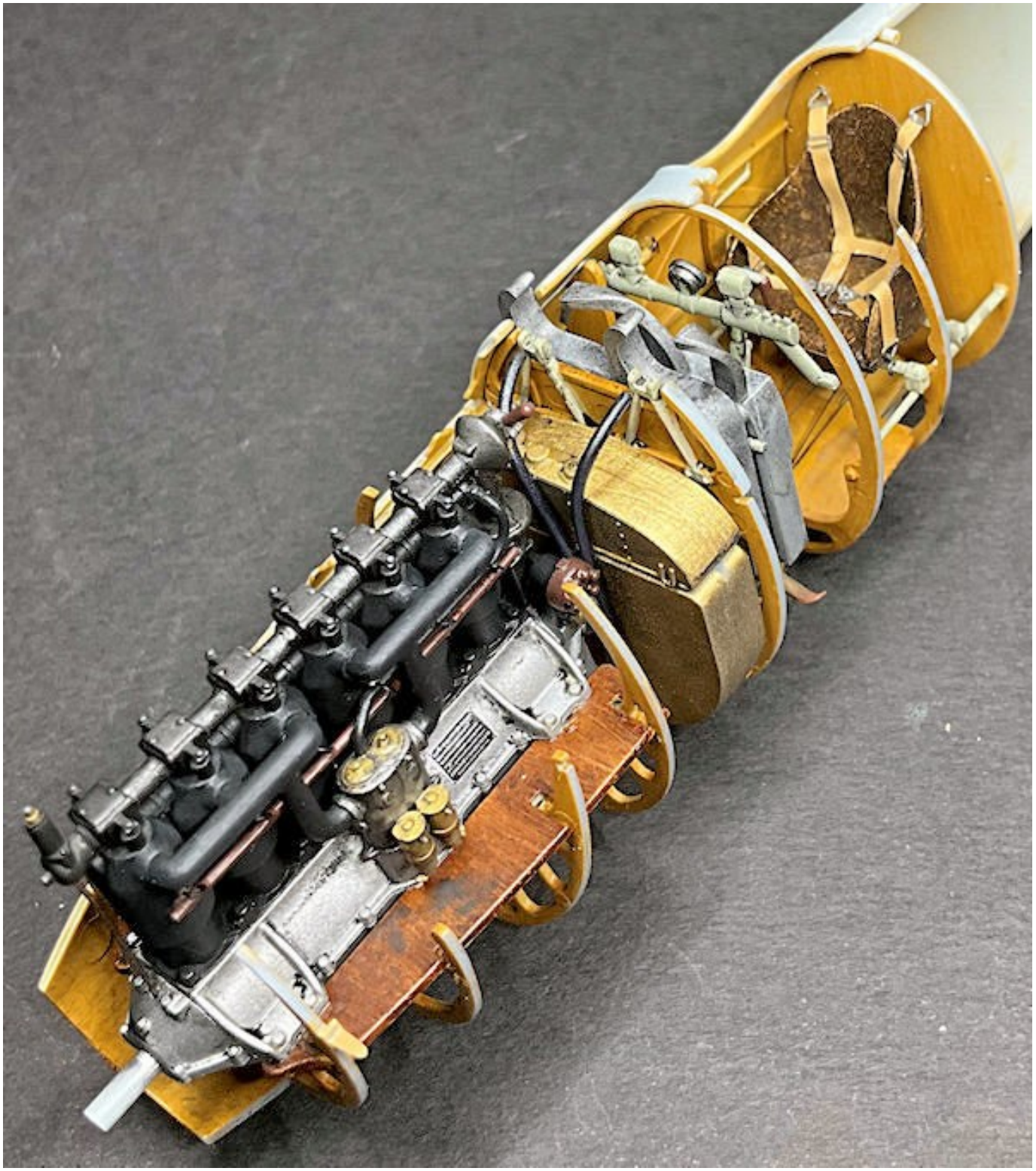
Brush a clear gloss coat, such as ’Tamiya’ Clear (X22) or similar onto the dial/faces of the various instruments.

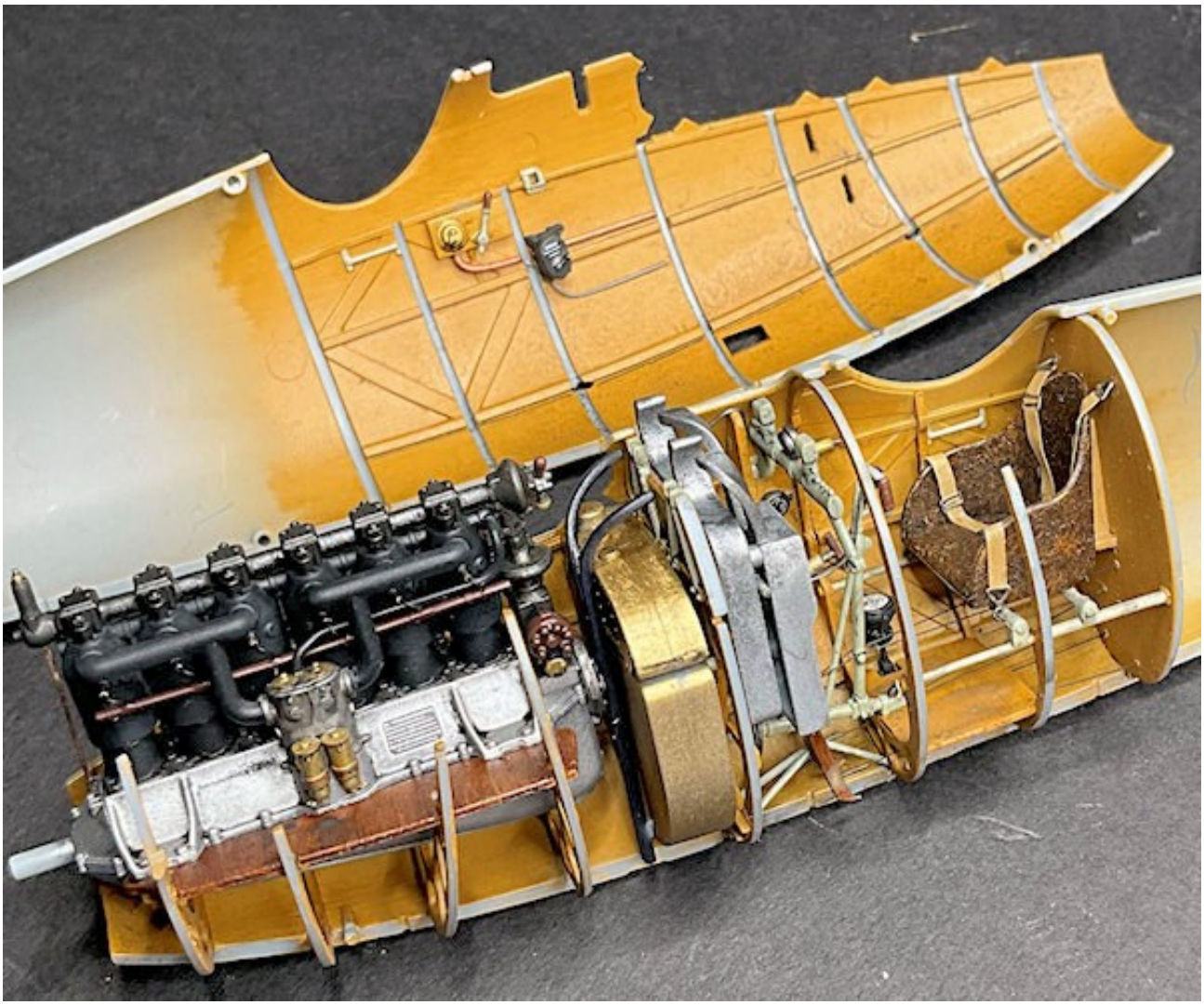
NOTE: *Refer to Part 3 (Weathering) of this build log for more information.*

Brush apply ‘Flory Models’ Clay washes (Grim) to the cockpit floor board.

Brush apply (as desired) ‘502 Abteilung’ Smoke (ABT005) oil paint, thinned heavily with Odourless Thinners or White Spirit, around the engine, cockpit components, inner surfaces of the two engine cover panels etc.







Assembly (continued):

As a final check, locate the fuselage left half to the fuselage right half, making sure the fuselage halves fully contact each other with all of the frames and the gun support bar fully located in their grooves and recess.

Separate the fuselage halves.

Apply a thicker cement, such as ‘Revell’ Contacta Professional cement, along the mating edges of the fuselage left half.

Locate the fuselage left half to the fuselage right half, making sure the fuselage halves fully contact each other with all of the frames and the gun support bar fully located in their grooves and recess.

Allow the cement to fully set.

Cement the two engine cover panels F2/F3 into position on the forward, top of the fuselage.

Cement the head rest F1 in position on the top of the fuselage at the rear of the cockpit opening.

NOTE: *Leave the fuselage for a few days to allow the cement to fully harden. Sometimes the cement can continue to be ’active’ under the surface, even though it may feel set. This continued ’activation’ can cause a cemented joint to reappear under paint or decals, by which time it can’t be rectified.*

Once the cemented joints are fully set, carefully sand over the joint to remove any residual cement and blend the joined parts together. Avoid sand away any pre-molded surface detail or panel lines.

Modifications (continued):

Spark lever control rod:

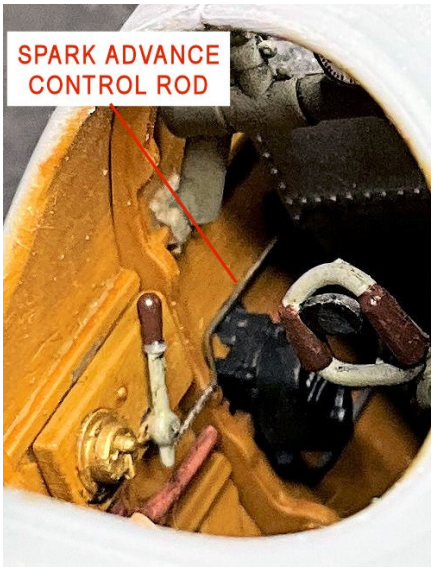
NOTE: *The control rod from the engine spark control lever has to be fitted at this stage of the build, as it needs to be routed around the fuselage frame for the ammunition containers. This can't be done until the fuselage has been 'closed up'.*

Cut a length of 0.4 mm diameter Nickel-Silver rod, such as 'Albion Alloy's' NST04 or similar.

Bend the rod in the middle such that it fits over the cockpit frame with the front and rear sections of the rod parallel.

Trim the ends such that the front rod fit under the left ammunition container and the rear rod at the bottom of the spark advance control lever.

Apply CA adhesive to the front rod and using appropriate tweezers, place the rod in position on the fuselage side.



Propeller spinner and back plate:

NOTE: *The kit supplied propeller spinner and back plate were intended to be replaced with those in the 'Proper Plane' Albatros D.V spinner (RD-014) set, as that has a more correctly shaped spinner. However, I found the back plate to be too small in diameter. Therefore I used the kit supplied back plate with the 'Proper Plane' spinner.*

Remove the 3D printed 'Proper Plane' spinner from its base and sand off any residual 'support tree' stubs.

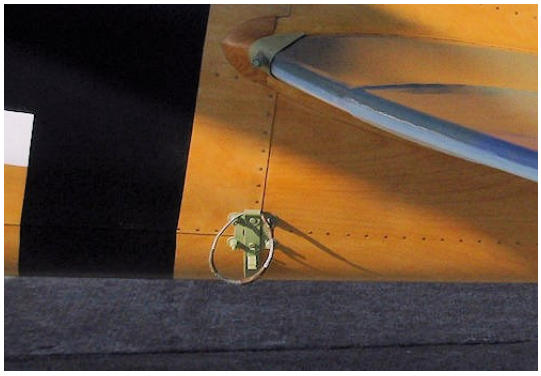
Cut away the propeller mounting hub from the kit supplied back plate, then file the residual away to flatten the back plate surface.

If necessary, increase the diameter of the propeller shaft hole in the back plate so it fits easily onto the engine propeller shaft.

Test fit the propeller between the spinner and back plate then onto the engine propeller shaft.

Grab handles:

NOTE: *The rear of the fuselage was fitted with a wire grab handle on each side.*



Weapons:

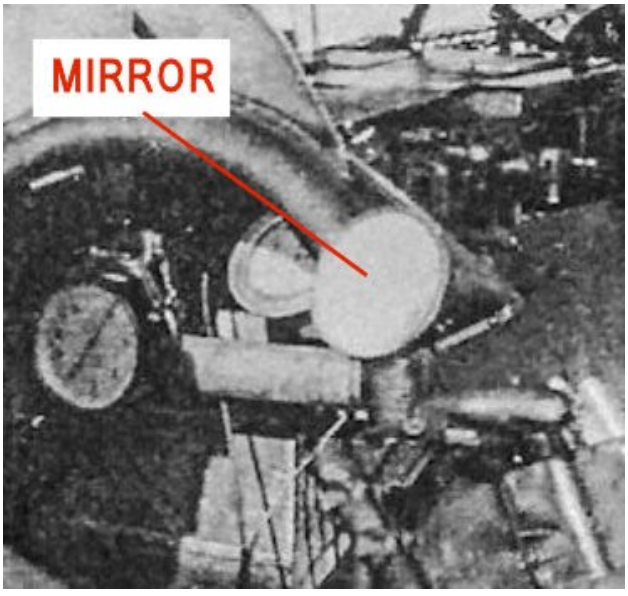
Machine guns:

NOTE: *At this stage of the build, the replacement machine guns from 'Proper Plane' should be modified and test fitted to the fuselage - refer to Part 9 (Weapons) of this build log.*

External mirror:

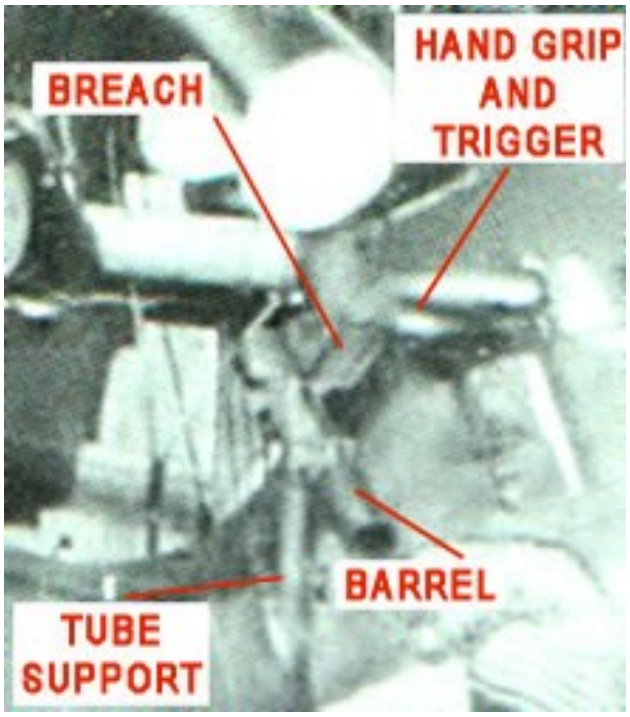
NOTE: *This aircraft had a mirror (rear view) externally mounted to the right side of the cockpit.*

The external mirror (to be fitted later in this build) was a spare from a 'Wingnut Wings' model.



Flare pistol:

NOTE: *This particular aircraft had what seems to be a flare pistil, mounted externally at the right side of the cockpit. The pistol is mounted on a vertical tube, such that the pilot can load a flare, lock then fire the pistol (directed away to the rear right of the aircraft). In the following photograph it looks as though the breach is open, not closed and locked. Just forward of the pistol is a flare holder rack.*



The pistol is possibly of the 'Hebel M1894' type.

Pistol:

Cut the barrel of the pistol off, leaving a small amount of the barrel mount in place on the breach block.

Drill a recess of 0.8 mm diameter centrally into the separated barrel and the barrel on the pistol.

Drill a hole of 0.2 mm diameter at an angle into the separated barrel and centrally into the lower face of the breach block.

Cut a short length of 0.2 mm diameter Nickel-Silver rod, such as 'Albion Alloy's' NSR02 or similar.

Using thin CA adhesive, secure the rod into the pre-drilled hole in the breach block.

Trim the length of protruding rod such that it can be inserted into the pre-drilled hole in the separated barrel and be bent to the appropriate angle between the barrel and pistol body.

Using thin CA adhesive, secure together the barrel and pistol body.

Pistol mounting:

Cut a short length of 1.4 mm diameter Brass tube, such as 'Albion Alloy's' MBT14 or similar.

Cut a short length of 0.8 mm diameter Brass tube, such as 'Albion Alloy's' MBT2M or similar and file a slight chamfered angle on one end of the tube.

Cut a short length of 0.4 mm diameter Brass rod, such as 'Albion Alloy's' BW04 or similar.

Drill a hole of 0.4 mm diameter into one side only of the 1.4 mm diameter tube.

Using thin CA adhesive, secure the 0.4 mm diameter rod into the angled end of the 0.8 mm diameter tube, leaving just enough protruding to insert into the pre-drilled hole in the 1.4 mm diameter tube.

Using thin CA adhesive, secure the protruding 0.4 mm diameter rod into the pre-drilled hole in the 1.4 mm diameter tube, making sure the angled end butts fully against the side of the tube.

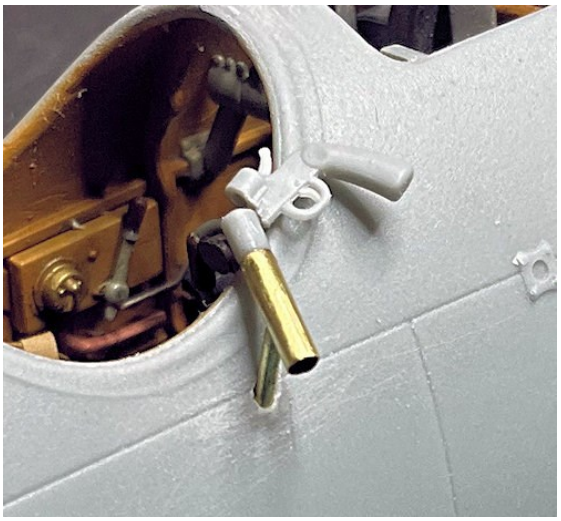
Cut off the end of the pistol barrel to leave a stub just long enough to insert into the upper end of the 1.4 mm diameter mounting tube.

Drill a hole of 0.8 mm diameter into, **but not through**, the right side of the fuselage, just forward from the bottom, centre of the cockpit opening and at a slight outward and forward angle.

Insert the 0.8 mm diameter mounting tube into the hole and the pistol into the upper end of the 1.4 mm diameter mounting tube.

Check that the mounting and pistol are positioned as shown in the following photograph.

Using thin CA adhesive, secure the stub of the pistol barrel into the upper end of the 1.4 mm diameter mounting tube.



The following photograph is a test of the flare pistol, mirror and kit supplied flare rack in position

Fuselage longitudinal panels:

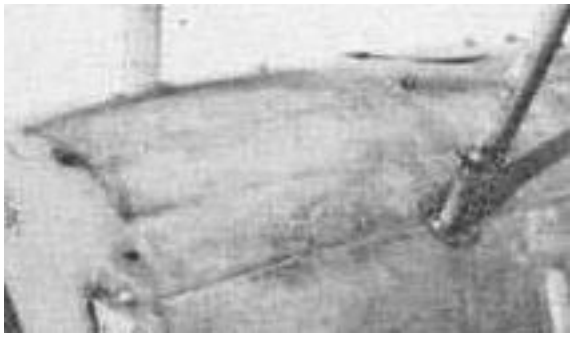
NOTE: *The pre-molded detail on the assembled fuselage has transverse panels across the underside of the fuselage, between the rear of the metal cowl ring and the leading edge wing roots of the lower wings. Whilst this is correct for later version of the aircraft, earlier had instead longitudinal panels, of which there were seven (one central and three each side).*

Although there is no photograph of Albatros D.V, Ser No:2006/17 (this model build), there is of Ser No:2005/17, which clearly shows longitudinal panels.

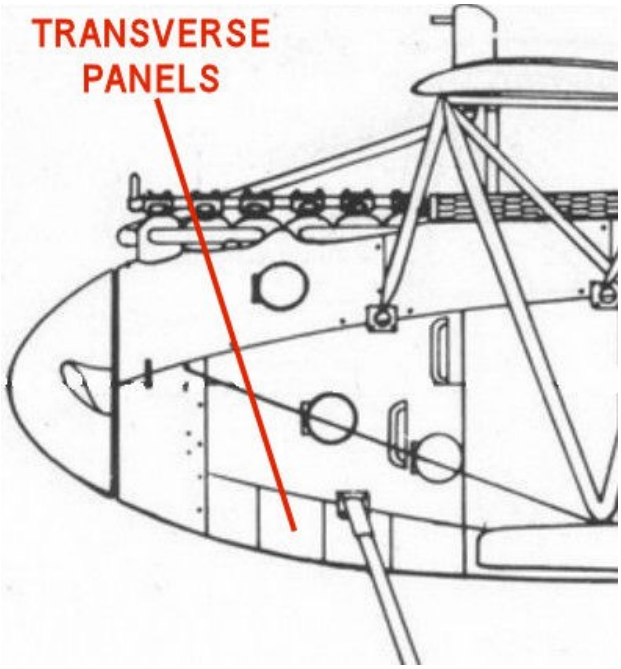
At this stage of the build, the fuselage is assembled and therefore the panel lines can be corrected.

The following photograph is of Serial Number 2005/17 (same production batch as this model 2006/17)

Another aircraft with longitudinal panels



The following illustration shows the panels as pre-modelled on the kit fuselage



Filling the transverse panel lines:

Using a brush, apply ‘Mr. Surfacer’ 500 or similar along each of the four transverse panel lines, pre-molded in the underside of the fuselage, between the rear of the metal cowl ring and the leading edge wing roots of the lower wings.

Allow the applied surfacer to set.

Lightly dampen a cotton bud with ’Mr. Colour’ Levelling Thinners 400.

NOTE: *During the following step, the intention is to wipe off the surfacer, but leave the panel lines filled.*

Lightly stroke the side of the cotton bud rearwards across the filled panel lines on the fuselage. Don’t press the cotton bud too hard or it will totally remove the surfacer from the panel lines.

Once the residual surfacer/thinners has dried, lightly sand over the panel lines to remove any residual surfacer and to blend the panel lines with the surrounding fuselage area.

Adding the longitudinal panel lines:

NOTE: *The following steps are necessary as applying primer will show any panel lines not totally filled.*

Mask off the surrounding areas of the filled panel lines.

Airbrush a grey primer of the filled panel lines and when dry, check that the filled panels lines can’t be seen. If necessary repeat the filling procedure to any visible panel lines then and re-prime and check.

NOTE: *I could not find definitive information as to how many longitudinal strips of plywood were used under the fuselage. Photographs are lacking in clarity and no drawings were found. Therefore I chose, incorrectly or not, to create six strips (three each side of the centre line).*

Using a fine tipped scraper or similar, carefully and lightly scribe along the fuselage central joint line to create a shallow panel line.

Use thin strips of masking tape to mark two panel lines at each side of the central panel line. The resultant three panels should be the same width on both sides.

Using a fine tipped scraper or similar, carefully and lightly scribe along the edges of the masking tapes to create shallow panel lines.

Remove the masking tapes.

Spinner backplate:

NOTE: *At this stage of the build it's best to fit back plate for the propeller spinner, as later in this build, it will help prevent airbrush over spray entering the engine bay area.*

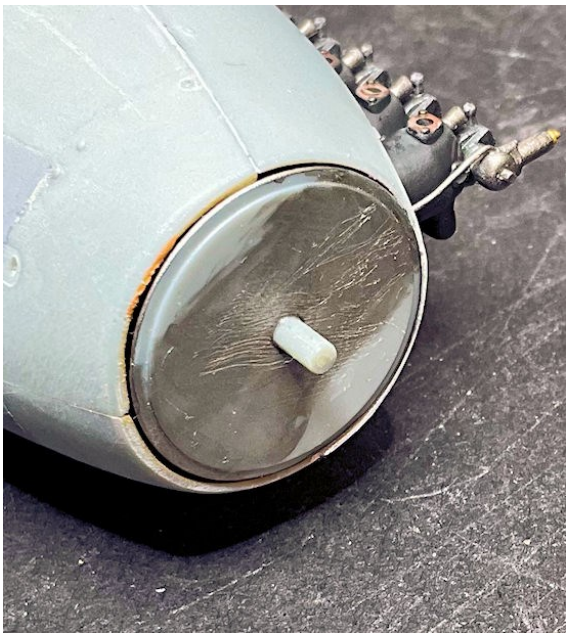
Brush paint the kit supplied back plate for the propeller spinner and the inside of the 'Proper Plane' supplied spinner with 'Mr. Colour' Stainless Steel (213).

Buff the applied paint with a cotton bud to create the metal effect.

Apply thick (slower setting) CA adhesive to the engine propeller shaft and front of the engine (shaft housing) and locate the spinner back plate (detailed side towards the engine) fully onto the engine shaft.

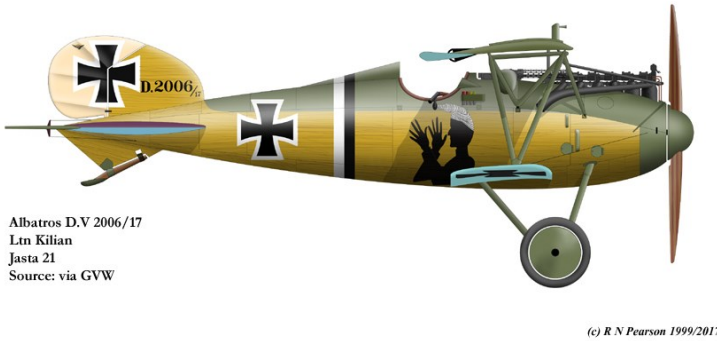
Before the adhesive sets, locate the 'Proper Plane' spinner onto the backplate and make sure the spinner/ back plate are centrally positioned in the fuselage front.

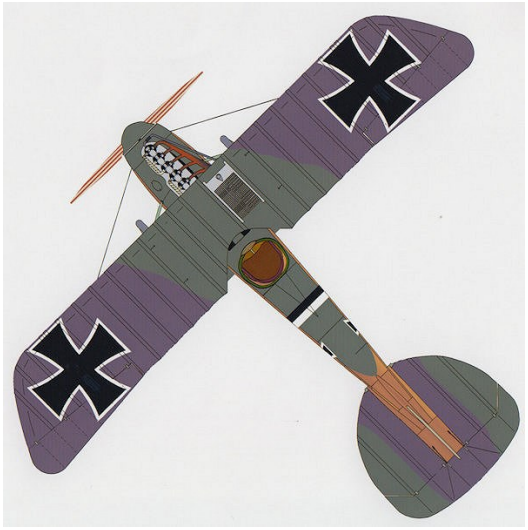
Remove the spinner.



Painting (continued):

NOTE: *Refer to the following illustrations for guidance.*





Mask off the sides of the fuselage (use the top longitudinal panel line as a guide) and the tail of the fuselage to leave just the grey/green coloured area exposed.

Mask off all openings in the fuselage, including the open cockpit and engine bay.

Airbrush the exposed areas of the fuselage and the propeller spinner with a grey primer, such as 'AK Interactive' Grey (AK758) or similar.

NOTE: *The 'Aviattic' Albatros D.V (ATT32326) decal set has the green/purple upper wing colours. As these decals will be applied over a coat of grey primer, the shade of the green coloured decal may change slightly. There, the painted colour of the upper fuselage needs to be colour matched as close as possible to the decal colour. The decal set has a wing decal that is marked as incorrect and this decal can be used as a test piece.*

Cut a green coloured piece from the incorrect decal as a test piece.

Airbrush a piece of plastic card with a grey primer, such as 'AK Interactive' Grey (AK758) or similar.

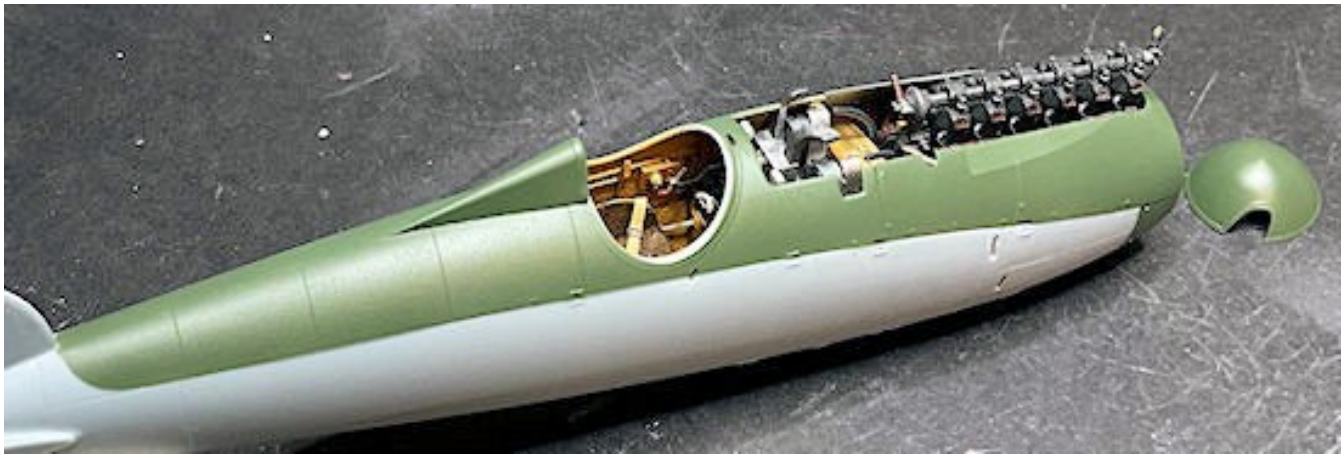
Apply the test decal onto a section of the grey primed plastic card.

NOTE: *To colour match the fuselage with the green decal, I mixed 'Hataka' (Orange line) Dark Moss Green (C246) with Light Green (C020) to a ratio of 50/50% and thinned with 'Mr. Colour' Levelling Thinners 400 by 10%. This colour mix was airbrushed onto the primed plastic card near the previously applied decal and the colour match checked. The colour of the applied paint was slightly darker, but the decal, once applied to the wings, will darken slightly when weathered and clear coated.*

Airbrush the grey primed areas of the fuselage and the propeller spinner with the mixed paint.

Remove all of the masking from the fuselage.

Check for any airbrush overspray around or into the cockpit or engine and if necessary, brush paint (as previously) to correct.



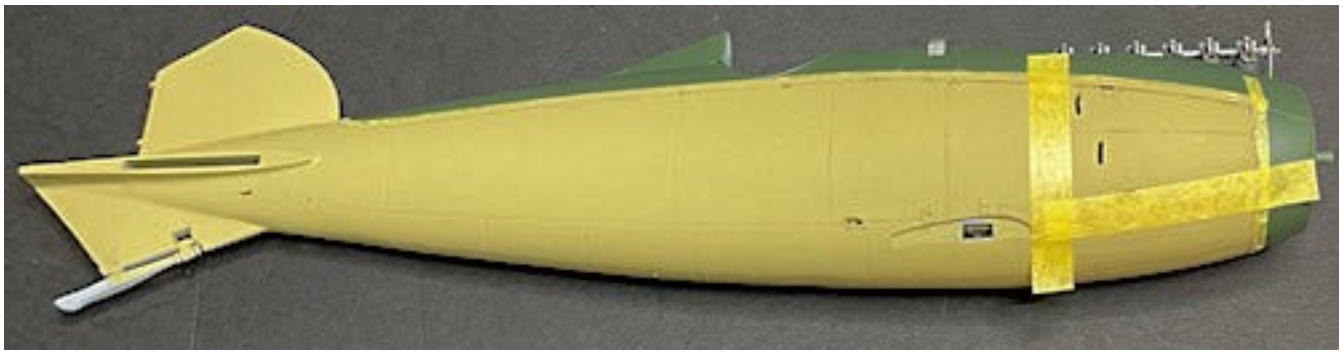
Wood effect:

NOTE: *Refer to Part 2 (Wood Effects), Method 2 of this build log for more information. The fuselage plywood effect is created using the 'Windsor & Newton' Griffin Alkyd* ***Raw Sienna*** *oil paint.*

Mask off the green painted fuselage, open cockpit, engine bay and the locating slots for the lower wings.

Airbrush the exposed fuselage areas with a grey primer, such as 'AK Interactive' Grey (AK758) or similar.

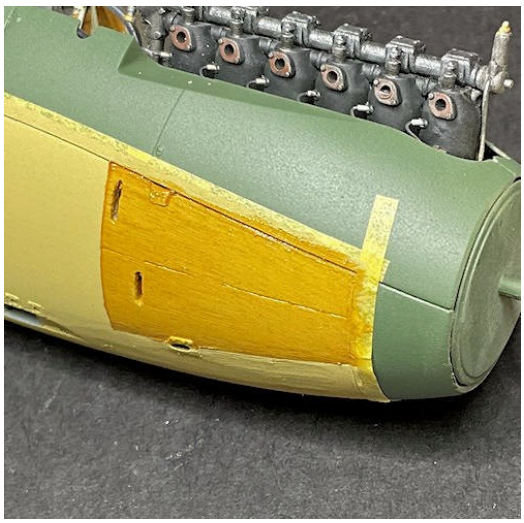
Airbrush the exposed fuselage areas with 'Tamiya' Dark Yellow (XF60) or similar.



NOTE: *To achieve different wood grain effects on the different fuselage panels it's best to paint each panel separately.*

Mask off the edges of an individual fuselage panel.

Brush the ‘Windsor & Newton’ Griffin Alkyd **Raw Sienna** oil paint to the panel to create a plywood effect.



Remove the masking from the panel edges.

Repeat the procedure on another panel away from the previously painted panel.

NOTE: *When masking the edges of already painted panels, make sure the oil paint has fully dried and apply the masking gently. Pressing hard on the masking may lift off previous oil paint.*

Continue painting separated panels around the fuselage, taking care to not touch already painted panels.

Remove all masking from the fuselage.

Brush paint the tail skid with ‘Windsor & Newton’ Griffin Alkyd **Burnt Umber** oil paint.

Brush paint the shoe of the tail skid with ‘Mr. Colour’ Stainless Steel (213) or similar.

Details parts:

NOTE: *The fuselage hatches panels are those from the ’Proper Plane’ Albatros D.V/D.Va Inspection Hatches (RD-015) set. The fuselage cooling louvres are those from the ’Proper Plane’ Albatros D.V/D.Va Louvres (RD-011) set.*

Airbrush the hatches, louvres and the kit supplied bulbus ammunition belt cover (left machine gun cover) with a grey primer, such as ‘AK Interactive’ Grey (AK758) or similar.

Airbrush the hatches, louvres and cover with ‘Hataka’ (Orange line) Dark Moss Green (C246) with Light Green (C020) to a ratio of 50/50% and thinned with ’Mr. Colour’ Levelling Thinners 400 by 10%.

Brush paint the following with ‘Hataka’ (Orange line) Dark Moss Green (C246) with Light Green (C020) to a ratio of 50/50%:

Rudder hinges on the fin trailing edge
Metal fittings
Pilots foot step
Tail skid metal fittings.

Brush paint the cockpit surround padding and pilots head rest with ‘AK Interactive’ Brown Leather (AK3031) with ‘AK Interactive’ WW1 British Uniform Light (AK3082) highlights.

Brush paint the tail skid suspension cords with ‘Tamiya’ Deck Tan (XF55) or similar.

Decals:

NOTE: *Refer to Part 4 (Decals) of this build log for more information. The decals used are those from the ‘Pheon Models’ Albatros D.V/D.Va Volume 1 (32011) set and kit supplied decals.*

To seal and protect the painted surfaces for applying decals, airbrush the areas for decals with a gloss clear coat, such as ‘Mig’ A-Stand Aqua Gloss (A.Mig-2503) or similar.

‘Pheon’ decals:

NOTE: *The ‘Pheon’ decal for the ‘jester’ has the elbow rounded, whereas the actual marking on the aircraft was sharper. Therefore, before apply this decal, cut away the elbow of the decal as in the following photograph.*

Apply the relevant ‘Pheon’ decals to the fuselage as follows:

Black/white bands around sides and top of fuselage

Number 4 to fuselage sides

Serial D.20006/17 to fin sides

The ‘jester’ to fuselage sides.

Kit supplied decals:

Apply the relevant kit supplied decals to the fuselage as follows:

Two line capacity decal to fuselage **left side only**

White bordered ‘Eisernes Kreuz’ (Cross Pattée) to fuselage sides

Section of white bordered ‘Eisernes Kreuz’ to fin sides.

To seal and protect the applied decals, airbrush a light coat of a clear gloss, such as ‘Mig’ A-Stand Aqua Gloss (A.Mig-2503) or similar.

Assembly (continued):

NOTE: *The fuselage hatches panels are those from the ’Proper Plane’ Albatros D.V/D.Va Inspection Hatches (RD-015) set. The fuselage cooling louvres are those from the ’Proper Plane’ Albatros D.V/D.Va Louvres (RD-011) set.*

Using thin CA adhesive, secure a large cooling louvre to the left, lower side of the fuselage.

Using thin CA adhesive, secure a small cooling louvre to the left, upper side of the fuselage.

Using thin CA adhesive, secure a large, flat access hatches to the left side of the fuselage/engine panel.

Using thin CA adhesive, secure one smaller, flat access hatches to the left side of the fuselage below the cooling louvres.

Using thin CA adhesive, secure a large cooling louvre to the right, lower side of the fuselage.

Using thin CA adhesive, secure a small cooling louvre to the right, upper side of the fuselage.

Using thin CA adhesive, secure a large, flat access hatches to the right side of the fuselage.

NOTE: *The remaining work on the fuselage is in Part 10 (Fuselage - continued) of this build log.*

PART 9
WEAPONS

PART 9 - WEAPONS

The kit supplied machine guns, although of good quality, were replaced with the resin ‘Gaspatch’ ‘Spandau’ 08/15 extended loading handle machine guns.

Preparation:

NOTE: *The supplied padding for the rear of the breach blocks and the ammunition belts are* ***not required*** *for this model.*

Remove the two machine guns and two gun barrels from their 3D print bases and remove any residual ‘support tree’ stubs from the edges of the parts.

Assembly:

Using thin CA adhesive, secure the gun barrels into their locating holes in the bottom, front of the cooling barrels of the machine guns.

Modifications:

NOTE: *The two machine guns need to be modified to be able to fit into the fuselage assembly - refer to* ***Part 8 (Fuselage)*** *of this build log. During the following steps, handle the machine guns with care, as they are fragile and can easily be broken.*

Refer to the following photograph and file away the resin areas (marked red) from the two ‘Proper Plane’ machine guns.

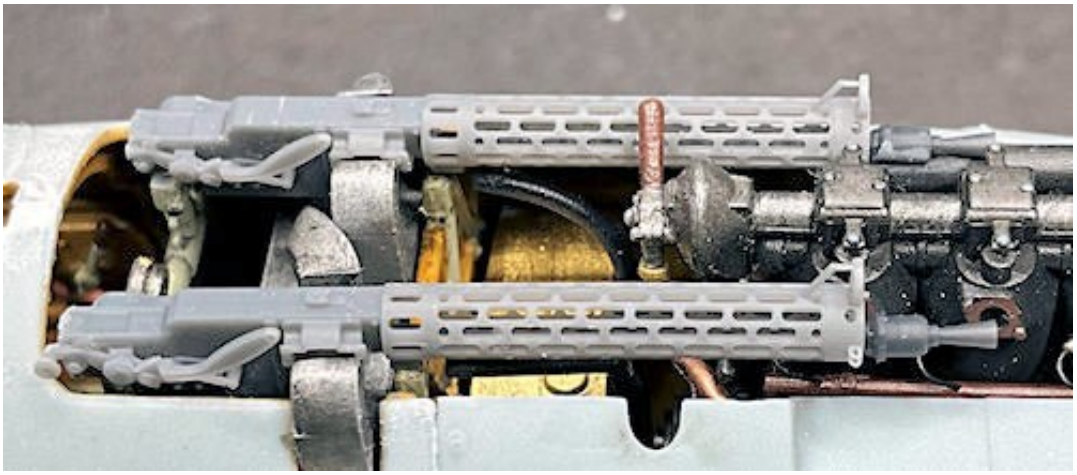
As material is removed, keep locating the weapons into the fuselage front and rear gun supports and check that:

The two weapons are horizontal when viewed from the sides and parallel when viewed from above.

The ammunition feed chutes in the fuselage align with the ammunition slots in the right side of the weapon breach blocks.

If necessary, to allow the left machine gun to locate correctly, remove material from the rear end of the rear carburettor intake manifold on the engine fitted already in the fuselage. Then repaint that area of the manifold with ’Tamiya’ Rubber Black (XF85).

Test fit of machine guns in fuselage (Part 8 of this build log)



Painting:

Airbrush the machine gun with a grey primer, such as ‘AK Interactive’ Grey (AK758) or similar.

Airbrush the machine gun with a gloss black, such as ‘Tamiya’ (X1) or similar.

Airbrush the machine gun with ‘Alclad’ Gun Metal (ALC-120) or similar.

Dry brush the machine gun with ‘Mr. Colour’ Super Iron 2 (SM203) or similar.

PART 10
FUSELAGE
(Continued)

PART 10 - FUSELAGE (Continued)

References:
'Windsock' WW1 Modelling Special' Serial No.2 - (Ray Rimell).
'Windsock' data file No.3 - Albatros D.V (Ray Rimell).
'Kookabarra' Technical Publications - Albatros Scouts described (Charles Schaedel).
'Profile Publications' No.9 - Albatros D.V (Peter Gray).

Preparation:

NOTE: *Once the various required parts are removed from their gates, remove any residual gate tags from the edges of the parts.*

Modifications:

Engine exhaust pipe:

NOTE: *The kit supplied engine exhaust pipe has been molded solid. Therefore, the exit opening of the exhaust pipe needs to be drilled out.*

Point mark once on the inside edge of the outlet.

Using the mark as a guide, drill into the outlet using a suitable drill (I used a 0.6 mm diameter drill). Make sure the hole is drilled aligned to the outer edge of the exhaust pipe, otherwise you may drill through the side of the pipe.

Continue to point mark and drill around the inside edge of the outlet.

Drill out the centre area of the outlet.

Slightly angle the drill in each drilled hole to remove as much material as possible.

Using a small, curved scalpel blade to carefully scrape away any drill ridges etc from inside the pipe, to smooth the internal surface.

Apply a small amount of cement to the internal surfaces to finally smooth the surfaces..

Painting:

Exhaust pipe:

Airbrush the exhaust pipe with a grey primer, such as 'AK Interactive' Grey (AK758) or similar.

Airbrush the exhaust pipe with **'Alclad' Exhaust Manifold (ALC-123)**.

Airbrush the exhaust pipe with a matte (flat) clear coat, such as **'Alclad' Flat (ALC-314)**.

Refer to Part 3 (Weathering) of this build log for more information - apply your desired weathering finish to the exhaust pipe (I used **'Flory Models' Dark Dirt or Grey fine clay wash**).

Seal the weathering with a semi-matte clear coat, such as **'Alclad' Light Sheen (ALC-311)**.

Dry brush the exit ends of the pipes with **'Tamiya' Flat Black (XF1)**.

Decking cover plate:

Remove the photo-etch decking cover plate from the kit supplied sheet.

Remove any residual photo-etch tags from the edges of the cover.

Brush 'VMS' Metal Prep 4K over the top (visible when fitted) surface of the cover.

Airbrush the plate with a grey primer, such as 'AK Interactive' Grey (AK758) or similar.

Airbrush the top surface of the cover with 'Hataka' (Orange line) Dark Moss Green (C246) with Light Green (C020) to a ratio of 50/50% and thinned with 'Mr. Colour' Levelling Thinners 400 by 10%.

Dry brush the decking plate with 'Mr. Colour' Super Iron 2 (SM203) or similar.

Windscreen:

Brush paint the frame of the windscreen with 'Hataka' (Orange line) Dark Moss Green (C246) with Light Green (C020) to a ratio of 50/50%.

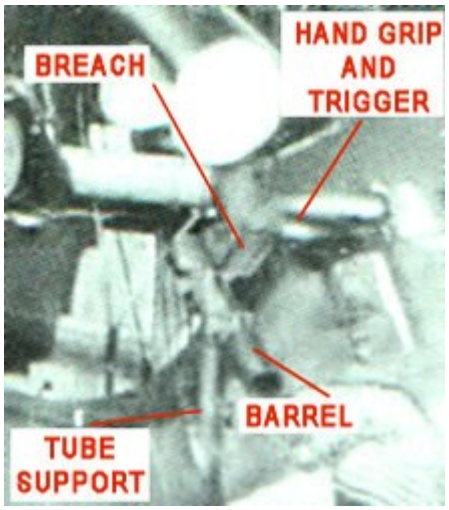
Flare pistol:

Airbrush the flare pistol assembly with a grey primer, such as 'AK Interactive' Grey (AK758) or similar.

Brush paint the mounting and flare pistol body with 'Tamiya' Semi-Gloss Black (X18) or similar.

Dry brush the flare pistol body with 'Mr. Colour' Super Iron 2 (SM203) or similar.

Brush paint the handle of the pistol with 'Tamiya' Hull Red (XF9) or similar.



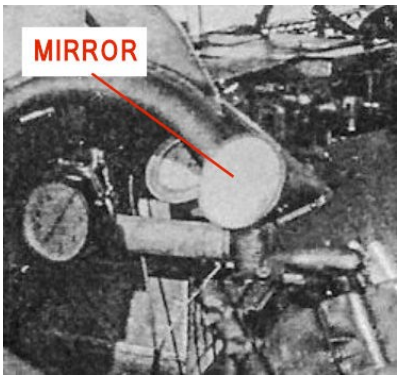
Mirror:

Airbrush the mirror with a grey primer, such as 'AK Interactive' Grey (AK758) or similar.

Brush paint the body of the mirror with 'Hataka' (Orange line) Dark Moss Green (C246) with Light Green (C020) to a ratio of 50/50%.

Brush paint the mirror surface with 'Mr. Colour' Stainless Steel (213) or similar.

Brush the mirror surface with 'Tamiya' Clear Yellow (X24).



Flare rack:

NOTE: *The flare rack used was from my 'spares' from other kits.*

Brush paint the flare rack a grey primer, such as 'AK Interactive' Grey (AK758) or similar.

Brush paint the flare rack with 'Tamiya' Dark Yellow (XF60).

NOTE: *Refer to Part 2 (Wood Effects), Method 2 of this build log for more information.*

Brush the flare rack with 'Windsor & Newton' Griffin Alkyd **Raw Sienna** oil paint, to create a wood effect.

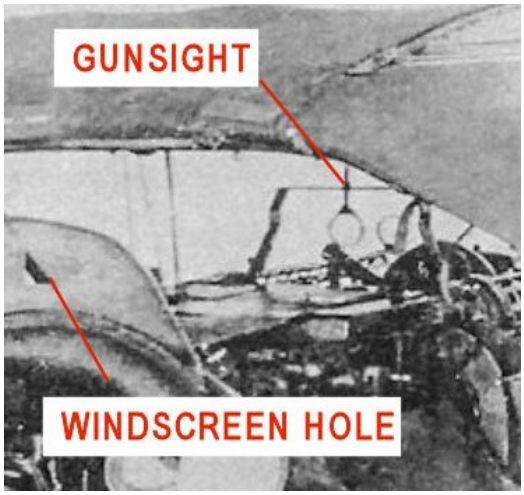
Brush paint the flares with 'Tamiya' Red (XF7) and White (XF2).

Brush paint the flare caps with 'Mr. Colour' Brass (219).

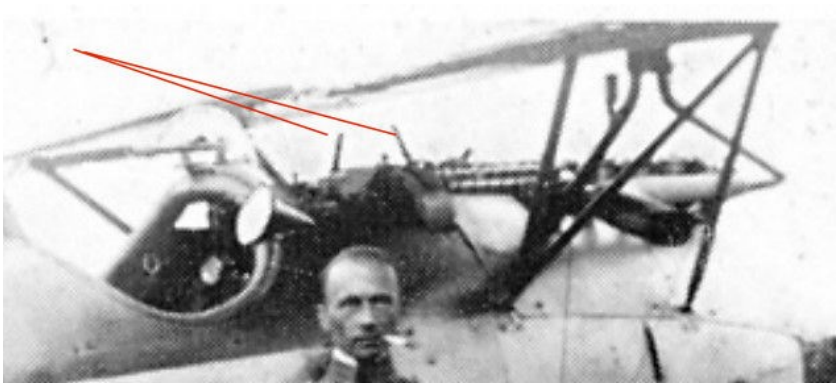
Modifications (continued):

Central gun sight and mount:

NOTE: *Some Albatros D.V fighters, including this particular aircraft, had what seems to be a field modification for the addition of a centrally mounted gunsight. This presumably was easier for the pilots to sight their machine guns without leaning left or right to use the sights mounted on the front of the machine gun cooling barrels.*



A different aircraft with the gunsight fitted

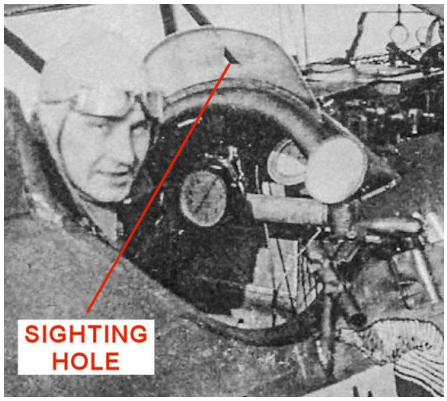


To represent the gun sight I cut a long length of 'Albion Alloy's' 0.5 mm diameter Aluminium tube (MAT05) and flattened it along its length using flat nosed pliers. This flattened tube was then bent to the shape of the support frame to span over the two machine guns, with its bottom ends overlapping the outer edge of the breech blocks of the machine guns. A 'spare' photo-etch ring type sight was then secured to the centre of the frame using thin CA adhesive. The gun sight assembly was the airbrushed with 'Tamiya' Rubber Black (XF85).

Windscreen:

NOTE: *Some Albatros D.V fighters, including this particular aircraft, had a field modification to introduce an opening in the windscreen, Presumably so that the pilot could clearly see the centrally mounted gun sight.*

During the following steps, make sure the windscreen is adequately supported while being drilled. If not may be stressed and crack or break.



The centre of the windscreen was drilled through, using first a drill of 0.5 mm diameter then increasing the drill sizes from 0.7mm, 0.9 mm and finally 1.0 mm diameter.

Assembly:

NOTE: *To avoid overspray, the windscreen will not be fitted until much later in this build.*

Machine guns:

NOTE: *The two 'Gaspatch' machine guns were modified and painted in Part 9 (Weapons) of this build log.*

Cement the bulbus ammunition belt cover (for the left machine gun) onto its location on the left side of the fuselage.

NOTE: *During fitting of the two machine guns, make sure both are aligned to each other when viewed from above and the sides and they are horizontal in the fuselage.*

Using thin CA adhesive, secure the left machine gun into position on its cockpit rear support and forward underside mounting. If necessary, for additional support, onto the rear intake manifold of the engine.

Using thin CA adhesive, secure the right machine gun into position on its cockpit rear support and forward underside mounting.

Decking cover plate:

Using thin CA adhesive, secure the decking cover plate in position on the fuselage at the rear edge of the gun bay opening and the left edge onto the left machine gun.

Gun sight:

Using thin CA adhesive, secure the central gun sight over the two machine guns with the bottom of the frame legs against the outer edges of the breech blocks of the machine guns.

Flare pistol:

Using thin CA adhesive, secure the mounting of the flare pistol into the pre-drilled hole in the fuselage at the right side of the cockpit.

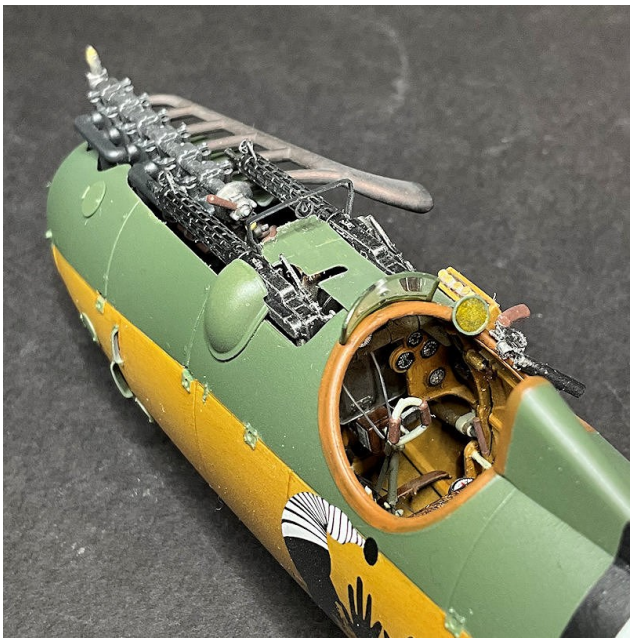
Flare rack:

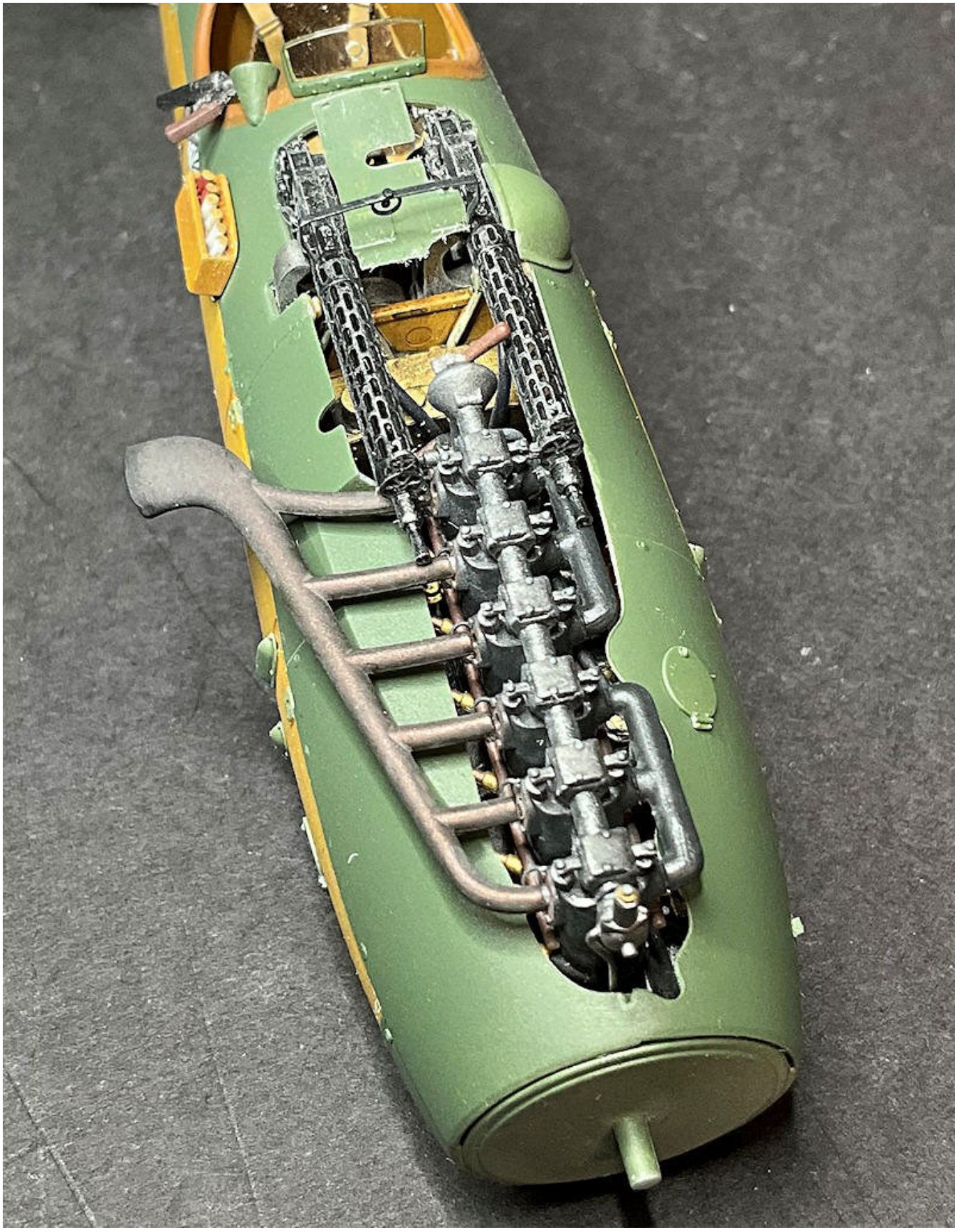
Using cement or thin CA adhesive, secure the flare rack for the flare pistol onto the fuselage at the forward, right side of the cockpit.

Mirror:

Using cement or thin CA adhesive, secure the mirror onto the fuselage and over the cockpit padding, above the fitted flare pistol.

NOTE: *The following photographs show the windscreen and engine exhaust pipe only temporarily located, as they will be finally fitted later in this build.*





Weathering:

NOTE: *Refer to Part 3 (Weathering) of this build log for more information.*

To provide a good base for applying weathering, airbrush a semi-matte clear coat, such as ‘Alclad’ Light Sheen (ALC311) or similar, over the fuselage.

Refer to Part 3 (Weathering) of this build log for more information - Apply your desired weathering finish to the parts. I used ‘Flory Models’ Dark Dirt and Grime fine clay wash.

Seal the applied decals by airbrushing the fuselage with a semi-matte clear coat, such as ‘Alclad’ Light Sheen (ALC311) or similar.

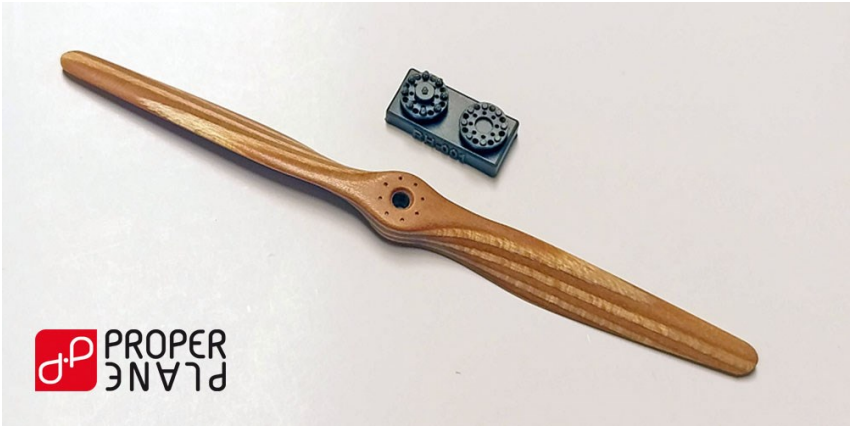
Brush ‘Tamiya’ Clear Gloss (X22) onto the faces of the cockpit instruments and the external rear view mirror.

Carefully dry brush the bulbus ammunition belt cover, fuselage access hatches and louvres with ‘Mr. Colour’ Super Iron 2 (SM203) or similar.

PART 11
PROPELLER

PART 11 - PROPELLER

The kit supplied propellers were not used and replaced with the ‘Proper Plane’ Axial wood laminated propeller (WP-001).



Preparation:

Carefully cut off the two ‘Proper Plane’ resin hub plates from their casting block.

Press the plates rear face down on flat sand paper and drag with a finger to remove residual resin down to the thickness of the cast plates.

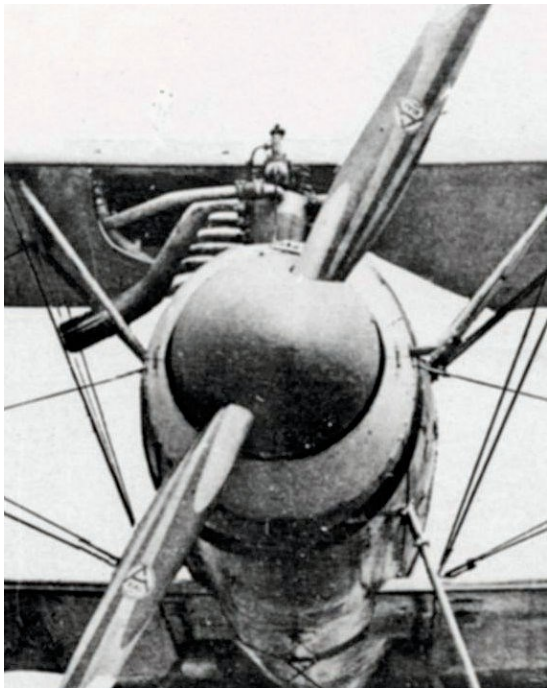
Brush paint the plates with ‘Tamiya’ Semi-matte Black (XF18) or similar.

Brush paint the plates with ‘Mr. Colour’ Stainless Steel (213) or similar.

Assembly:

Using thin CA adhesive, secure the front hub plate centrally onto the propeller, making sure it is fitted to the front face of the propeller hub.

Using thin CA adhesive, secure the rear hub plate centrally onto the back face of the propeller hub.



Decals:

Apply the kit supplied ‘Axial’ logo decals onto the propeller blades. Refer to the following photographs for the correct orientation of the decals on the blades.

PART 12
CONSTRUCTION

PART 12 - CONSTRUCTION

References:
'Windsock' WW1 Modelling Special' Serial No.2 - (Ray Rimell).
'Windsock' data file No.3 - Albatros D.V (Ray Rimell).
'Kookabarra' Technical Publications - Albatros Scouts described (Charles Schaedel).
'Profile Publications' No.9 - Albatros D.V (Peter Gray).

Preparation:

NOTE: *Once the various required kit parts are removed from their gates, remove any residual gate tags from the edges of the parts.*

Remove all remaining parts from their gates.

Tailplane and elevator:

Check fit the tailplanes B1/B2 into their locating slots in the fuselage and adjust if required. With the tailplanes located, check fit the elevator B7 onto its locating lugs on the rear of the tailplanes and adjust if required.

Rudder:

Check fit the rudder B5 onto its locating lugs on the rear of the fin and adjust if required.

Lower wings:

Check fit the lower wings B3/B4 into their locating slots in the fuselage and adjust if required.

Interplane and cabane struts:

Check fit the interplane struts D8 (x 2) and the fuselage cabane struts A3/A4 into their locating recesses in the upper/lower wing and the fuselage and adjust if required.

Ailerons:

Check fit the ailerons A43/A44 onto their locating lugs on the upper wing and adjust if required.

Landing gear:

Check fit the axle ends of the axle/fairing A24 through their locating holes in the landing gear struts A40/ A41 and adjust if required.

Control horns:

Drill a hole of 0.2 mm diameter through both ends (rear to front) of the two elevator control horns D2.

Aileron pulley inspection hatch:

Cement the hatch A48 into its locating recess in the underside of the upper wing centre section.

Remove the photo-etch aileron pulley access panel (P1) from the kit supplied sheet.

Remove any photo-etch 'tags' from the edges of the part.

NOTE: *Annealing photo-etch parts is done by applying heat from a cigarette lighter or similar, along the part until the photo-etch changes to a grey colour. Avoid melting the part by keeping the heat source moving over the part.*

Anneal (soften) the part to allow it to be formed over the trailing edge of the upper wing centre section. seat.

Clean off any soot created by the heat source.

Position the opening in the panel over the fitted hatch and holding it in position, bend the remaining panel around the wing trailing edge to the wing top surface.

Remove the panel.

Radiator:

NOTE: *The radiator fitted to the upper wing on this aircraft is the 'Teeves & Braun' type.*

Check fit the upper half of the radiator F9 into its locating recess in the top surface of the upper wing and adjust if required.

Check fit the underside half of the radiator F6 into its locating recess in the underside of the upper wing and adjust if required.

Check fit the coolant pipe F15 into its location recess in the underside radiator F6 and adjust if required.

Check fit the coolant pipe F13 into its location recess in the upper radiator half F9 and adjust if required.

Cement the radiator top housing A37 into its locating recess in the upper radiator half F9.

Modifications:

Wheels:

NOTE: *The kit supplied landing gear wheels are replaced with those in the 3D printed 'Proper Plane' Continental 760x100 wheels (RW-002) set.*

Remove the two 'Proper Plane' tyres, outer and inner wheels covers from their print base and remove any residual support tree tags from their edges.

Check fit the axle ends on the axle/fairing A24 through the 'Proper Plane' inner wheel covers and adjust if required.

Check fit the axle ends on the axle/fairing A24 into their recesses in the 'Proper Plane' outer wheel covers and adjust if required.

NOTE: *The following step is necessary to make sure that the 'Proper Plane' wheels can be assembled on the axle with the wheel restrainer in position between the wheel covers.*

Sand one face of the two wheel restrainers D10 to reduce their thickness, allowing the wheel covers to fully locate in the tyres.

Aileron cable covers:

NOTE: *The following step is necessary to make sure the forward lug on the aileron control horns D1 clears the rear face of the aileron cable covers A46/A47.*

Drill a recess of 1.2 mm diameter centrally into the rear face of the aileron cable covers A46/A47.

Anemometer:

NOTE: *The Anemometer is fitted at the end of this chapter. These holes will be used to locate the Anemometer.*

Drill a hole of 0.4 mm diameter through both struts of the left interplane 'V' strut. The holes should be drilled approximately 10 mm up each strut and from the bottom (top of the lower wing) end.

Painting:

NOTE: *Normally a light base coat, such as white or tan, is necessary under 'Aviattic' linen effect decals, in order for the full linen weave to be seen. However, for the green/purple and blue decals that will be used on this model, a light grey base coat is preferred as this will also slightly darken the colours of the decals.*

Airbrush the following parts with a grey primer, such as 'AK Interactive' Grey (AK758) or similar:

Upper wing
Lower wings (x2)
Ailerons (x 2)
Tailplanes (x 2)
Elevator
Wheel covers (x 4)
Tyres (x 2)
Fuselage cabane struts (x 2)
Interplane struts (x 2)
Aileron control covers (x 2)
Ammunition cover
Landing gear struts (x 2)
Radiator halves
Engine to radiator pipes (x 2).

Airbrush the following with several light coats of a gloss clear coat, such as 'Mig' A-Stand Aqua Gloss (A.Mig-2503) or similar:

Upper wing
Lower wings (x2)
Ailerons (x 2)
Tailplanes (x 2)
Elevator.

Brush 'VMS' Metal Prep 4K over the prepared photo-etch (P1) Aileron pulley inspection panel.

Airbrush the following parts with 'Hataka' (Orange line) Dark Moss Green (C246) with Light Green (C020) to a ratio of 50/50% and thinned with 'Mr. Colour' Levelling Thinners 400 by 10%. This should match the green of the fuselage:

Wheel covers (x 4)
Fuselage cabane struts (x 2)
Interplane struts (x 2)
Aileron pulley access panel (P1)
Landing gear struts (x 2).

Axle fairing:

Refer to Part 2 (Wood Effects), Method 2 of this build log for more information. The plywood effect is created using the 'Windsor & Newton' Griffin Alkyd ***Raw Sienna*** *oil paint.*

Airbrush the axle fairing with a grey primer, such as 'AK Interactive' Grey (AK758) or similar.

Airbrush the axle fairing with 'Tamiya' Dark Yellow (XF60) or similar.

Apply the oil paint to the panel to create a plywood effect.

Once the oil paint has fully dried, seal by airbrushing with a semi-matte clear coat, such as 'Tamiya' (X35) or similar.

Lower wing roots:

Refer to Part 2 (Wood Effects), Method 2 of this build log for more information. The plywood effect is created using the 'Windsor & Newton' Griffin Alkyd ***Raw Sienna*** *oil paint.*

Mask off the lower wing roots.

Airbrush the lower wing roots with a grey primer, such as 'AK Interactive' Grey (AK758) or similar.

Airbrush the lower wing roots with 'Tamiya' Dark Yellow (XF60) or similar.

Apply the oil paint to the lower wing roots to create a plywood effect.

Once the oil paint has fully dried, seal by airbrushing with a semi-matte clear coat, such as 'Tamiya' (X35) or similar.

Rudder:

Airbrush the rudder with a white primer, such as 'AK Interactive' White (AK759) or similar.

Airbrush the rudder with 'Tamiya' White (XF2) mixed with Deck Tan (XF55) to 85/15% ration.

Airbrush the rudder with a gloss clear coat, such as 'Mig' A-Stand Aqua Gloss (A.Mig-2503) or similar.

Decals:

Underside decals:

NOTE: *Refer to Part 4 (Decals) of this build log for more information. The decals used are those from the 'Aviattic' Albatros D.V (ATT32326) set. Follow the instructions printed on the decal sheet. Although these decals are pre-shaped to fit the model parts, they still need to be accurately cut out from the decal sheet. Apply the lighter Blue underside decals first.*

Carefully cut out the decals from their backing sheet.

Using a sharp scalpel blade, carefully cut out any hinge openings etc on the leading edges of the ailerons and elevator, to allow the decals to fit over the molded hinges on the parts.

To make it easier to apply the large upper wing decal, separate the decal by cutting across the decal at one side of the radiator recess.

NOTE: *The locating tabs for the two tailplanes are different sizes, so can only be fitted to the correct side of the fuselage. Before applying their decals, make sure you identify which are the undersides.*

Apply the decals to the undersides of the:

Upper wing
Lower wings
Ailerons
Elevator
Tailplanes.

To seal and protect the applied decals from subsequent handling and for applying additional decals, airbrush with a gloss clear coat, such as 'Mig' A-Stand Aqua Gloss (A.Mig-2503) or similar.

Top surface decals:

Follow the previous procedure to apply the upper surface decals.

Kit supplied decals:

Wings:

NOTE: *Refer to Part 4 (Decals) of this build log for more information. The decals used are those from the 'Wingnut Wings' kit supplied decals.*

Apply the relevant kit supplied decals to the wings as follows:

White bordered ‘Eisernes Kreuz’ (Cross Pattée) to each side of the top surface of the upper wing

White bordered ‘Eisernes Kreuz’ (Cross Pattée) to each side of the undersides of the lower wings.

Rudder:

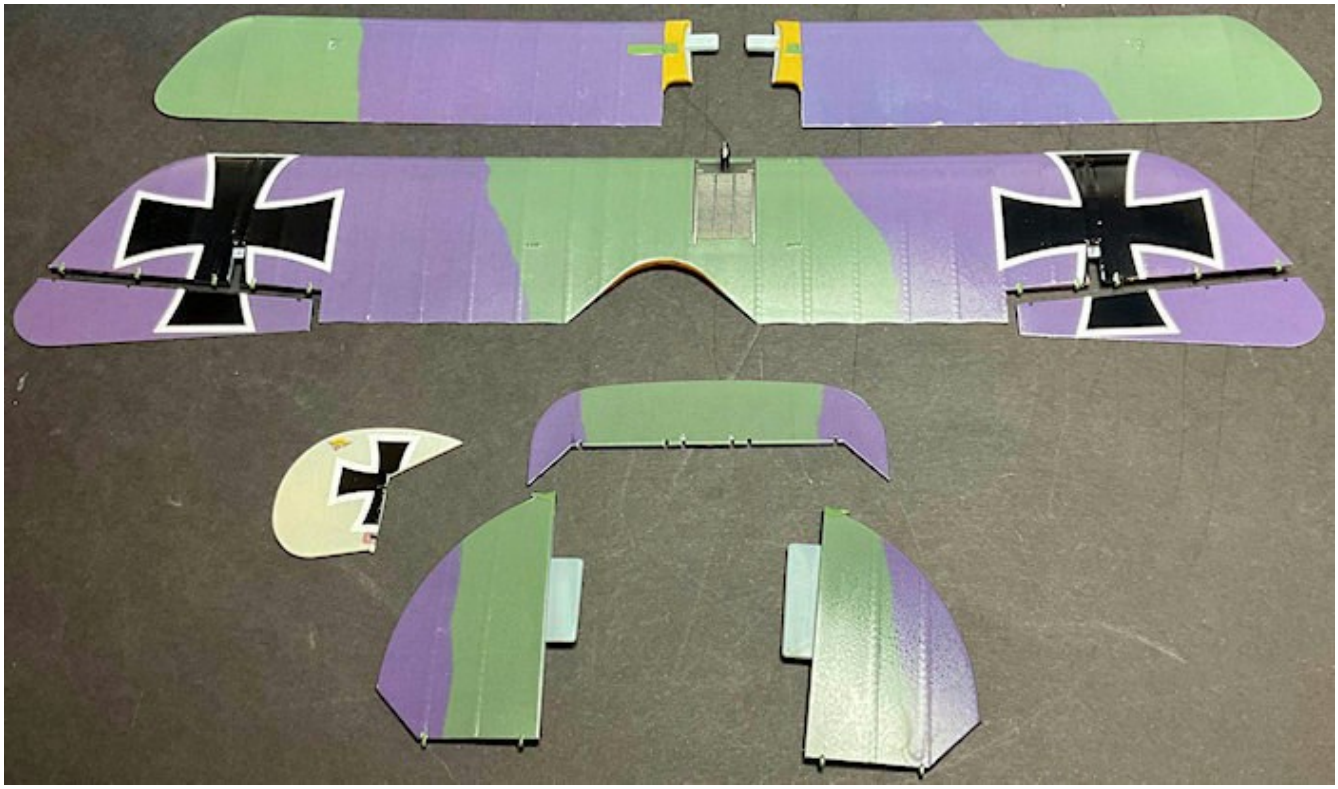
NOTE: *Make sure to align the section of the ‘Eisernes Kreuz’ on the rudder to the fin section of the ‘Eisernes Kreuz’.*

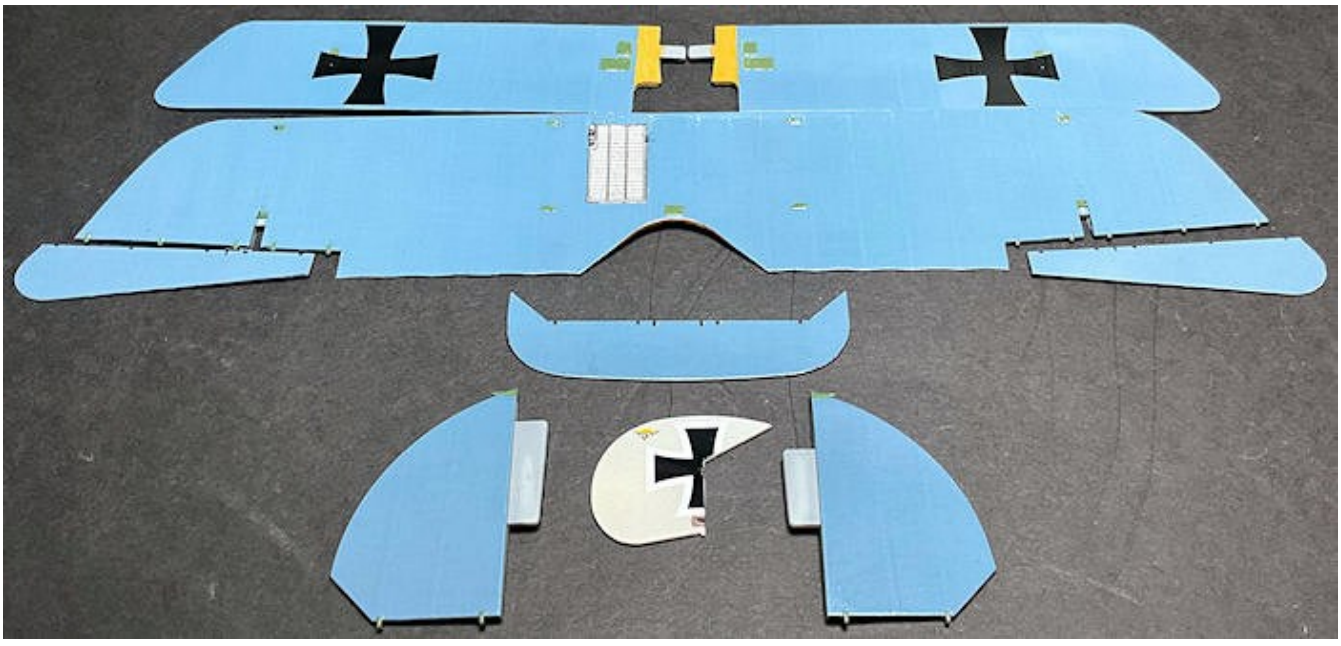
Apply the relevant kit supplied decals to the rudder as follows:

Section of white bordered ‘Eisernes Kreuz’ to rudder sides

Albatros logo to rudder sides.

To seal and protect the applied decals, airbrush with a light coat of clear gloss, such as ‘Mig’ A-Stand Aqua Gloss (A.Mig-2503) or similar.





Painting (continued):

Brush paint the following with 'Hataka' (Orange line) Dark Moss Green (C246) with Light Green (C020) to a ratio of 50/50%:

Aileron hinges on the upper wing trailing edge
Elevator hinges on the tailplanes trailing edges
Leading edge metal plates on both tailplanes
Metal fittings on both sides of lower wings
Metal fittings on both sides the upper wing.

Brush paint crash padding on the trailing edge of the curved centre section on the upper wing with 'AK Interactive' Brown Leather (AK3031) with 'AK Interactive' WW1 British Uniform Light (AK3082) highlights.

Airbrush the upper wing radiator halves with 'Tamiya' Gloss Black (X1) or similar.

Airbrush the upper wing radiator halves and the two engine radiator pipes with 'Alclad' Steel (ALC112) or similar.

Brush 'AK Interactive' Kerosene wash (AK2039) into the radiator shutters.

Brush paint the top half of the two aileron cable covers (A46, A47) with 'Tamiya' Semi-Gloss Black (X18) or similar.

Brush paint the underside half of the two aileron cable covers (A46, A47) with 'Tamiya' Medium Blue (XF18) mixed with Light Blue (XF23) at approximately 40/60 %.

Brush paint the two aileron control levers (D1) with 'Tamiya' Semi-Gloss Black (X18) or similar.

Brush paint the two elevator control horns with 'Tamiya' Semi-Gloss Black (X18) or similar.

Brush paint the 'bungee' suspension cords on the landing gear struts with 'Tamiya' Buff (XF57) or similar, then with Brush 'AK Interactive' Kerosene wash (AK2039).

Brush paint the centres of the axle wires with 'Tamiya' Rubber Black (XF85) or similar.

Weathering:

NOTE: *Refer to Part 3 (Weathering) of this build log for more information.*

To provide a good base for applying weathering, airbrush a semi-matte clear coat, such as 'Alclad' Light Sheen (ALC311) or similar, over the following:

Upper wing and Lower wings (x2)
Ailerons (x 2) and elevator
Tailplanes (x 2)
Wheel covers (x 4)
Fuselage cabane struts (x 2)
Interplane struts (x 2)
Aileron control covers (x 2)
Landing gear struts (x 2).

Apply your desired weathering finish to the parts. I used 'Flory Models' Dark Dirt and Grime fine clay wash.

Seal the applied weathering by airbrushing the fuselage with a semi-matte clear coat, such as 'Alclad' Light Sheen (ALC311) or similar.

Carefully dry brush the 'Mr. Colour' Super Iron 2 (SM203) or similar over the nose of the propeller spinner and painted metal fittings on the upper and lower wings.

Assembly:

Cement the upper half of the radiator into its recess in the top surface of the upper wing.

Cement the lower half of the radiator into its recess in the underside of the upper wing.

Cement the two aileron control cable covers into their recesses in the trailing edge of the upper wing, making sure the longer 'leg' of the covers locates into the tops of the recesses.

Cement the two aileron control levers (D1) into their recesses in the leading edges of the two ailerons.

Cement the two elevator control horns into their recesses in the leading edge of the elevator.

Cement the two tailplanes into the locating slots at the rear of the fuselage.

Cement the axle ends of the axle fairing into their locating holes at the bottom of the landing gear struts.

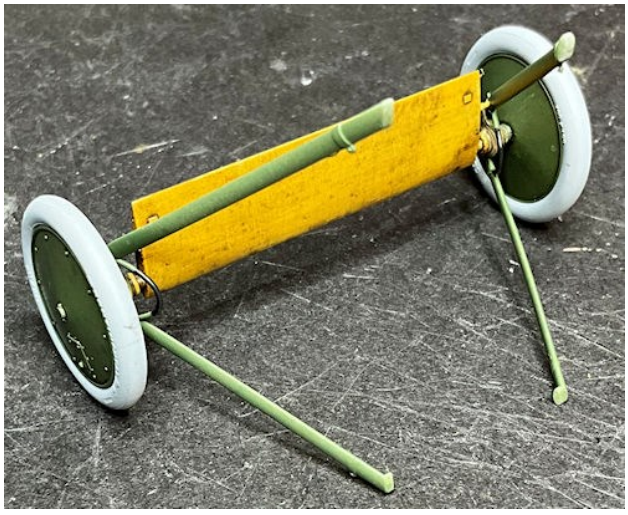
Locate the 'Proper Plane' rear wheel covers onto the ends of the axle.

Locate the wheel restrainers over the ends of the axles to retain the rear wheel covers on the axle.

Cement the restrainers to the axle ends and rear covers.

Locate the 'Proper Planes' tyres onto the outer wheel covers.

Cement the outer wheel cover/tyre assemblies fully onto the axle ends and rear wheel covers.



Drilling pre-rigging locations:

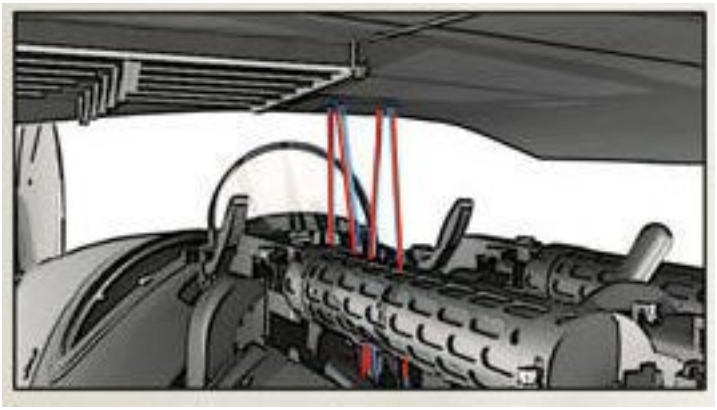
NOTE: *Refer to Part 6 (Rigging) for more information. Before continuing further with the build, it's best to drill the rigging location points into the various model parts.*

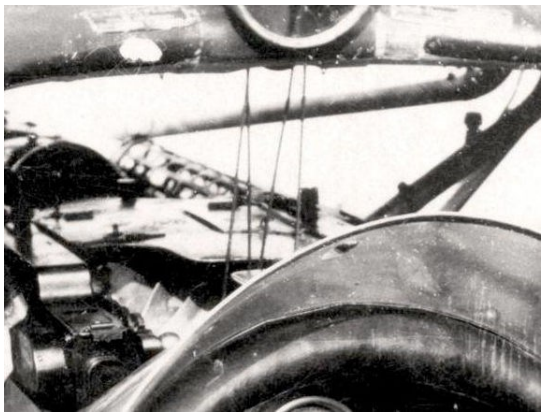
Elevator upper control cables:

Drill a hole of 0.5 mm diameter into, **but not through**, the top of the fuselage rear, centrally in the pre-molded recesses, making sure the holes are drilled at a shallow angle downwards (to align the cable, control wire, when fitted, with the tops of the elevator control horns).

Aileron control cables:

NOTE: *The two pairs of aileron control cables were routed from the fuselage top and into the aileron pulleys control hatch on the underside of the upper wing centre section.*



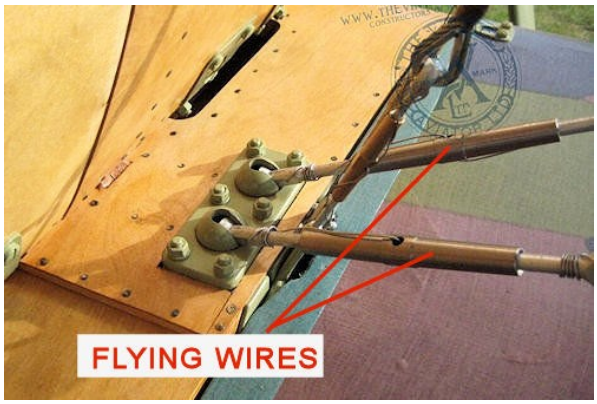


Drill a hole of 0.5 mm diameter into, **but not through**, the pre-molded locations on the aileron pulleys control hatch.

Flying wires:

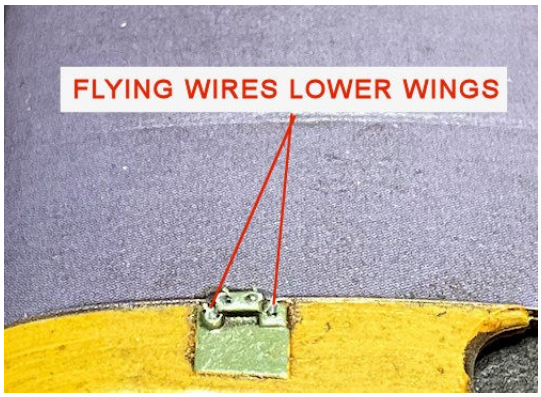
Temporarily fit the lower wings into the fuselage.

Temporarily fit the interplane 'V' struts into the lower wings.



Use as guides the pre-molded locations for the two flying wires at the root of the lower wings. Drill holes of 0.3 mm diameter into (**not through the lower wings),** making sure the holes are drilled at the angle necessary to align with the tops of the interplane 'V' struts on the lower wings.

Use as guides the pre-molded locations for the two flying wires in the underside of the upper wing, inboard from the location recesses for the interplane 'V' struts. Drill holes of 0.3 mm diameter into, **but not through**, the underside of the upper wing.



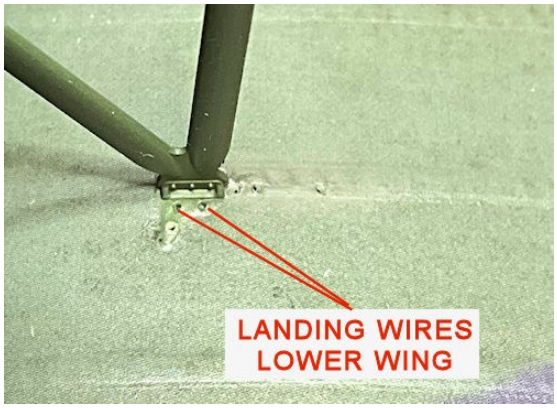
Landing wires:

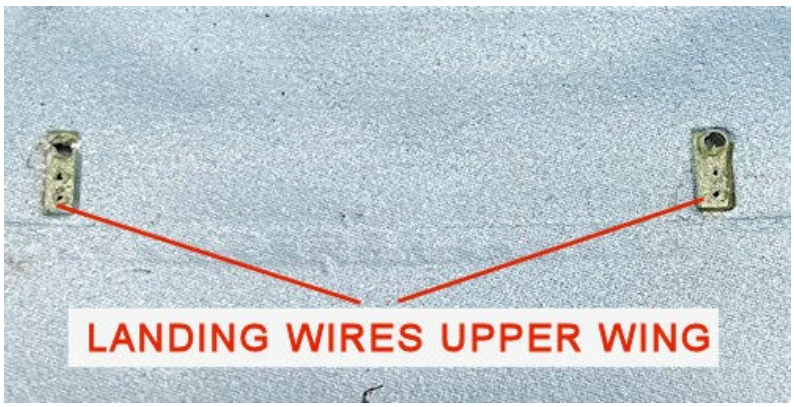
Temporarily fit the lower wings into the fuselage.

Temporarily fit the fuselage cabane struts into the fuselage.

Use as guides the pre-molded locations for the two landing wires on the top surface of the lower wings, inboard from the locating recesses for the interplane 'V' struts. Drill holes of 0.3 mm diameter into (**not through the lower wings),** making sure the holes are drilled at the angle necessary to align with the tops of the fuselage cabane struts.

Use as guides the **outboard** pre-molded locations for the two landing wires in the underside of the upper wing, outboard from the location recesses for the fuselage cabane struts. Drill holes of 0.3 mm diameter into, **but not through**, the underside of the upper wing.

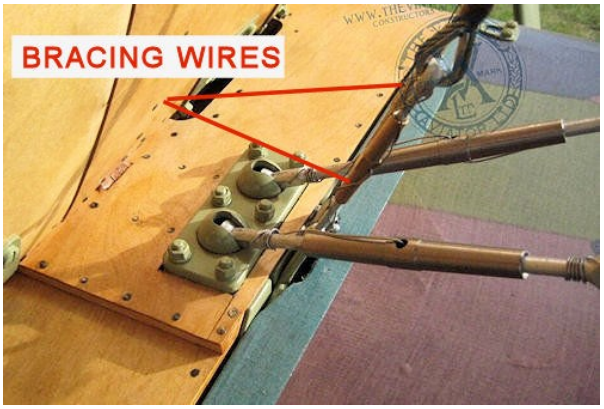




Bracing wires:

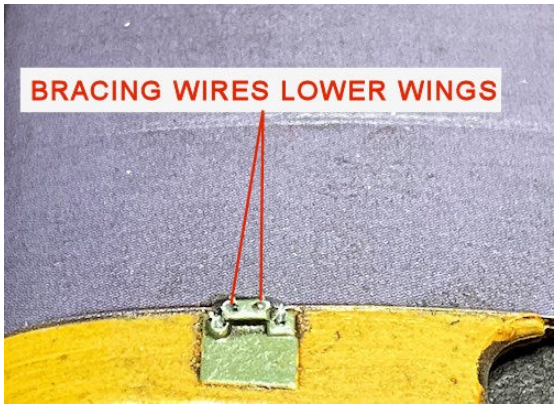
Temporarily fit the lower wings into the fuselage.

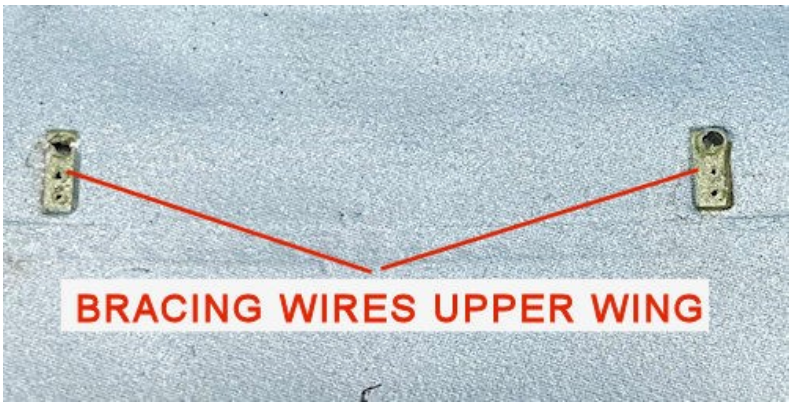
Temporarily fit the fuselage cabane struts into the fuselage.



Use as guides the pre-molded locations for the bracing wires at the root of the lower wings. Drill holes of 0.3 mm diameter into (**not through the lower wings),** making sure the holes are drilled at the angle necessary to align with the tops of the fuselage cabane struts.

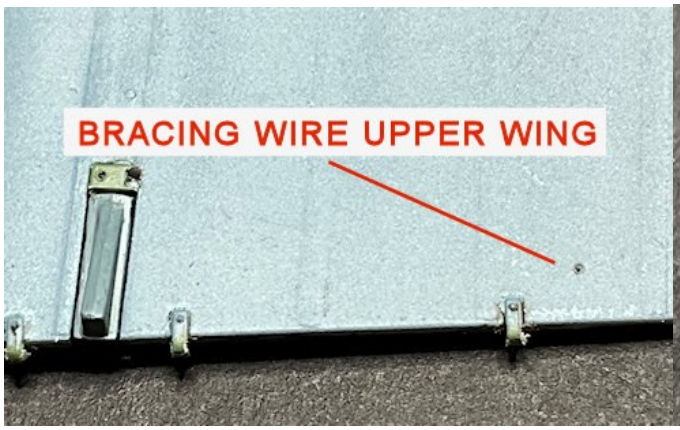
Use as guides the **inboard** pre-molded locations for the two bracing wires in the underside of the upper wing, outboard from the location recesses for the fuselage cabane struts. Drill holes of 0.3 mm diameter into, **but not through**, the underside of the upper wing.

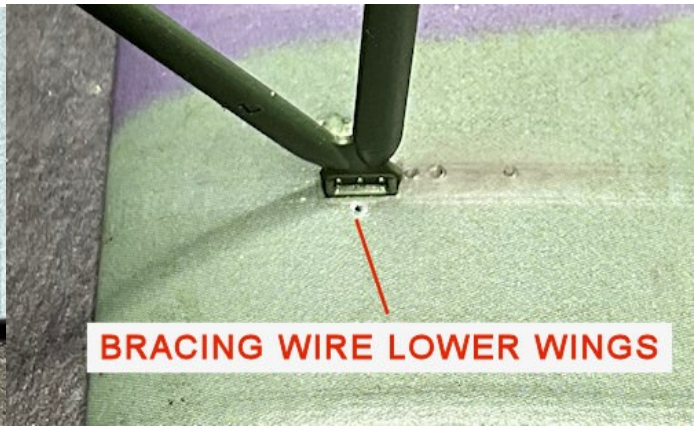




Use as guides the pre-molded locations for the bracing wires at the trailing edge of the upper wing, outboard from the second aileron hinge from the wing tip. Drill holes of 0.3 mm diameter into, but **not through,** the underside of the upper wing.

Drill holes of 0.3 mm diameter into, **but not through**, the upper surface of the lower wings, outboard from the bottom of the interplane 'V' struts. Drill the holes at the angle necessary to align with the tops of the trailing edge holes.



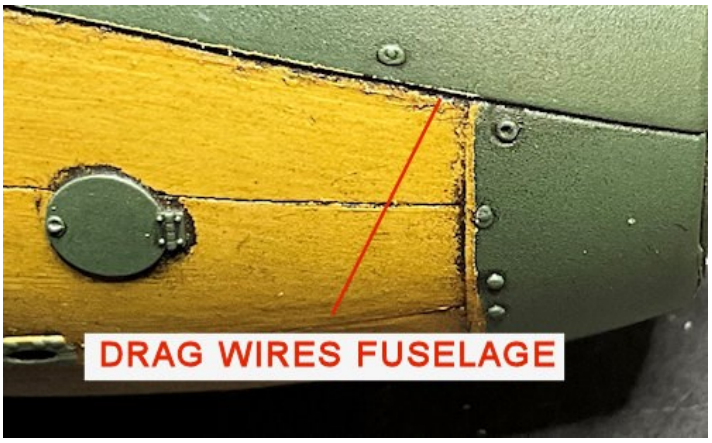


Drag wires:

Temporarily fit the lower wings into the fuselage.

Use as guides the pre-molded locations for the drag wires on the top surface of the lower wings, inboard from the locating recesses for the interplane 'V' struts. Drill holes of 0.3 mm diameter into, **not through,** the lower wings.

Drill holes of 0.3 mm diameter into the sides of the fuselage, at the join between the wood fuselage panels and the green painted metal engine/nose panels. Drill the holes at the angle necessary to align with the previously drilled in the lower wings.



Once the pre-rigging holes have been drilled, remove the struts and lower wings.

Landing gear bracing wires:

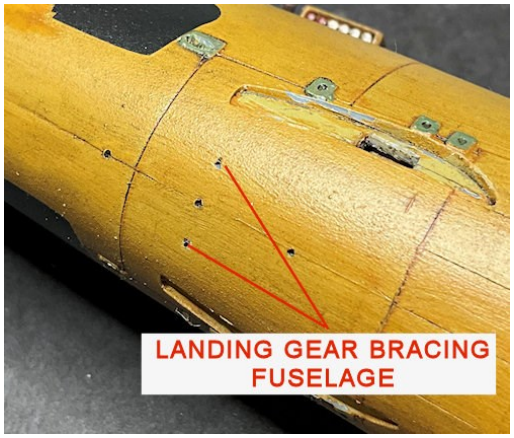
NOTE: *Handle the landing gear assembly with care. The struts are molded to scale and can easily be bent or broken.*

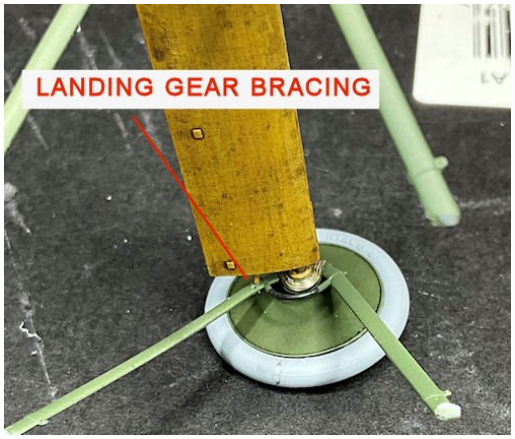
Temporarily fit the landing gear assembly into its fuselage locating recesses.

Use as guides the pre-molded locations for the bracing wires on the underside of the fuselage, either side of the centre line, inline with the rear edge of the lower wing
recesses. Drill holes of 0.3 mm diameter into the fuselage and at the angle necessary to align with the diagonally opposite rear, outer edge of the axle fairing.

Remove the landing gear assembly.

Use as guides the pre-molded locations for the bracing wires on the forward, lower edge of the landing gear rear struts. Drill holes of 0.3 mm diameter through the struts.



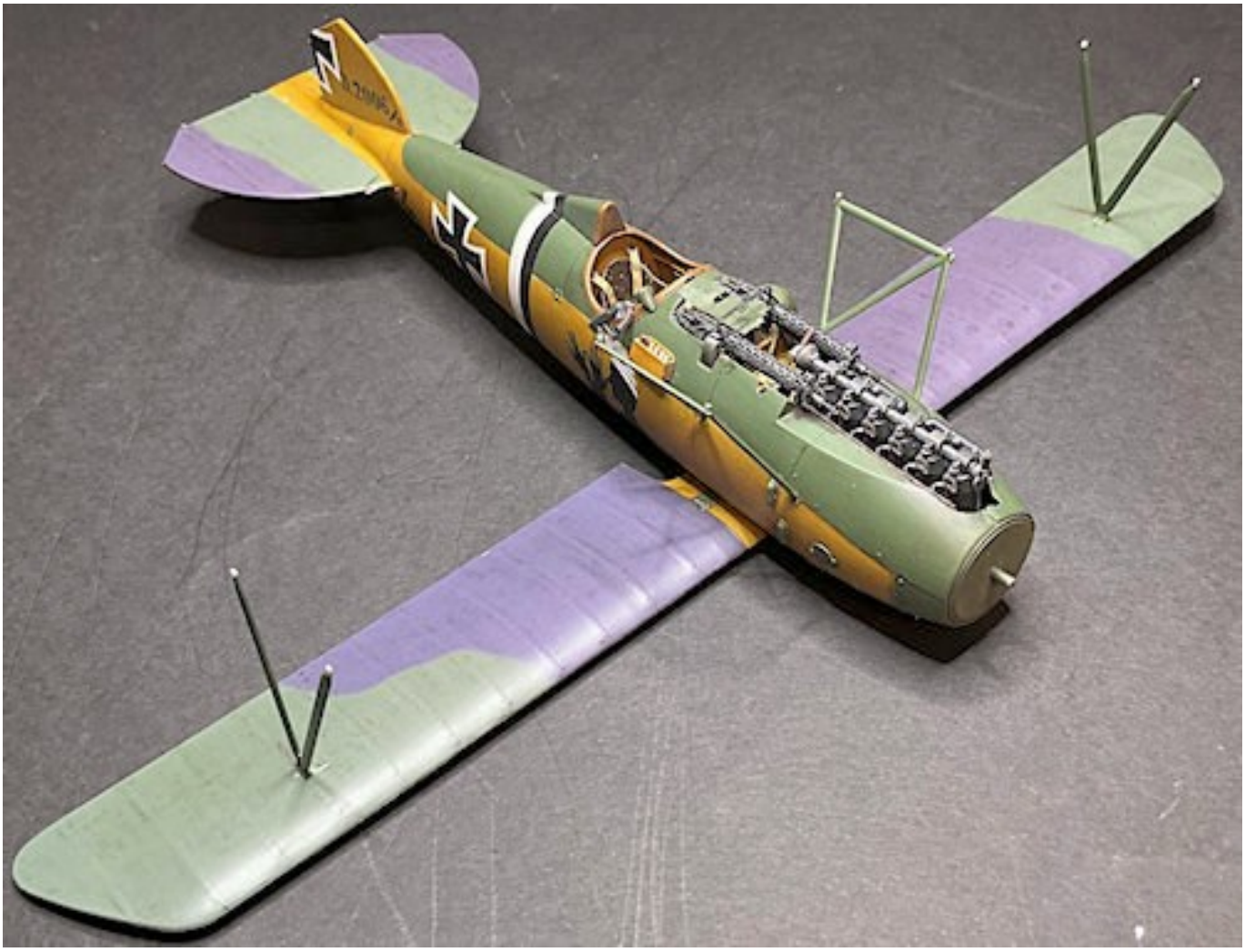


Assembly (continued):

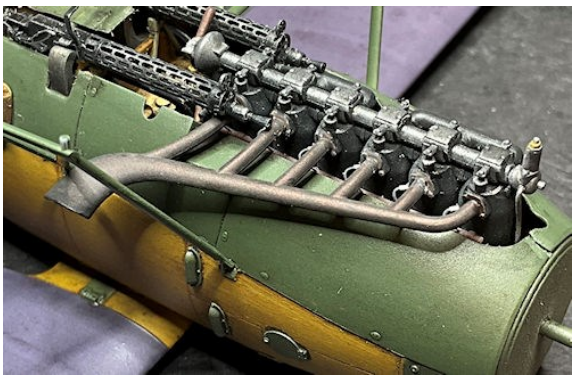
Cement the two lower wings fully into their locating slot/recesses in the fuselage.

Cement the two interplane 'V' struts into their locating recesses in the lower wings, making sure the struts are fitted correctly, with the slightly longer stuts facing forwards.

Cement the two cabane struts into their locating recesses in the fuselage, making sure the struts are fitted correctly, with their upper wing locating stubs vertical, when viewed from the front and aligned with the tops of the interplane 'V' struts, when viewed from the sides.



Cement the engine exhaust pipe into its locating holes in the upper, refight side of the engine, with the exhaust exit between the rear and centre cabane struts.



Rigging anchor points:

NOTE: *The Anchor Points used are the metal versions of the 'GasPatch Elite Accessories' Anchor Points (1/48 scale). Each are snapped at the centre to create two Anchor Points.*

Using thin CA adhesive, secure the 'leg' of an Anchor Point into each of the pre-drilled holes in the underside of the upper wing, **but not** the four holes in the aileron pulleys hatch (centre section of upper wing at trailing edge). Also on the top surface of the lower wings, for the drag wires (inboard from the bottom of the interplane 'V' struts). Make sure the Anchor Points are fitted so that the 'eye' of the Anchor Points will be parallel with fuselage.

Using thin CA adhesive, secure the 'leg' of an Anchor Point into the pre-drilled holes for the drag wires, located in the top surface of the lower wing, inboard from the locating recesses for the interplane 'V' struts.

Once secured in position and if necessary, run a 0.2 mm diameter drill through the 'eye' of any Anchor Points contaminated with adhesive.

Pre-rigging:

NOTE: *At this stage of the build it's best to pre-rig the model parts as this makes it easier to final rig the assembled model. The pre-rigging uses the following:*

'Albion Alloy's' 0.5 mm diameter Nickel-Silver micro-tube (NST05)

'Steelon' mono-filament (0.12 mm diameter)

'GasPatch Elite Accessories' 1/48 scale Turnbuckles (One Ended type).

Underside of upper wing:

NOTE: *For **each of the fitted Anchor Points (except the lower wing bracing wires)** fitted in the underside of the upper wing, use the following procedure to add a longer than necessary, pre-rigged line.*

If necessary, carefully run a 0.2 mm diameter drill through the 'eye' end of the Anchor Point to remove any obstruction.

Cut a short length of 0.5 mm diameter Nickel-Silver tube, such as that supplied from 'Albion Alloy's (NST05) or similar.

Deburr the tube by running a 0.3mm diameter drill through the tube.

NOTE: *Nickel-Silver tube can be chemically blackened by immersion in solutions such as 'Blacken-It' or similar.*

Blacken the tube to reduce its metallic sheen.

NOTE: *Always **cut the length of line much longer than needed** to span between its attachment points. This allows for easier connecting during the final rigging stage.*

Cut a long length of 0.12 mm diameter mono-filament (fishing line), such as that from 'Steelon'.

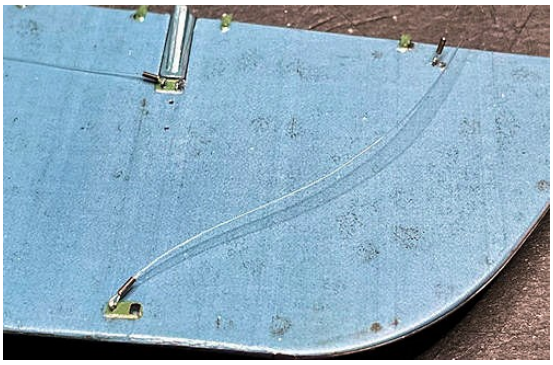
Pass the line through the tube, then trough the 'eye' end of the Anchor Point.

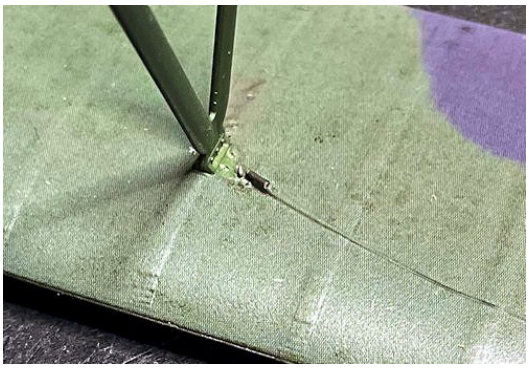
Loop the line back and through the tube.

Slide the tube up to, **but not touching**, the 'eye' end of the Anchor Point.

Using thin CA adhesive, secure the lines in the tube end away from the Anchor Point.

Cut away any residual tag of line at the tube end.





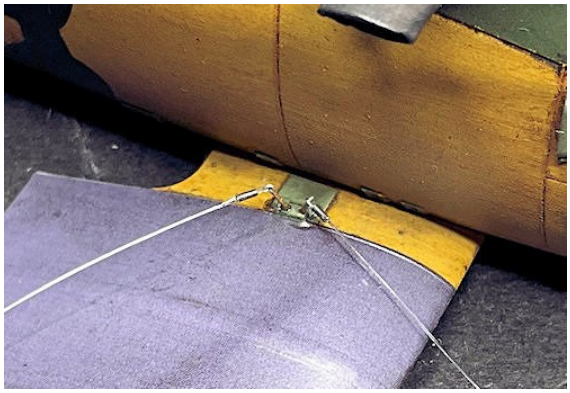
Fuselage:

NOTE: *At this stage, pre-rigging the two bracing wires at the lower wings roots will give easier access for add the adjacent flying wires later.*

Brush paint the centre barrels of four One-Ended turnbuckles with 'Mr. Colour' Brass (219) or similar.

Follow the pre-rigging procedure used for the anchor points to add a line to the four turnbuckles.

Using thin CA adhesive, secure the turnbuckles into their pre-drilled holes at the lower wing roots, making sure the turnbuckles are aligned to the tops of the relevant fuselage cabane struts.



Assembly (continued):

Using thin strips of masking tape, hold down the various pre-rigged lines to the underside of the upper wing and top surface of the lower wings. Make sure the lines are held clear on the locating recesses in the upper wing for the fuselage cabane and interplane 'V' struts.

Lay the upper wing, top surface down, on a flat surface.

Carefully lower the inverted fuselage/lower wing assembly onto the upper wing, locating fully the fuselage cabane struts first into their upper wing recesses.

Cement the fuselage cabane struts into the upper wing.

Fully locate the interplane 'V' struts into their locating recesses in the upper wing. If necessary, use appropriate elastic bands around the wings to hold the struts in position.

Cement the interplane 'V' struts into their locating recesses in the upper wing.

Remove the masking tape strips holding the pre-rigged lines to the wings.

Final rigging:

Inner bracing wires - upper to lower wings.

NOTE: *Follow the previous procedure used to pre-rig lines to the upper wing Anchor Points.*

Attach the two pre-rigged bracing wires at both lower wing roots to their relevant Anchor Points in the underside of the upper wing, outboard from the front and rear fuselage cabane struts.

Keeping the line taut, slide the tubes up to, **but not touching**, the 'eye' ends of the Anchor Points.

Using thin CA adhesive, secure the lines in the tube end away from the Anchor Point.

Cut away any residual tag of line at the tube end.

Attaching One Ended turnbuckles:

NOTE: *For attaching a One Ended turnbuckles to a pre-rigged line, use the following procedure:*

If necessary, carefully run a 0.2 mm diameter drill through the 'eye' end of the One Ended turnbuckle to remove any obstruction.

Cut a short length of 0.5 mm diameter Nickel-Silver tube, such as that supplied from ‘Albion Alloy’s (NST05) or similar.

Deburr the tube by running a 0.3mm diameter drill through the tube.

NOTE: *Nickel-Silver tube can be chemically blackened by immersion in solutions such as ‘Blacken-It’ or similar.*

Blacken the tube to reduce its metallic sheen.

Pass the pre-rigged line through the tube, then trough the ‘eye’ end of the turnbuckle.

Loop the line back and through the tube.

Slide the tube up to, **but not touching**, the ‘eye’ end of the turnbuckle, leaving the line loop through the turnbuckle loose (for final fitting).

To attach the turnbuckle to the model, refer to the following paragraphs.

Flying wires:

Attached a One Ended turnbuckle to the four flying wires, pre-rigged on the underside of the upper wing, inboard from the tops of the interplane ‘V’ struts.

Insert each turnbuckle into its pre-drilled locating hole at the lower wing roots at each side of the fitted bracing wires.

NOTE: *During the following step, take care id bending the ‘Gaspatch’ metal turnbuckles, as the can only be bent slightly before snapping.*

Check that the turnbuckles align to the opposite end Anchor Point in the underside of the upper wing. If necessary, use tweezers to carefully bend the turnbuckle to align it.

Using thin CA adhesive, secure the turnbuckles into their locating holes.

Keeping the line taut, slide the tubes up to, **but not touching**, the ‘eye’ ends of the turnbuckles.

Using thin CA adhesive, secure the lines in the tube ends away from the turnbuckles.

Cut away any residual tag of line at the tube ends.

Outer bracing wires - upper to lower wings:

Attached a One Ended turnbuckle to the two outer bracing wires, pre-rigged on the trailing edge, underside of the upper wing to outboard from the interplane ‘V’ struts on the lower wings.

Using the previous flying wires procedure, attach the outer bracing wires to the pre-drilled holes in the lower wings.

Landing wires:

Attached a One Ended turnbuckle to the four landing wires, pre-rigged on the underside of the upper wing, outboard from the tops of the fuselage cabane struts.

Using the previous flying wires procedure, attach the landing wires into their relevant pre-drilled holes in the lower wings, inboard from the bottom of the interplane ‘V’ struts.

Drag wires:

Attached a One Ended turnbuckle to the two drag wires, pre-rigged on the top surface of the lower wings, inboard from the bottom of the interplane ‘V’ struts.

Using the previous flying wires procedure, attach the drag wires into their relevant pre-drilled holes in the forward sides of the fuselage.

Aileron control cables:

NOTE: *The aileron control cables run from the cockpit and up through the slot in the fuselage decking panel to the centrally located aileron pulley hatch in the underside, trailing edge of the upper wing.*

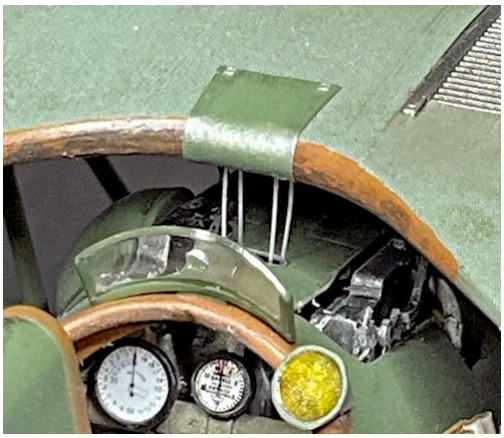
Cut four lengths of 0.12 mm diameter mono-filament, such as ‘Steelon’ or similar.

Apply a small amount of normal, thicker) CA adhesive to one end of a line.

Using angled tweezers, carefully locate the non-adhesive end of the line down inti the slot in the decking panel.

Carefully lift up the line to insert the adhesive end into one of the pre-drilled holes in the aileron pulley hatch.

Repeat the procedure to add the remaining three lines into their holes.



Assembly (continued):

Rear radiator pipe

Locate the bottom (engine water pump) end of the radiator pipe into the cut-out in the rear of the right engine cover panel.

Locate the top of the pipe into the rear pre-molded recess in the right underside of the radiator in the upper wing.

Cement the pipe into the radiator.

Front radiator pipe

Locate the front (engine cylinder) end of the radiator pipe into its locating recess in the engine front cylinder.

Locate the top of the pipe into the front pre-molded recess in the right underside of the radiator in the upper wing.

Cement the pipe into the radiator and engine cylinder.

Elevator:

Cement the elevator onto its four hinges on the trailing edge of the tailplanes and, if desired, angle the elevator slightly down.

Rudder:

Cement the rudder onto its two hinges on the trailing edge of the fin.

Landing gear:

Lay the aircraft down on the upper wing.

Locate the four landing gear struts fully into their locating recesses in the fuselage.

Cement the four landing gear struts into the fuselage.

Ailerons:

Cement the two ailerons onto their four hinges on the trailing edge of the upper wing.

Final rigging (continued):

Elevator control cables:

Cut a length of 0.12 mm diameter mono-filament, such as ‘Steelon’ or similar.

Pass the line through the pre-drilled hole in the upper end of an elevator control horn on the elevator.

Pass the line forwards and into the pre-drilled hole on the same side in the top rear of the fuselage.

Using thin CA adhesive, secure the line into the fuselage hole.

Keeping the line taut, secure the other end of the line in the control horn.

Cut away any residual line at the rear of the control horn.

Repeat the procedure to attach a line to the opposite control horn.

Cut a long length of 0.12 mm diameter mono-filament, such as ‘Steelon’ or similar.

Pass the line through the pre-molded slot in the fuselage lower rear and across to exit from the slot on the opposite side of the fuselage.

Pass the ends of the line through the pre-drilled holes the lower ends of the elevator control horns.

Keeping both lines taut, secure the other ends of the line in the control horns.

Cut away any residual line at the rear of the control horns.

Landing gear bracing wires:

Cut two long lengths of 0.12 mm diameter mono-filament, such as ‘Steelon’ or similar.

Using previous procedures, attach a One-Ended turnbuckle to one end of each line.

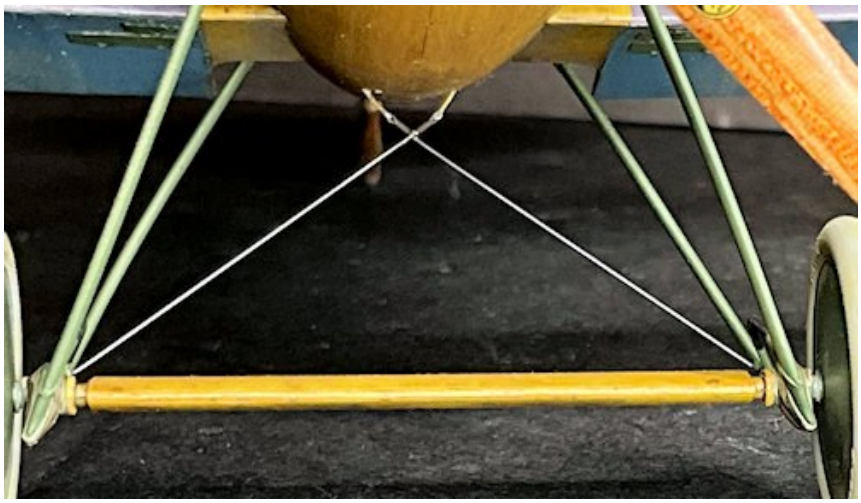
Using thin CA adhesive, secure the two turnbuckles into their pre-drilled holes in the fuselage underside, making sure the turnbuckles are aligned to the diagonally opposite landing gear rear struts (bottom).

Pass the free ends of the lines diagonally down to the opposite landing gear rear struts (bottom).

Pass each line through its pre-drilled hole in the bottom of the landing gear rear struts.

Keeping the lines taut, secure the lines in the struts using thin CA adhesive.

Cut away any residual line from the outer edge of the struts.



Rigging - final tensioning:

Invariably after rigging using mono-filament has been completed, some lines may be slack. This can be remedied by careful application of heat along the line, but should only be carried out once all rigging has been completed. Only then will you be able to see which lines require additional tensioning.

WARNING: *Care needs to be taken when using this method to tension line, as using a heat source is required.*

NOTE: *Take care not to linger at one area of a line with the heat source as this will melt the mono-filament causing the line to break. Also take care not to touch any part of the model or any other rigging, as this will also cause damage through melting.*

Carefully move a suitable heat source (I use a small electrical soldering iron) close to and along the slack line, keeping the heat source always moving. You will see the line tension as the applied heat takes effect, shrinking the line.

Final weathering:

Tyres:

Lightly sponge 'Tamiya' Weathering Master set A (mud) around the tyres.

Mud splatter:

Lightly wet a brush with 'Flory Models' wash (Grime) then flick the brush over a round rod or tooth pick to create spatter on the undersides of the lower wings, behind the wheels.

Rigging sheen:

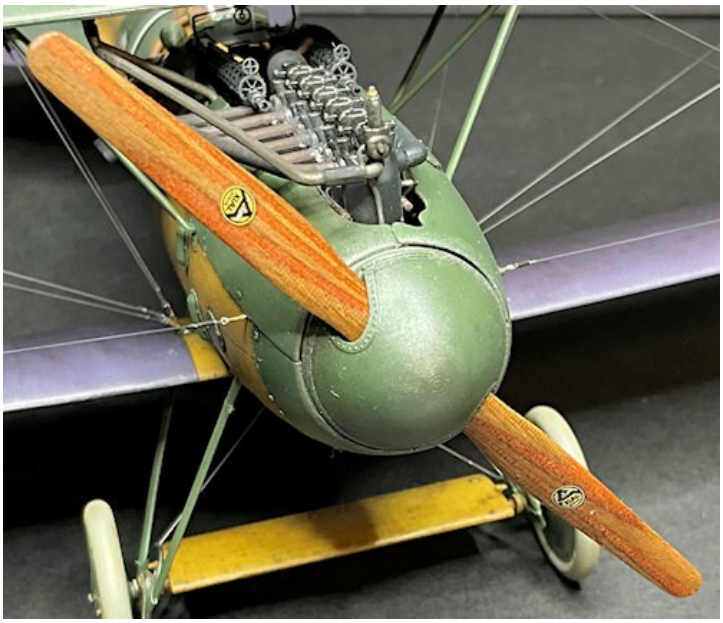
Airbrush all of the rigging wires and cables with a semi-matte clear coat, such as 'Alclad' Light Sheen (ALC311) or similar. This will reduce the natural sheen of the mono-filament.

Assembly (continued):

Propeller and spinner:

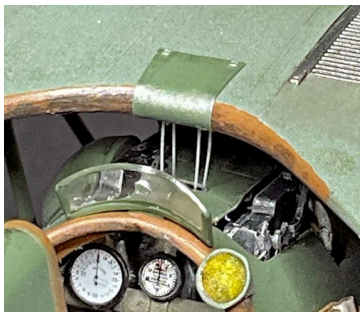
Using CA adhesive, secure the propeller onto the protruding engine propeller shaft.

Using thin CA adhesive, secure the 'Proper Plane' spinner over the propeller and against the spinner back plate.



Windscreen:

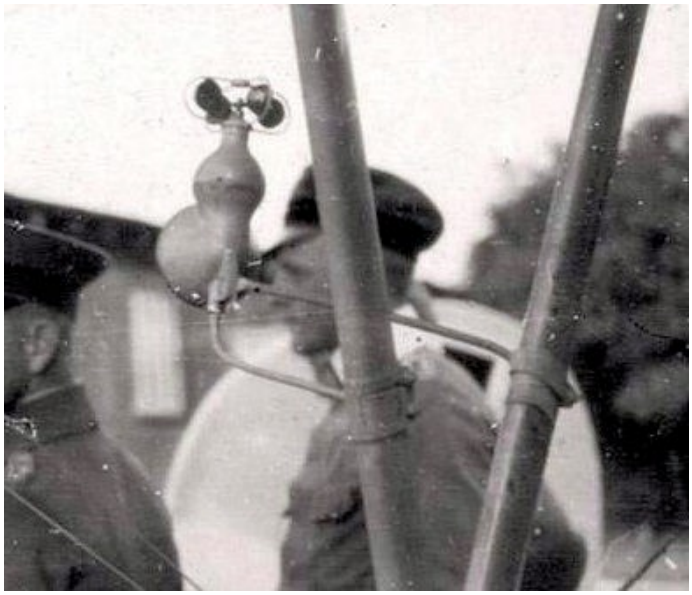
Cement the windscreen into its locating slot in the fuselage, forward from the cockpit.



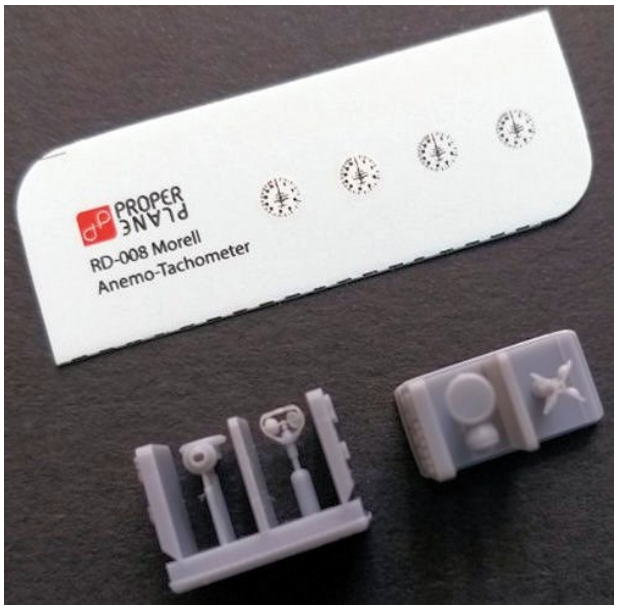
Modifications (continued):

Anemometer:

NOTE: *Some Albatros aircraft were fitted with an externally mounted, wing driven Anemometer (airspeed indicator). These were normally fitted to an interplane strut and positioned such that the pilot could see the aircrafts speed indication. One such aircraft was the Albatros D.V, Serial No. 2034/17 of Eduard Ritter von Schleich of the same Jasta 21 as the model in this build.*



Therefore, I chose to fit an Anemometer but replace the kit supplied part with the 3D printed 'Morell' Anemometer from 'Proper Plane' (RD-008).



Carefully remove the body and spinner from their support trees.

Remove any residual support tree stubs or mould flash from the parts.

Drill a hole of 0.4 mm diameter across and through the body of the Anemometer.

Cut a length of 0.4 mm diameter copper wire or similar malleable wire.

Pass the wire through the pre-drilled hole in the body and using thin CA adhesive, secure it midway along the wire.

Bend both sides of the wire such that they can be inserted into the pre-drilled holes in the left interplane 'V' strut and with the Anemometer vertical, facing towards the cockpit.

Painting:

Airbrush the Anemometer body and spinner with a grey primer, such as ‘AK Interactive’ Grey (AK758) or similar.

Brush paint the body with ‘Hataka’ (Orange line) Dark Moss Green (C246) with Light Green (C020) to a ratio of 50/50%:

Brush paint the spinner with ‘Mr. Colour’ Brass (219) or similar.

Brush the instrument face with ‘Tamiya’ Clear Gloss (X22) or similar.

Decal:

NOTE: *I chose not to use the supplied decal as these need to be accurately cut from the backing sheet. Instead, I use decal 11 from the ‘Airscale’ Generic Instruments WW1 (AS32-WW1) set.*

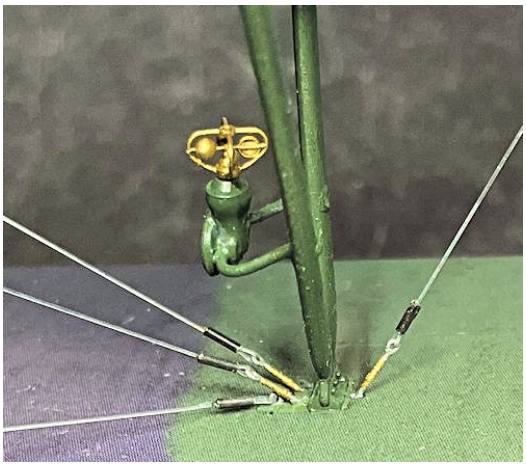
Apply the decal to the instrument face.

Brush the decal with ‘Tamiya’ Clear Gloss (X22).

Assembly:

Cement the spinner into it locating hole in the body of the Anemometer.

Locate the two wires from the Anemometer into the pre-drilled holes in the left interplane ‘V’ strut and secure in position using thin CA adhesive.



PART 13
FIGURE

PART 13 - FIGURE

The figure I chose to use is the ‘Aviattic’ Ltn Werner Voss (ATL004).

Preparation:

NOTE: *Refer to Part 5 (Resin) of this build log. The figure made of resin. I replaced the head with one from the ‘Hornet’ resin set.*

Cut away the body, legs, helmet/hand and the ’Hornet’ head from their casting blocks.

File or sand away residual casting resin or mold seam lines from the parts.

Check that there are no surface imperfections and if necessary, fill and/or sand to restore the surface finish.

Carefully drill a hole of 0.8mm diameter centrally up into the neck of the ’Hornet’ head, the underside of the body and one of the legs, making sure the drill is kept central to avoid it breaking through the leg.

Cut three lengths of 0.8mm diameter Brass rod, such as that from ‘Albion Alloy’s’ or similar.

Using CA adhesive, secure the rods into the pre-drilled holes in the body, head and leg. These will be used to hold the figure parts while being painted and the rod in the leg to mount the figure onto the display base.

Carefully drill out the right arm sleeve cavity to remove the ’solid’ look of the sleeve.

Painting:

NOTE: *The figure was painted using ‘AK Interactive’ and ‘Tamiya’ acrylic paints. Thin the ‘AK’ paints with their acrylic thinners (AK712).*

Airbrush the figure parts with a grey primer, such as ‘AK Interactive’ Grey (AK758) or similar

Laced boots - ‘AK Interactive’ Brown Leather (AK3031).

Trousers - ‘AK Interactive’ German Uniform Base (AK3091).

Jumper - ‘AK Interactive’ German Uniform Base (AK3091) mixed with German Uniform Light (AK3092) to lighten slightly.

Shirt collar: - ‘Tamiya’ Deck Tan (XF55).

Flying coat/helmet - Base colour - ‘AK Interactive’ Brown Leather (AK3031), highlights - ‘AK Interactive’ British Uniform (AK3081). Airbrush the helmet and coat with a semi-matte clear coat, such as ‘Alclad’ Light Sheen (ALC311) or similar.

Flesh - ‘Citadel Colour’ Cadian Flesh Tone with Kislev Flesh highlights.

Hair: - ‘Tamiya’ Rubber Black (XF85) with Medium Se Grey (XF83) dry brushed highlights.

Assembly:

Using thin CA adhesive, secure the legs portion of the figure fully into the body.

Using thin CA adhesive, secure the ‘Hornet’ head into the body.

Using thin CA adhesive, secure the right hand with helmet into the recess in the right arm.

Weathering:

NOTE: *Refer to Part 3 (Weathering) of this build log for more information.*

Brush apply ‘Flory Models’ Clay washes (Grim), desired, over the figure, but not the flesh.

Lightly sponge ‘Tamiya’ Weathering Master Set A (Mud) over the shoes.

Lightly sponge ‘Tamiya’ Weathering Master Set D (Oil Stain) over the pockets and elbows of the flying coat.

PART 14
DISPLAY BASE

PART 14 - DISPLAY BASE

The display case in made from piano black and clear acrylic sheet of 3mm thickness. The base shoulder, for locating the clear cover, is a second thickness on top of the base plate. This case was purpose built by Paul Moss, who has a retail outlet on Ebay - www.inperspextive.com

The grass mat used was the 'Model Scene' cut meadow - late Summer (F003).

The information plaque was engraved by 'TLS Engraving Ltd'.

Grass mat:

The grass mat was cut to the desired shape. The mat was laid onto the display base and positioned to ensure the model would clear the display top when located. A soft pencil was used to lightly trace the outline of the mat on the display base. PVA adhesive was then applied to the backing of the mat, which was then laid back onto the base, aligned to the pencil outline and gently pushed down to make proper contact. The grass mat was covered with a sheet of paper and several heavy books were then stacked onto the paper, to press the grass mat fully in contact with the display base. The books and paper were removed after several hours, when the edges of the grass mat were checked for contact (apply more PVA adhesive if not). The grass were gently brushed to remove any flatness.

Aircraft model:

The aircraft was not fixed to the display base, but left as 'free standing'. Although this may not be as secure as fixing the model to the display base, it does mean the model will not be subjected to shock loading when being moved around, as it might be if fixed on the display. However, the location of the wheels and tail skid were scored through the grass mat to give the model a more firmer location.

The figure:

The figure was positioned on the base in its final position and the location of the pin in the leg of the figure was marked on the grass mat. A hole of 1.0 mm was drilled through the grass mat and into (not through) the base. PVA or thin CA adhesive was then applied to the pin of the figure, which was then carefully seated into the drilled hole. Light pressure was applied to the figure to ensure it was fully located into the base.

PART 15
COMPLETED MODEL PHOTOGRAPHS


D.2006/17
4


D.2006/17
4


D.2006/17
4

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