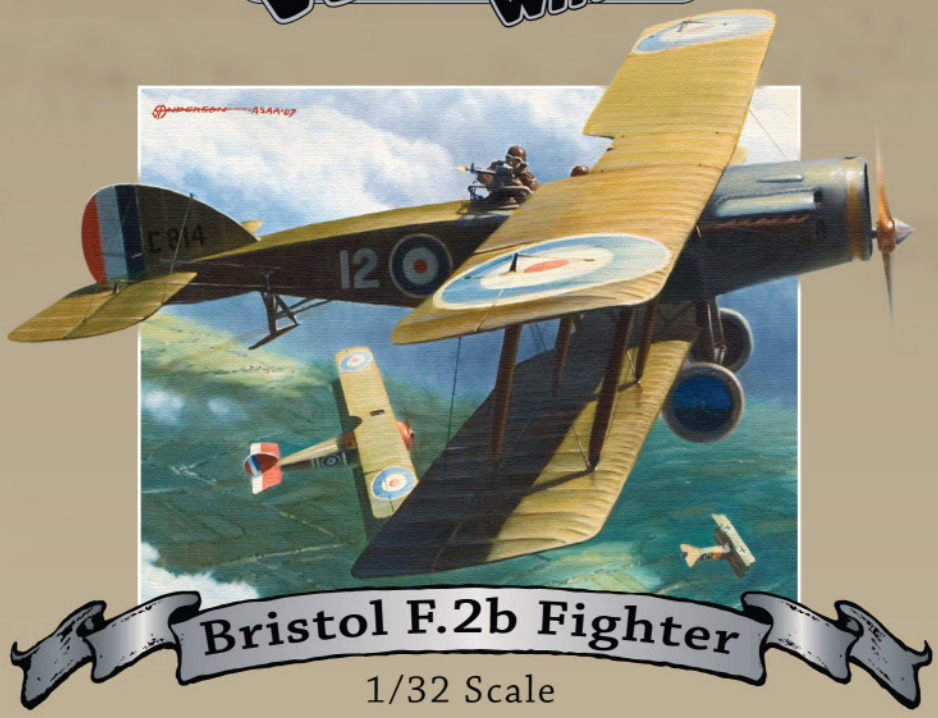


Bristol F.2b Fighter

1/32 Scale

Initially conceived in early 1916 as the Bristol R.2a reconnaissance aircraft to replace the RFC's aging BE2 series, Frank Barnwell's design evolved into the Bristol Fighter in July 1916 following the incorporation of the brand new Rolls Royce 190hp 'Falcon' engine. An order was placed for 50 aircraft and the first production Bristol F.2a Fighter (A3303) made the types maiden flight on 9 September 1916.

Deliveries of this new aircraft to 48 Squadron RFC started in December 1916 and continued through to March 1917 at which time they flew their 18 new Bristol F.2a Fighters to France. Their operational debut on 5 April 1917 was somewhat less than successful. Despite having the Bristol Fighter on strength for 3 months 48 Sqn thought it to be structurally unsound and, despite its name, flew them in a rather sedately manner similar to two seat reconnaissance aircraft, slow and steady as a platform for the rear gunner. Not surprisingly they were shot down just like slow and steady reconnaissance aircraft. It was soon realized that Bristol's fighter was actually a very sturdy aircraft that could, and should, be maneuvered as if it were a single seat fighter with rear protection. And a fighter it was, with over 240 pilots and gunners achieving ace status in the type before the end of the Great War. Further refinements to the design, of which the most obvious was angling the front longerons downwards to improve pilot visibility, resulted in the F.2b appearing in April 1917.

Several different engine types, including 150-200hp Hispano Suiza and Sunbeam's 200hp Arab, were fitted to the Biff (as it became affectionately known by those who flew it) but by far the most common and successful were the 190-275hp V12 Rolls Royce 'Falcon'. The Bristol Fighter continued to serve long after the war with many different air forces and was not finally withdrawn from Commonwealth service until it was retired by the RNZAF in 1936.

While there is little controversy about the common colour scheme for the Bristol Fighter of PC10 (Protective Covering number 10) dope for fabric upper surfaces, CDL (Clear Doped Linen) wing lower surfaces and, usually, Battleship Grey metal panels, there is a great deal of controversy as to what colour PC10 actually was. Made from mixes of yellow ochre, iron oxide and lamp black pigments it varied between chocolate brown and olive drab, depending on the mix and, presumably, time spent exposed to the elements. It appears that early, fresh, PC10 appeared more olive drab (XF62) while later mixes and aircraft exposed to the elements for some time would appear more chocolate brown (our suggested mix).

Wingspan:	Length:	Max Weight:	Max Speed:
39' 3" (11.96m)	25' 9" (7.85m)	2800lb (1070kg)	113mph (182kph)
No. manufactured:	**Production:**	**Engine:**	
4350	Aug. 1916 to Aug. 1919	Rolls Royce Falcon 1 (190hp), II (220hp) and III (275hp)	
Armament:			
.303" Vickers fixed and 1 or 2 .303" Lewis guns on Scarff ring mount, 25lb and 112lb bombs (to a weight of 300lb).			
References:			
Windsock Datafile Special volume 1 and 2 by J.M.Bruce 1997 and 1998. – Squadron Signal Bristol Fighter in Action 1993. Osprey Bristol F 2 Fighter Aces of World War 1 by Jon Guttman 2007. - RAF Museum Hendon, England. 1914-18 Aviation Heritage Trust. – Private collections.			

Bristol F.2b Fighter

1/32 Scale

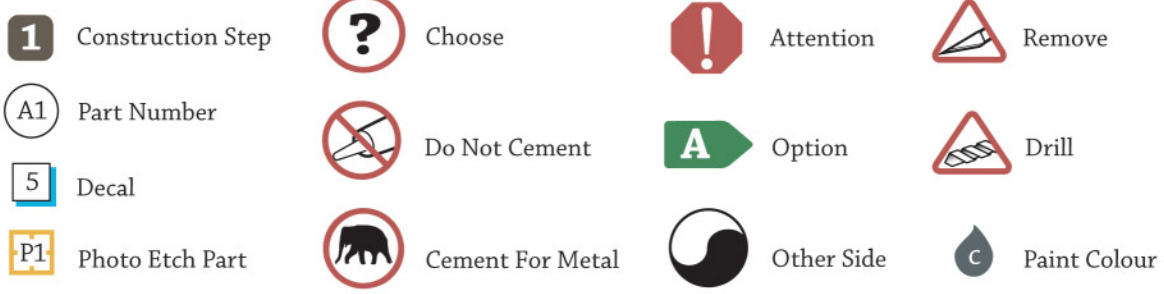
Warning: Choking hazard. Keep small parts and plastic bags away from children. Use glue and paint in a well ventilated area. Always wear protective eyewear when cutting and a protective mask when painting, gluing and sanding. Do not breathe dust from polyurethane resin parts (if included). Beware of sharp edges on metal parts.

Assembly: Read all the instructions carefully before starting assembly. Use glue intended for plastic models. Assemble metal and resin parts (if included) using Cyanoacrylate (CA) or epoxy glue. Before assembly select a marking option and note optional parts required in instructions.

Painting: Only use paints suitable for plastic model kitsets.

Decals: Cut out each decal as required. Soak in warm water for 15 seconds. Slide off backing paper onto gloss painted surface of model. For large decals it is helpful to apply a drop of water to the area they are being applied to. This will make it easier to maneuver them into the correct position

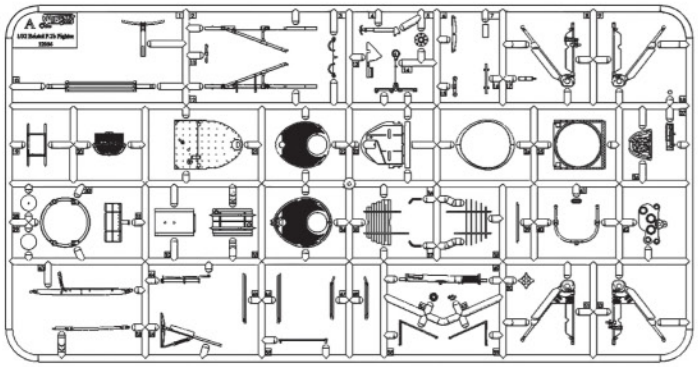
SYMBOLS



PAINT COLOURS

	All colours	Tamiya	Humbrol	Misterkit
a	Brass	X31	54	
b	Copper	XF6	12	
c	Gun Metal	X10	27004	
d	Aluminium	XF16	27001	
e	Steel	XF56	27003	
f	Dark Yellow	XF60	74	
g	Rust	XF9	113	
h	Leather	XF52	62	
i	Clear Doped Linen	XF55	121	BC05
j	Battleship Grey	XF53	87	BC01
k	PC10	XF62(x2) + XF10(x1)	155	BC03
l	Red	XF7	60	BC07
m	Buff	XF57	103	
n	Blue	X4	14	BC08
o	Dark Wood	XF68	98	
p	Semi Gloss Black	X18	85	
q	Dark Grey	XF63	67	
r	Light Wood	XF59	93	
s	White	XF2	34	

A



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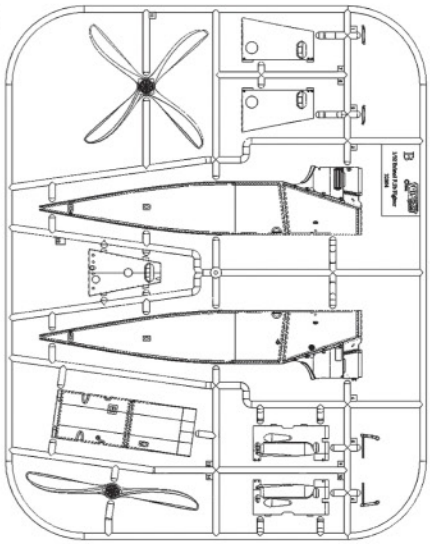

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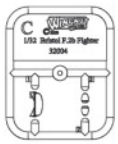
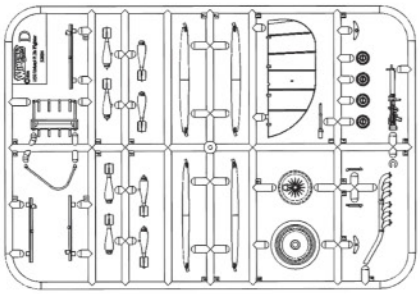


D
x2



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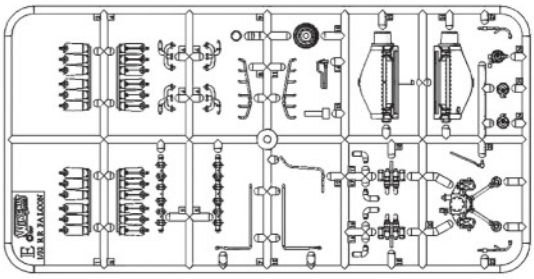

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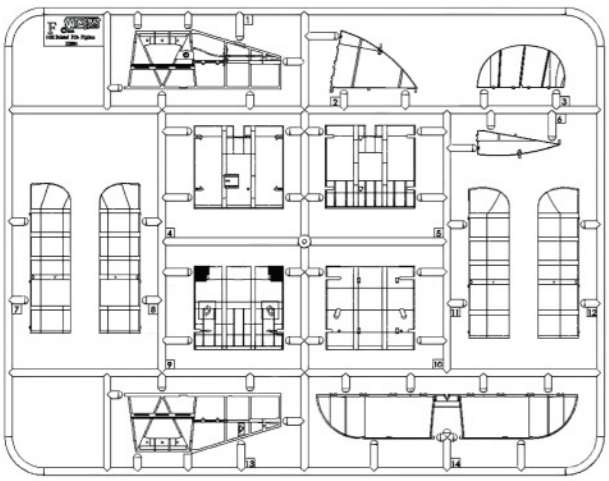
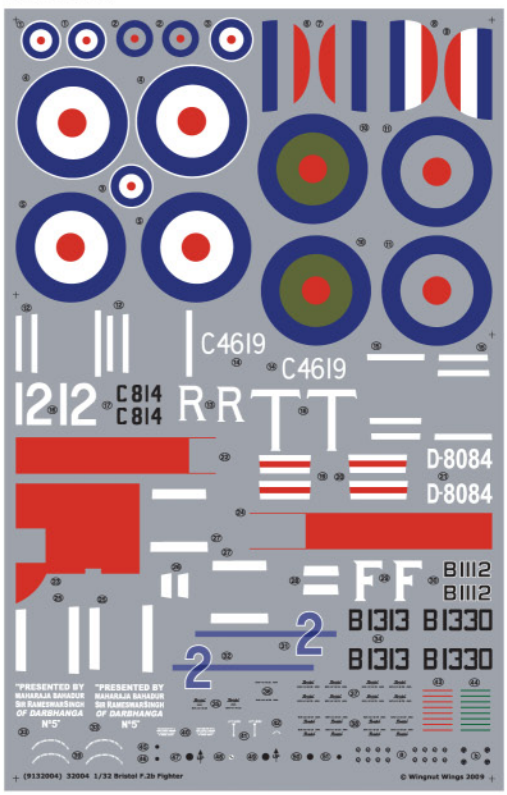


Photo Etch

Decal Sheet



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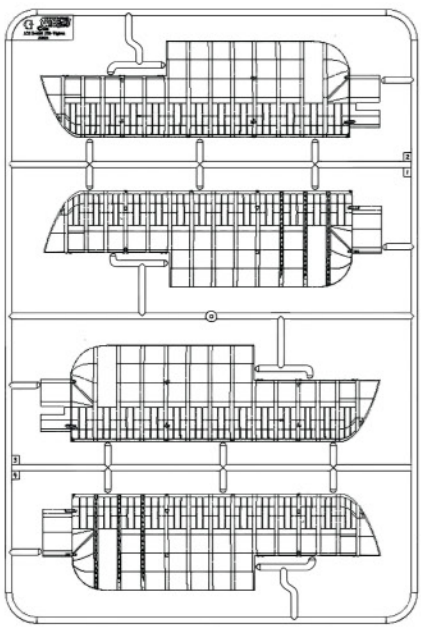
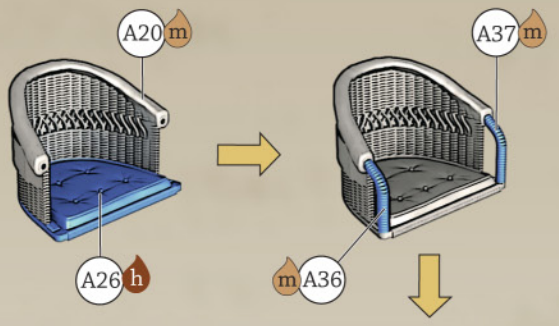
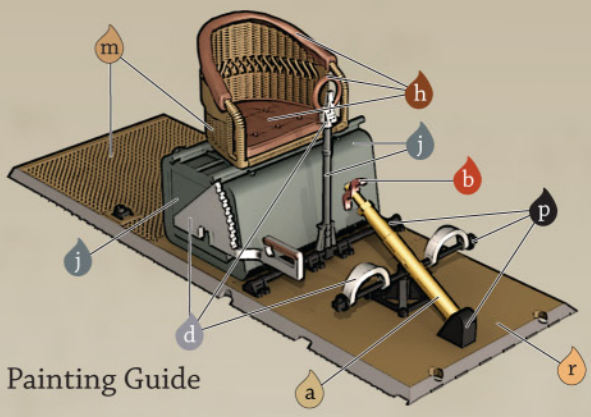
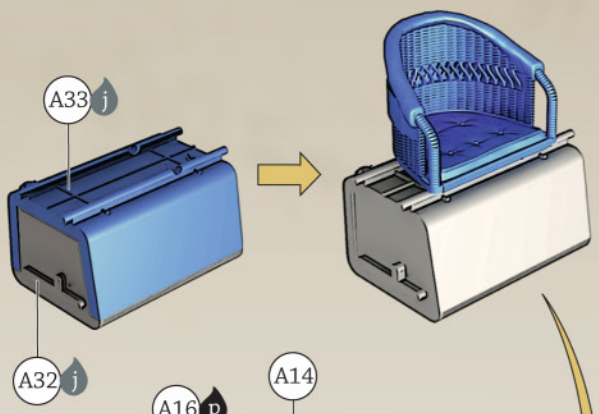


1 COCKPIT INTERIOR

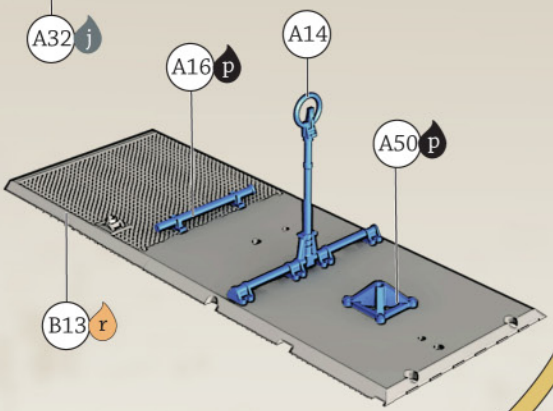


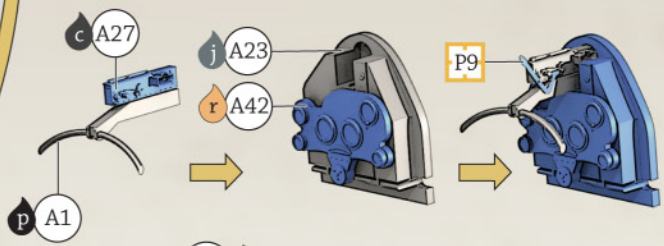


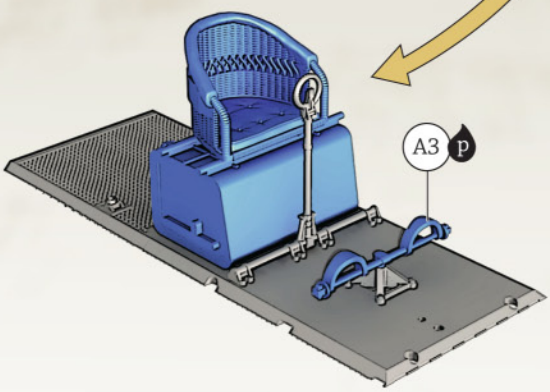
Painting Guide

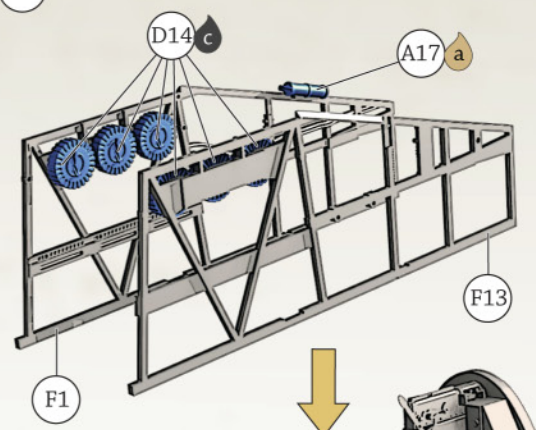


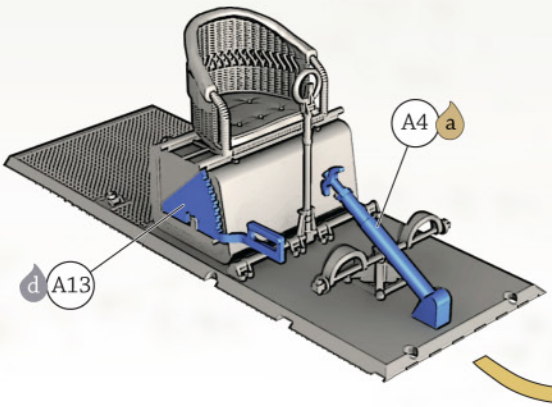
Pilot's wicker seat details, note the post WW1 Sutton four point safety harness.

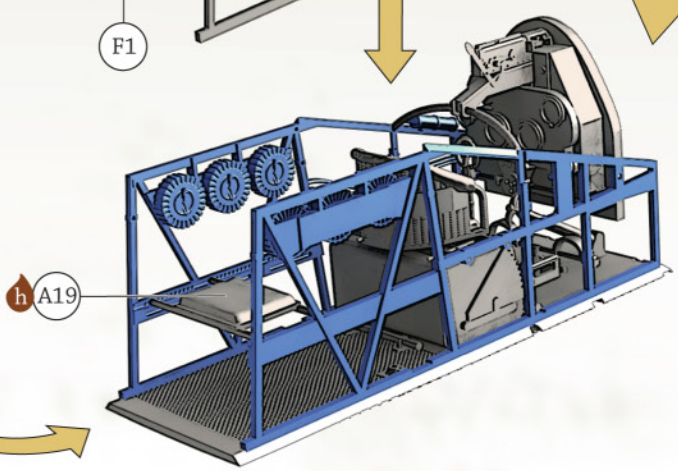


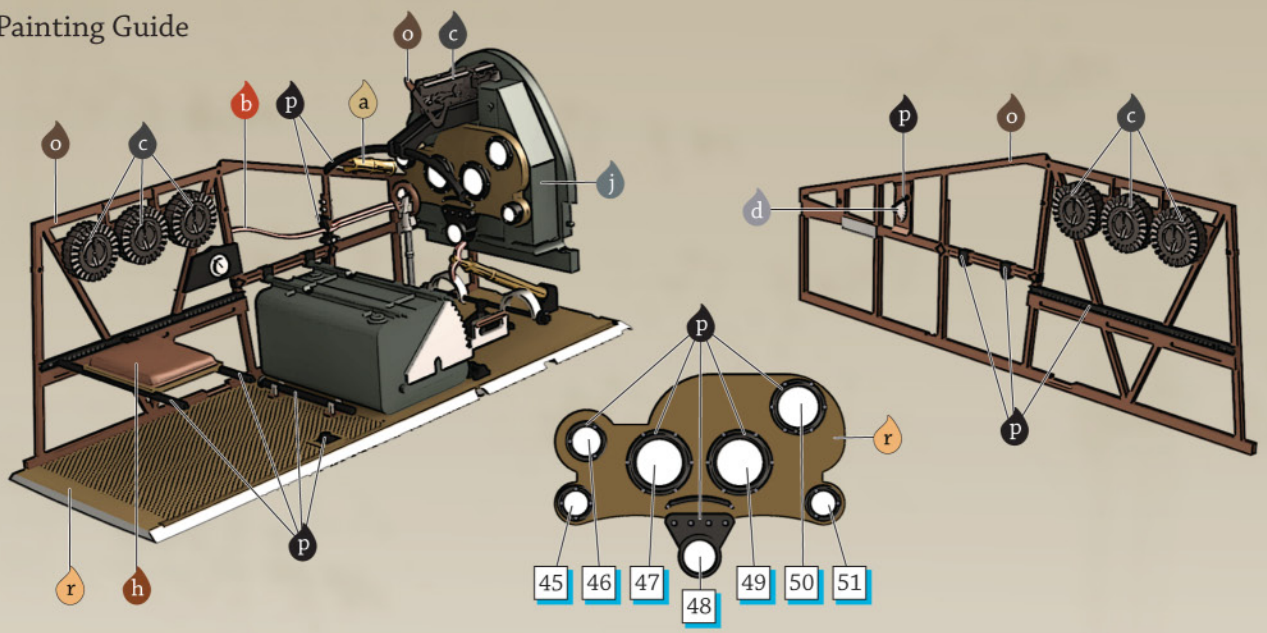












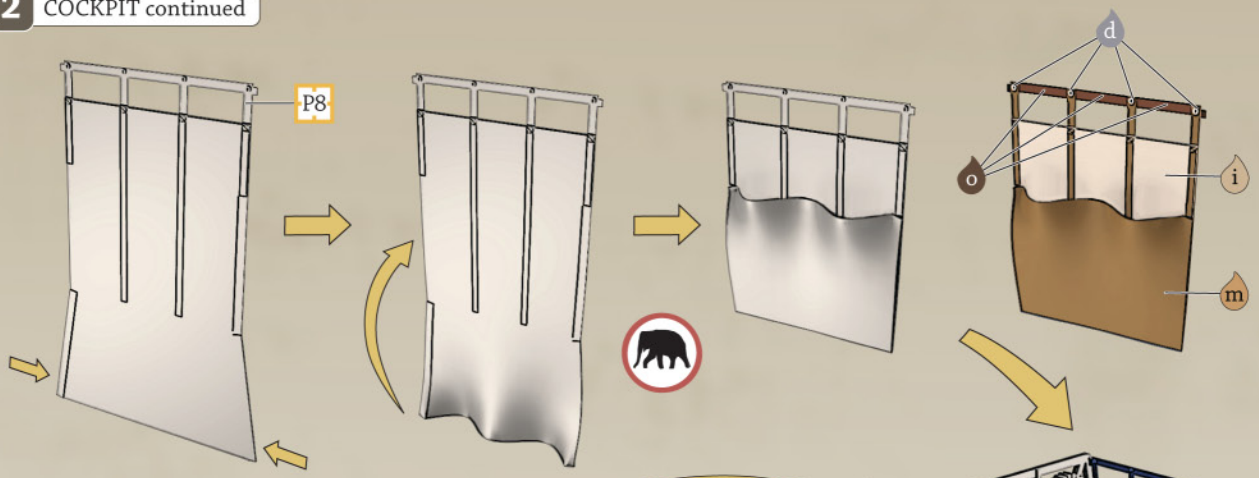
Left side of pilot's cockpit showing the throttle, mixture and spark advance control levers,. Note the modern plastic tubing.

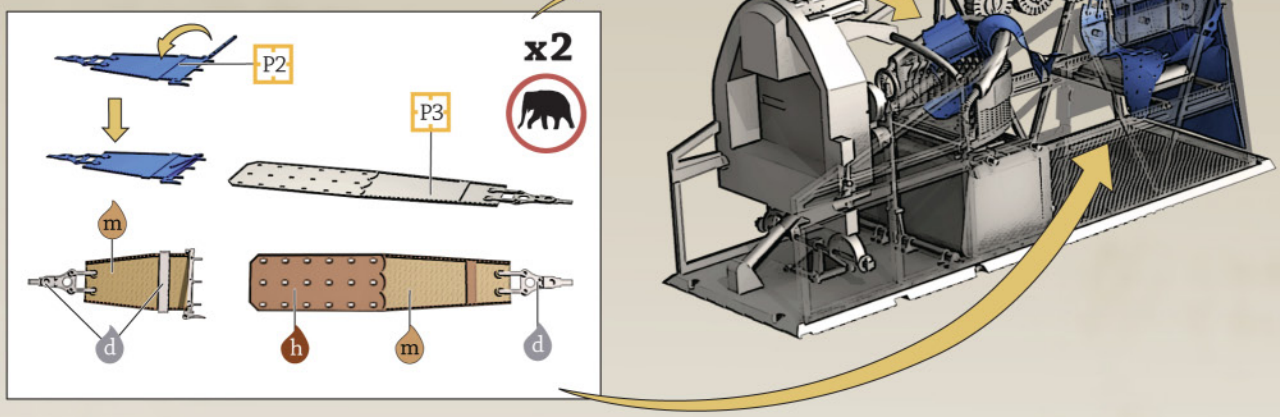
Rear of observer's cockpit showing the cloth screen and storage pockets, usually used for extra Lewis Gun magazines. Note the post WW1 four point safety harness.

Rear of pilot's seat showing the rear fuel tank and fuselage foot step details.

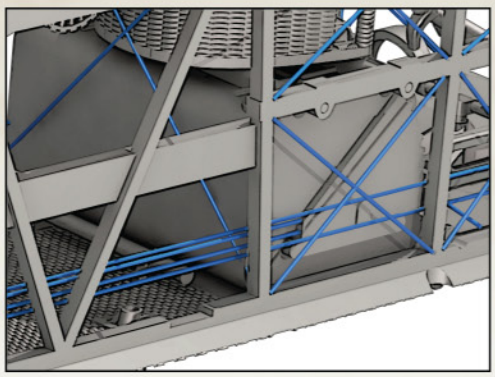
Right side of observer's cockpit showing mounts for spare Lewis Gun magazines. Note the interior colour of the fuselage linen.

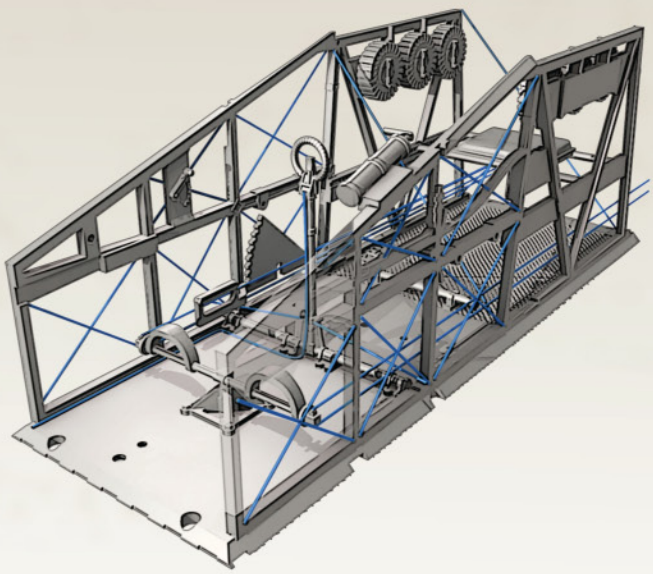
2 COCKPIT continued



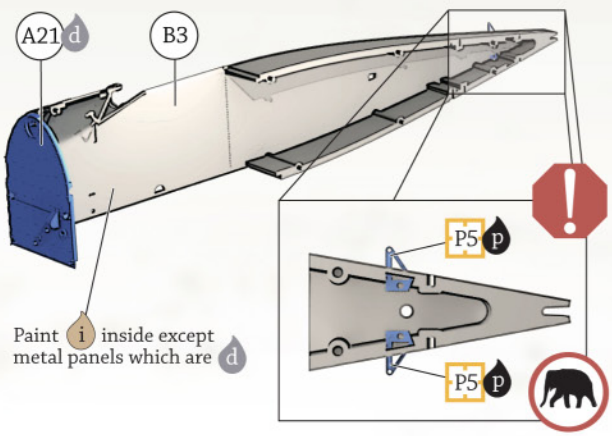


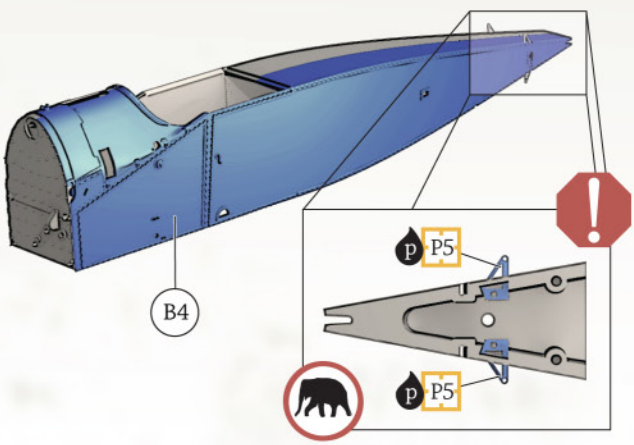
RIGGING DIAGRAM Rigging material not included



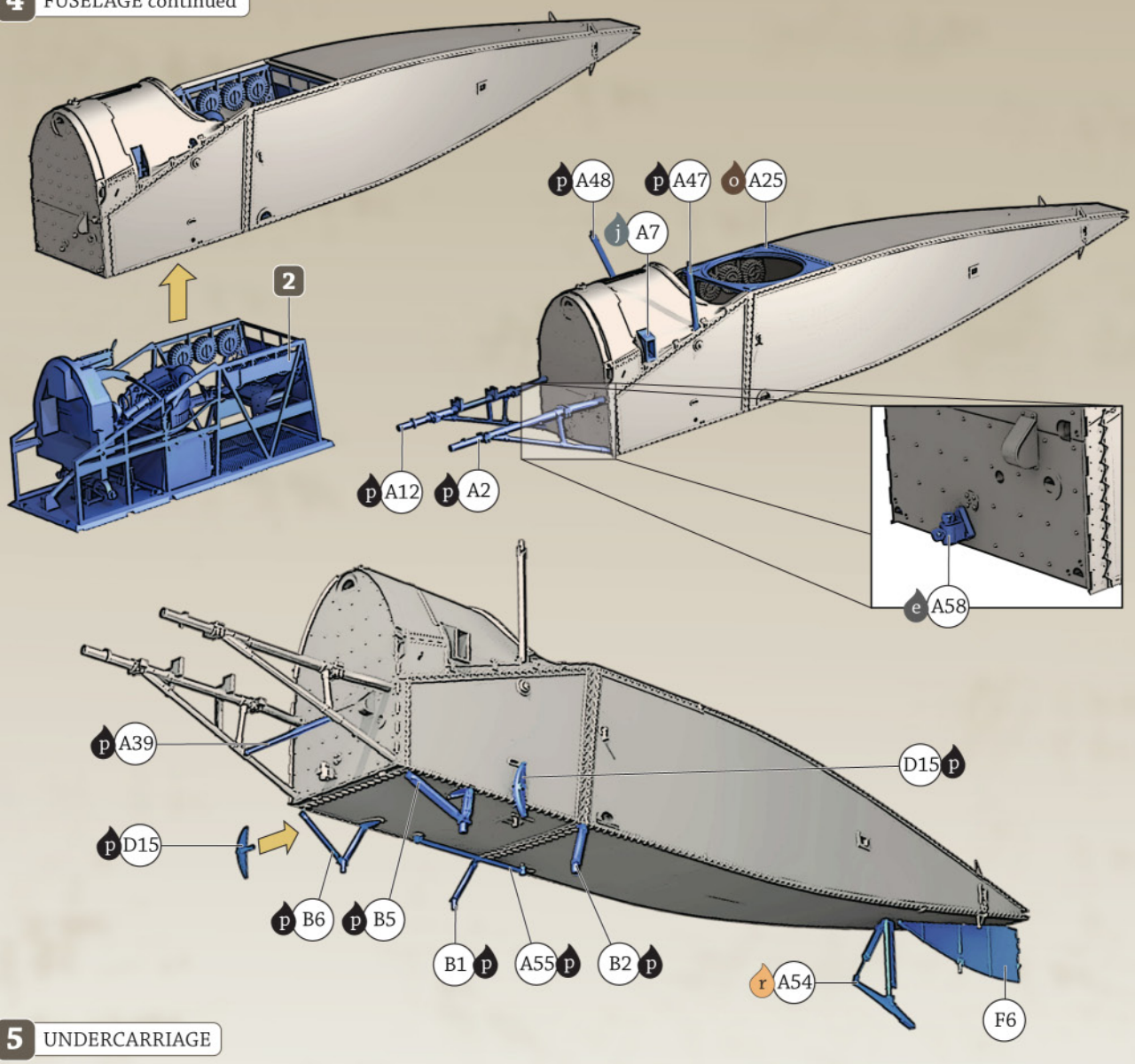


3 FUSELAGE



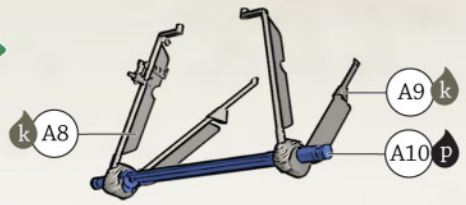


4 FUSELAGE continued

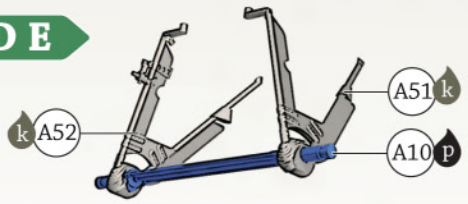


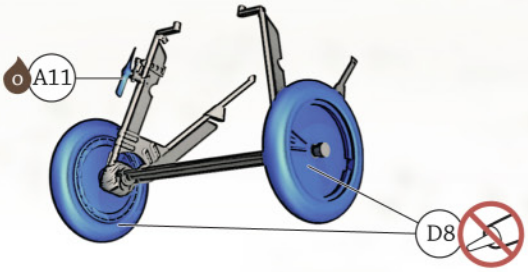
5 UNDERCARRIAGE

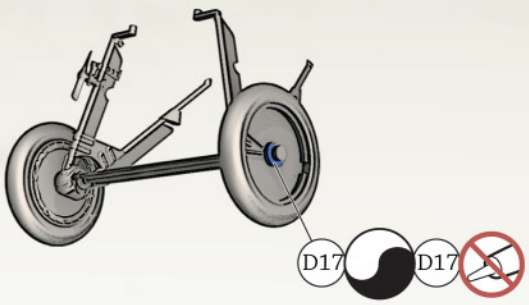
A

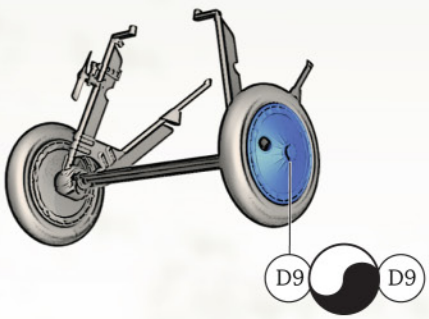


B C D E









Wind driven air pump for providing pressure to the fuel system.

Palmer detachable fabric wheel shield.

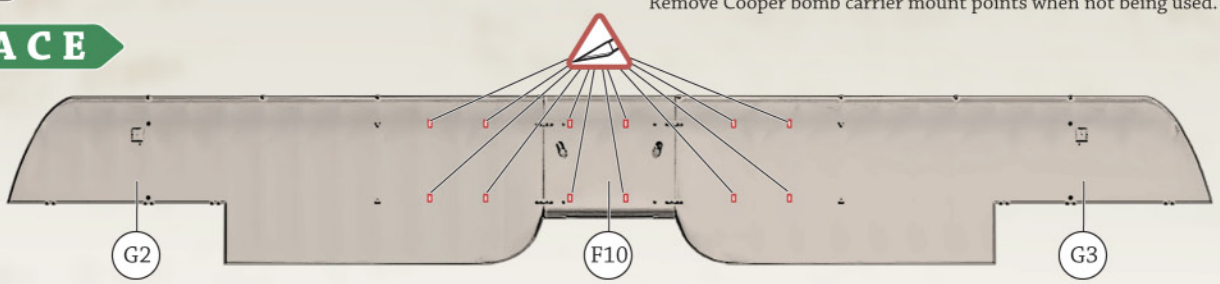
Right side wheel detail showing later style re-inforced undercarriage struts, note the bungee shock cord and axle retaining wire.

Tail skid showing bungee cord and retaining wire details.

6 LOWER WINGS

Remove Cooper bomb carrier mount points when not being used.

A C E



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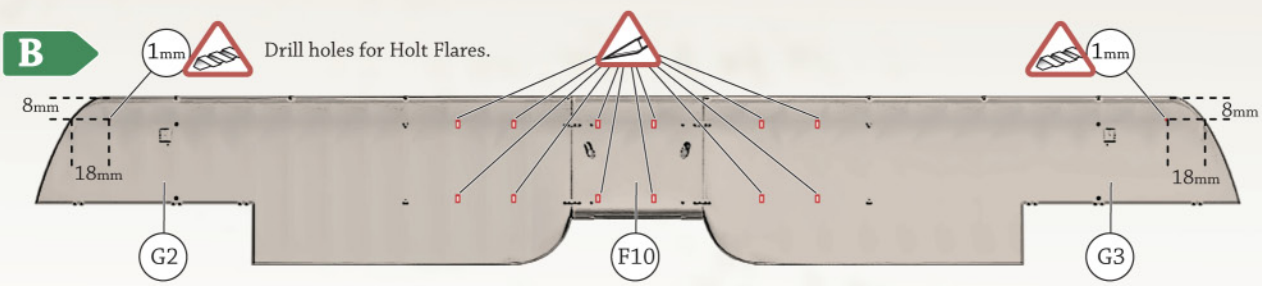

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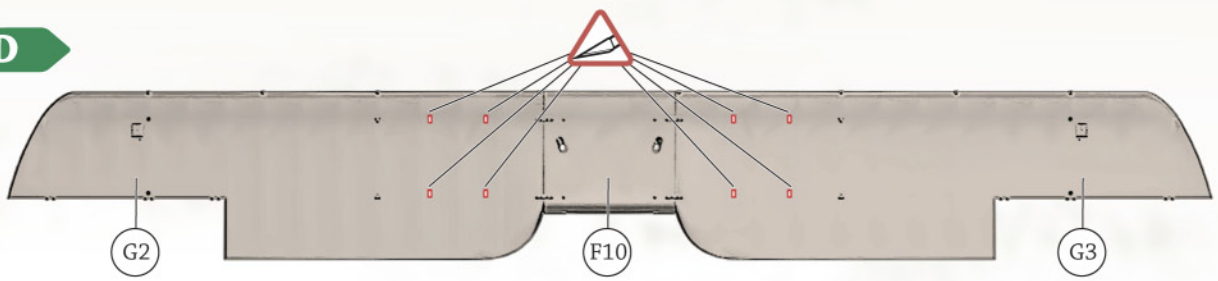
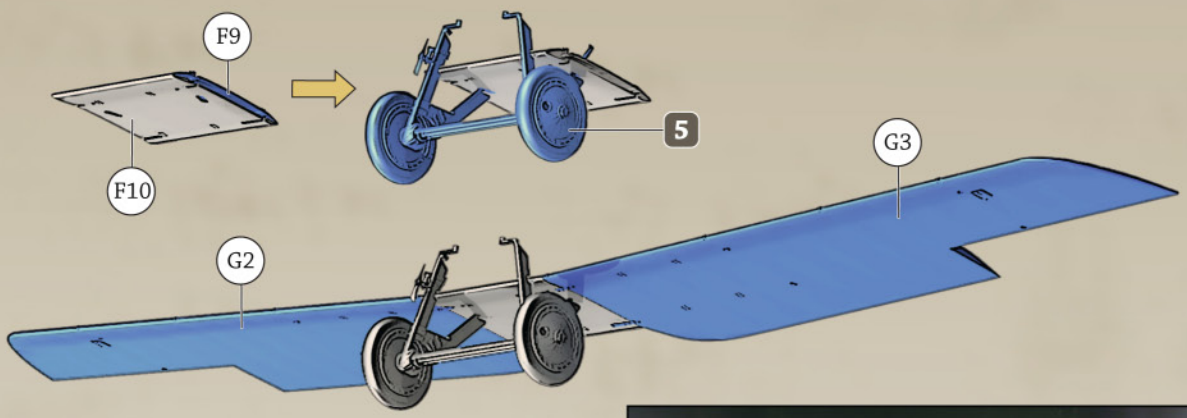


7 LOWER WINGS continued



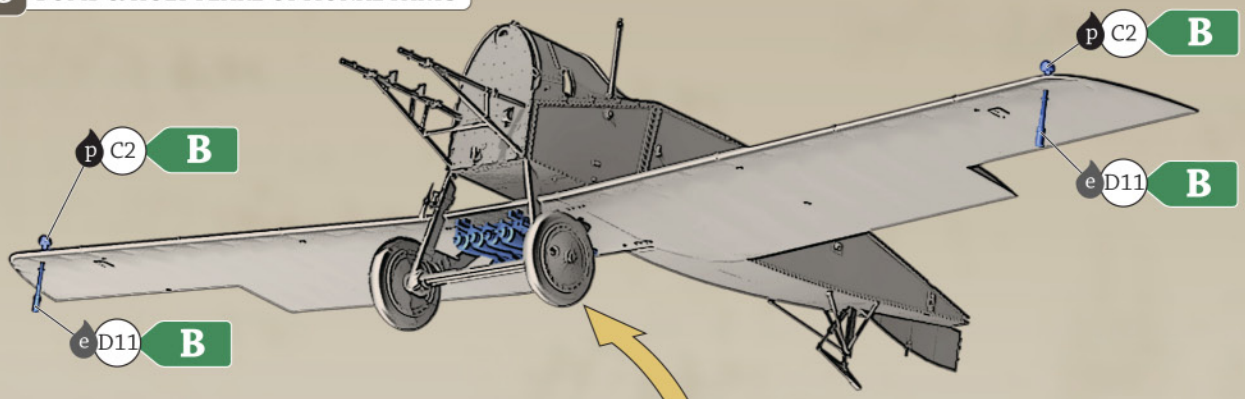
A view from the front showing the gap between the fuselage and lower wing.

Note the positions of the small struts

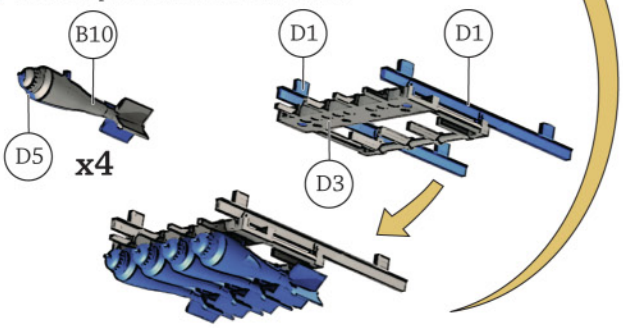
Starboard lower wing center section showing reinforced metal steps and elevator controls. Also note the lacing between the fabric and metal fuselage sections.

Port lower wing joint showing the pipes running out to the pitot tube.

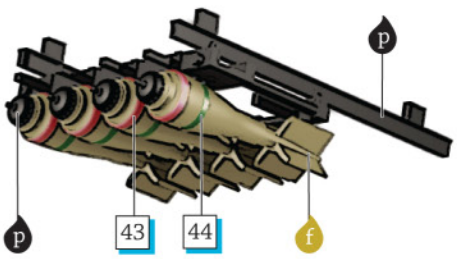
8 BOMB & HOLT FLARE OPTIONAL PARTS



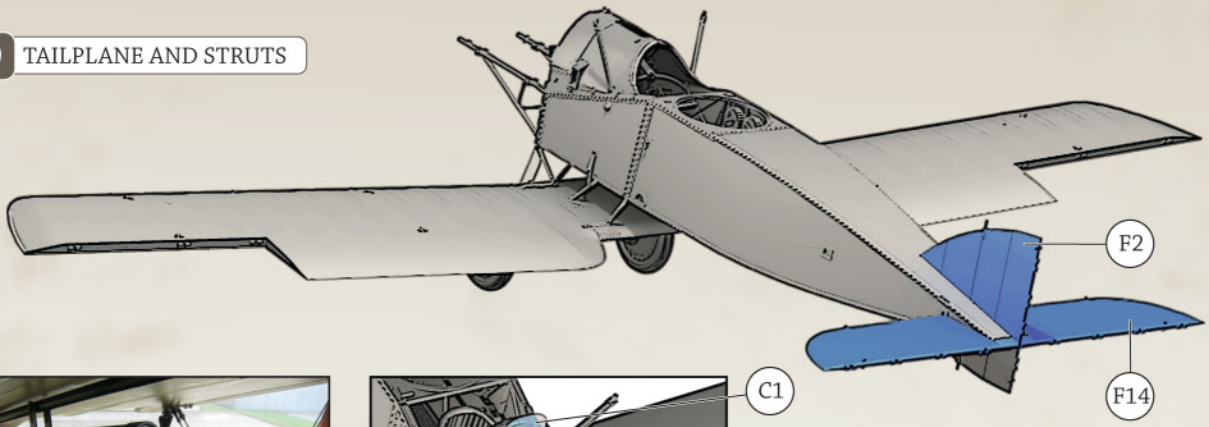
D 20lb Cooper bombs and bomb carrier

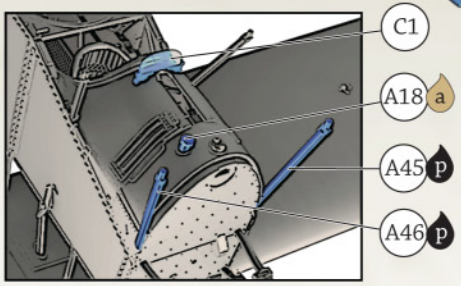


Painting Guide

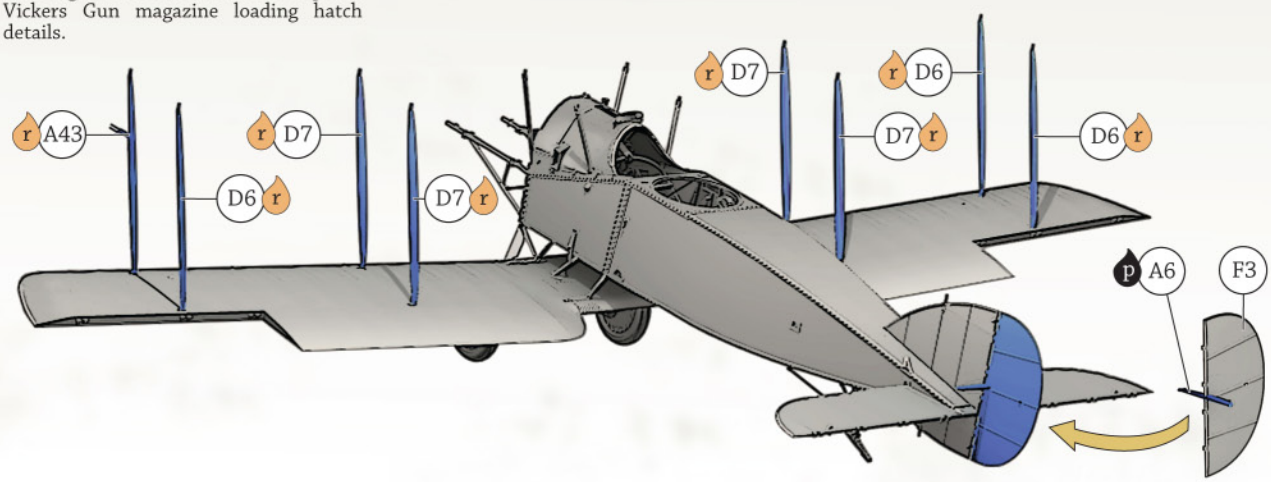


9 TAILPLANE AND STRUTS





Aldis sight, front fuel tank filler cap and Vickers Gun magazine loading hatch details.



Port lower wing inner front strut showing rigging detail.

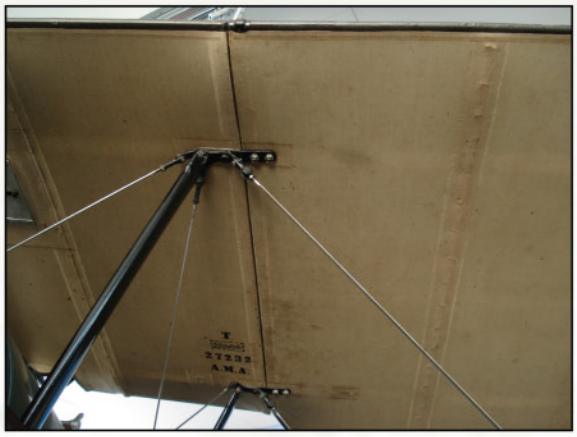
Pitot tube detail on port wing outer front strut.

Port lower wing outer struts showing yellow reinforcing tape.

A pilot's eye view along the starboard wing showing strut decals and aileron control cable details.

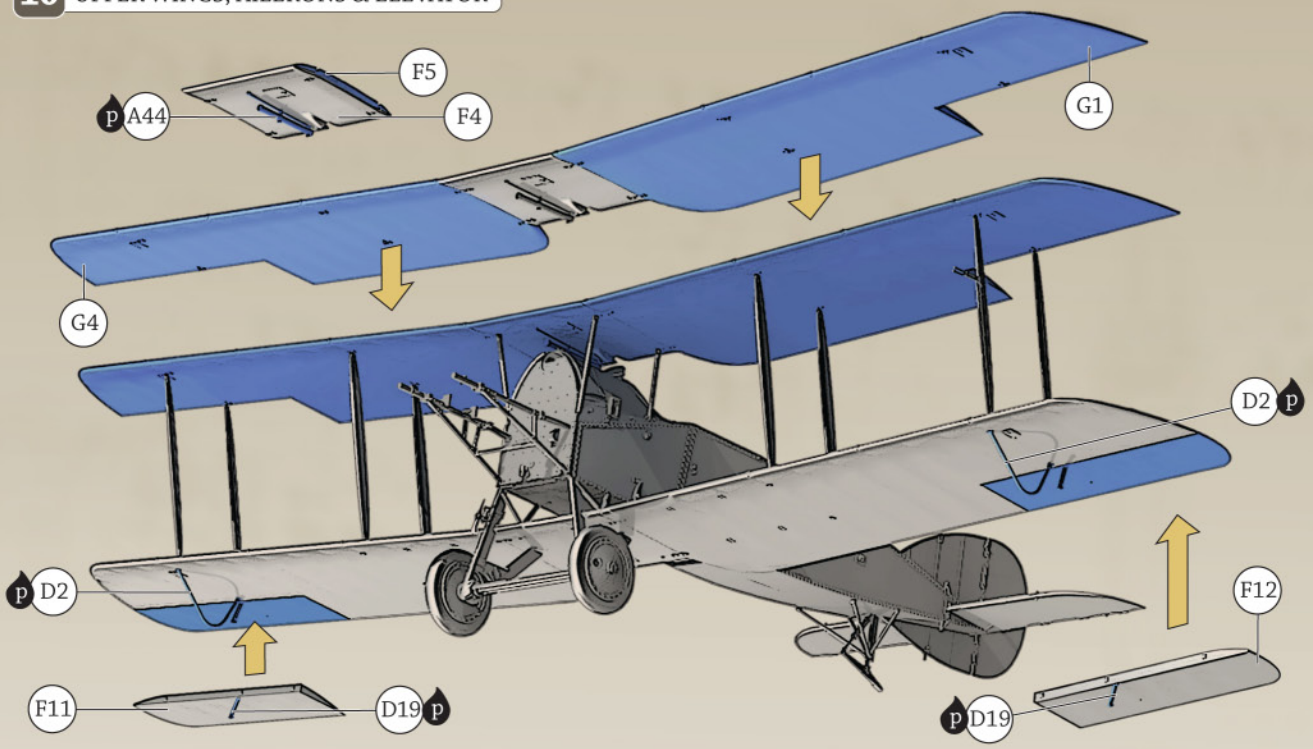
Starboard wings showing useful rigging details, note the late style extended exhaust.

Starboard upper wing and aileron.



The join between the port upper wing and center cabane section.

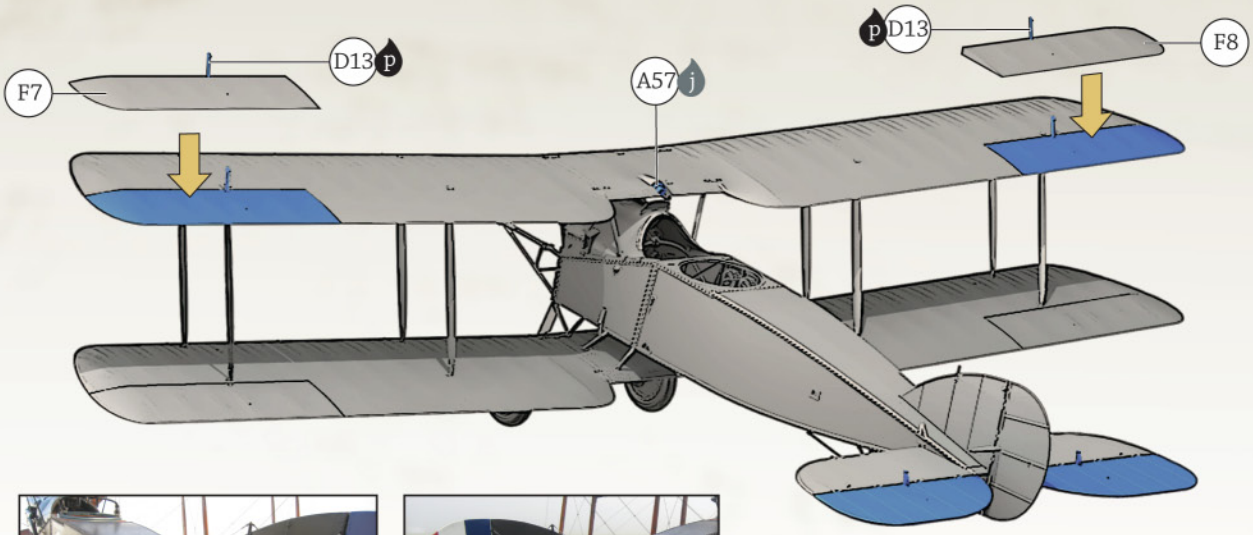
10 UPPER WINGS, AILERONS & ELEVATOR

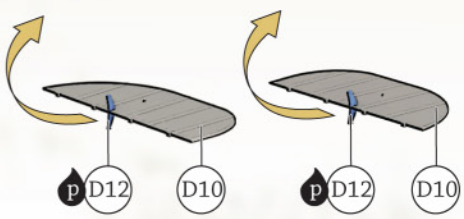


Windscreen, Aldis sight and compass details. Note the leather cockpit padding join at the centre.

Compass mounted in cut out at rear of upper cabane wing section.

Wing skid detail.





Tailplane showing the various control cables and RAF rigging wire details.

D8084 pictured later in its career than the colour scheme we offer in this kitset. This is also the scheme chosen for the aircraft in the colour photos included here.

B1252 is a presentation aircraft equipped with Holt landing flares and lights. A pale horizontal stripe on the fuselage has been overpainted with PC10.

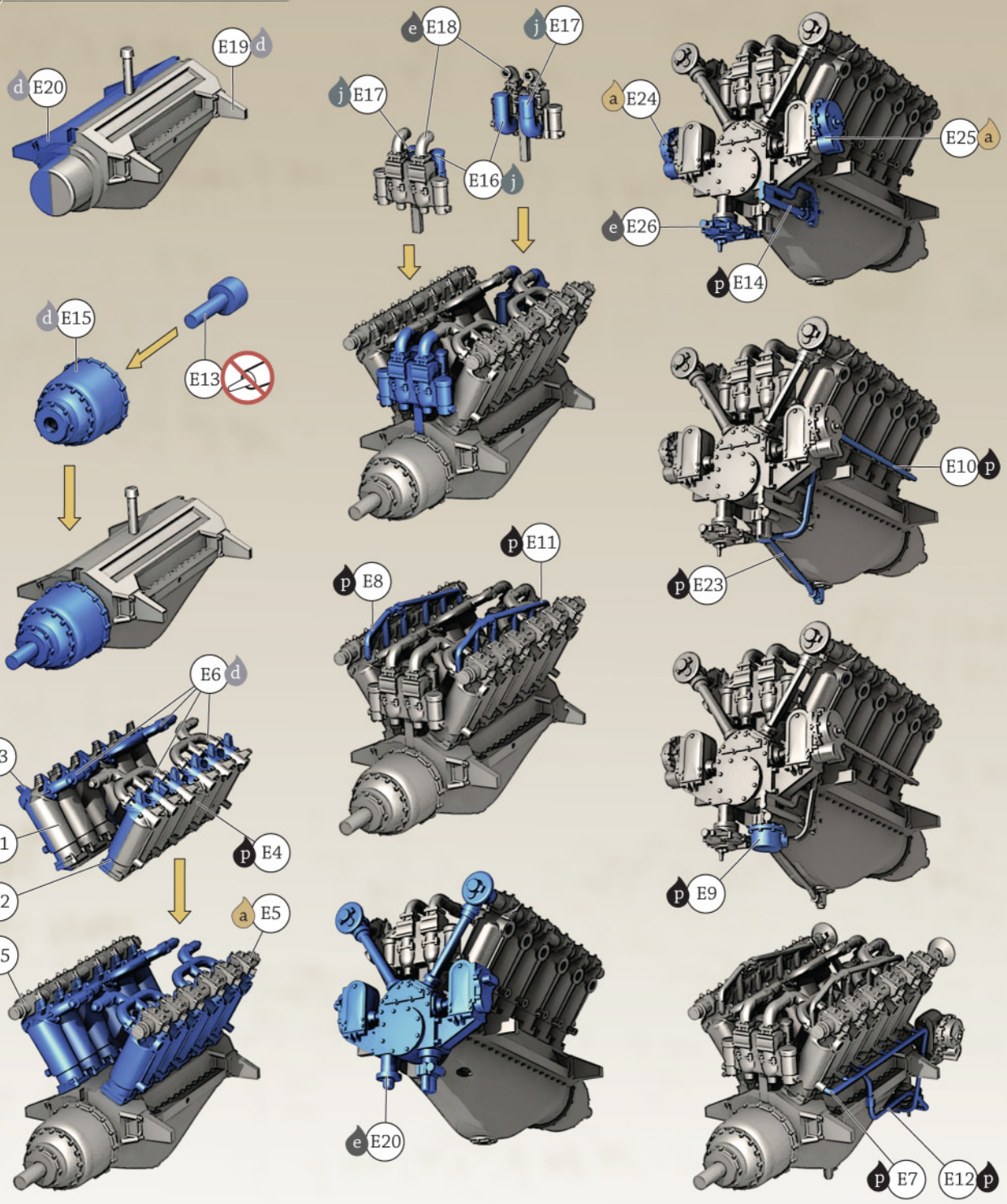
A line up of night fighters featuring presentation aircraft B1330 #2, one of the decal schemes included in this kitset.

A converted Scarff Ring serves as a mount for this movie camera. Note the weathered appearance of the PC10 fuselage covering.

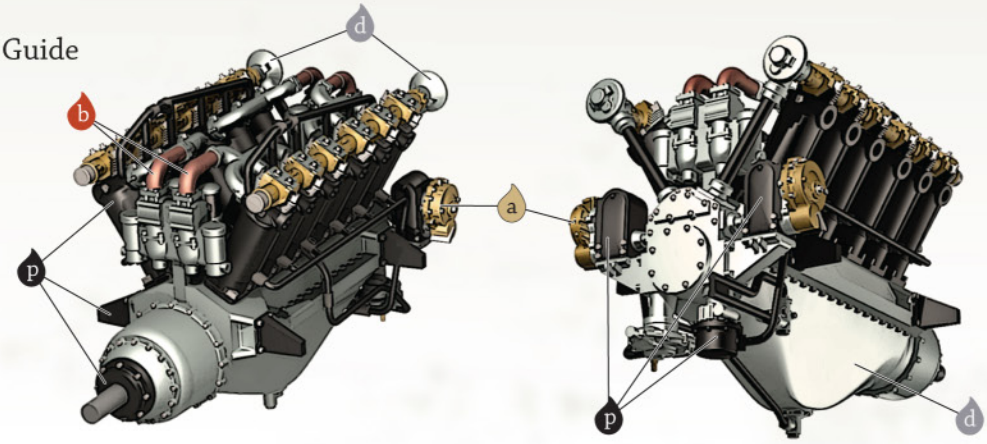
Note the CDL lower rear fuselage, identification letter G on the port lower wing and the streamers attached to the tail.

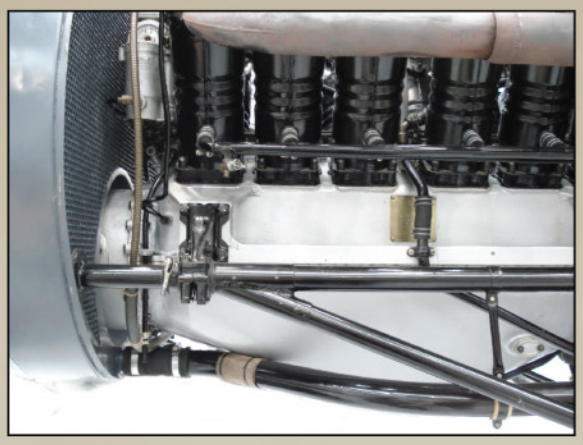
Interesting air to air photo.

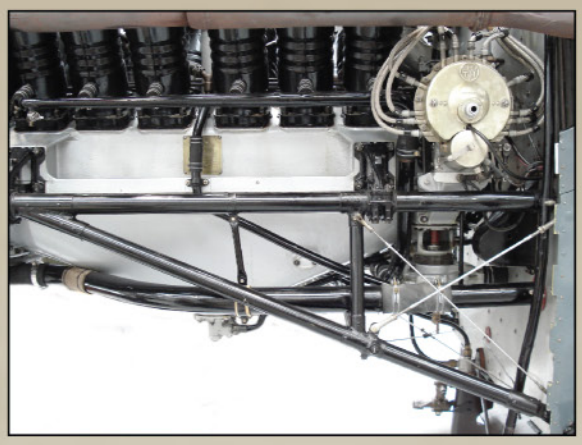
11 ROLLS ROYCE FALCON ENGINE



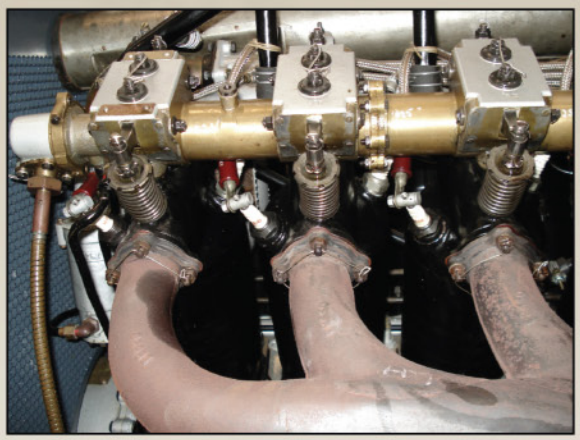
Painting Guide

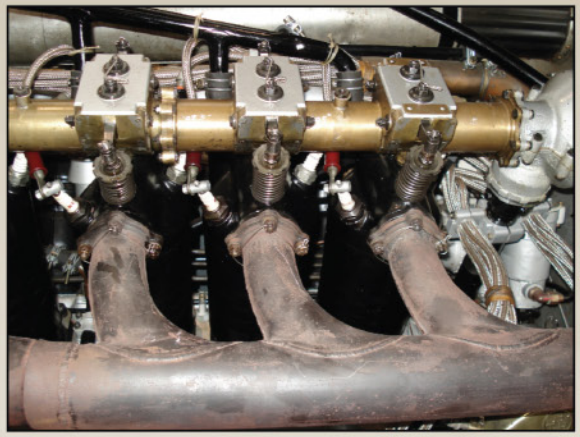




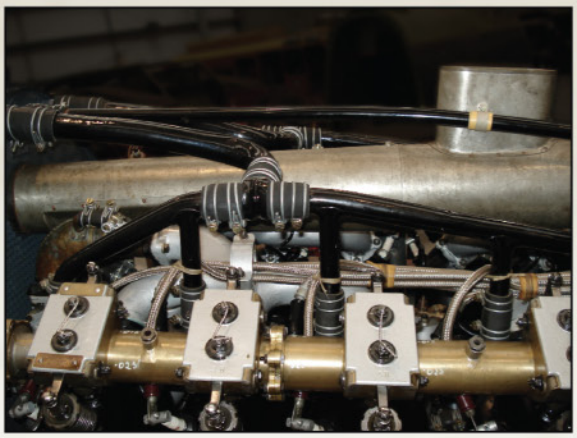


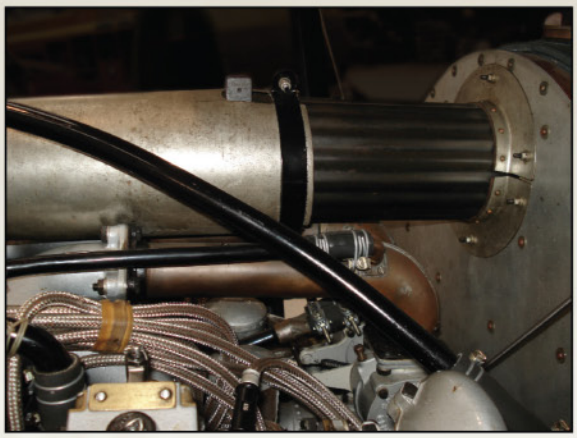
Left side showing engine bearers and lower water pipe details.



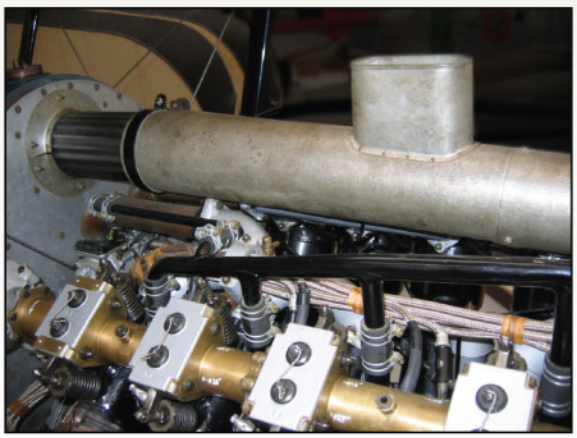


Top left of engine showing exhaust and rocker box colours.

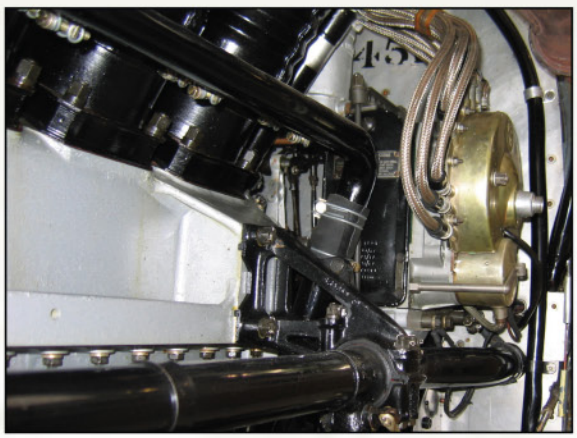




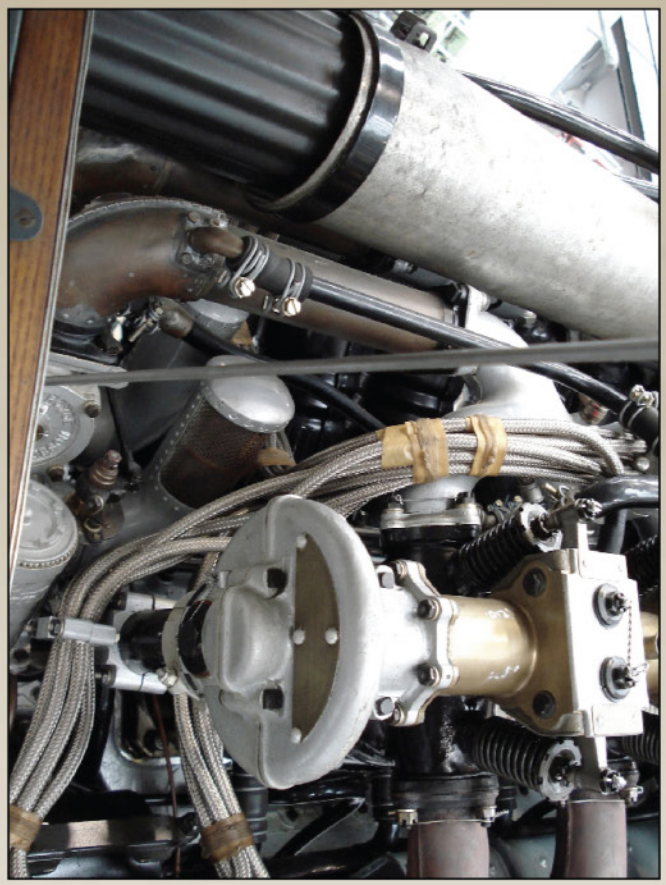
Upper water pipe and Vickers blast tube details.



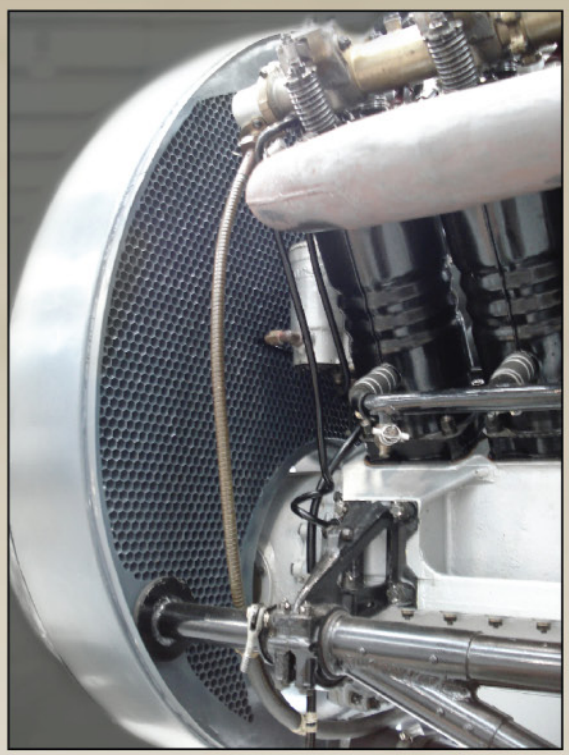
Vickers gun blast tube, note the gas exhaust outlet on top.



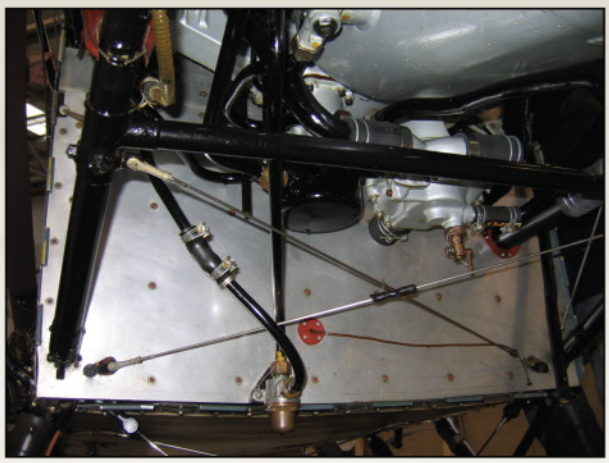
View of the left magneto showing plug leads and colouring details.



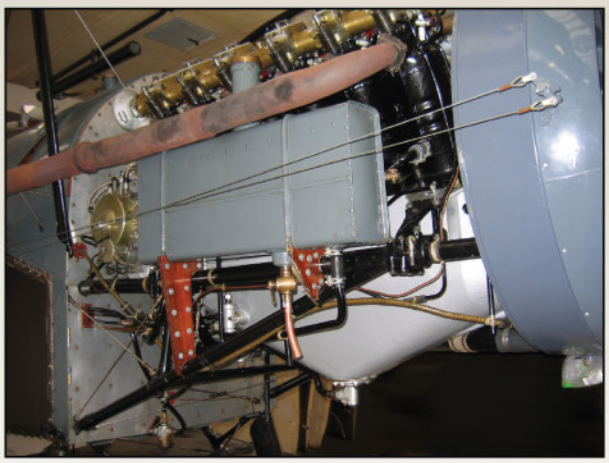
Top right rear view showing carburetor and filter details.



Rear view of the radiator in D8084.



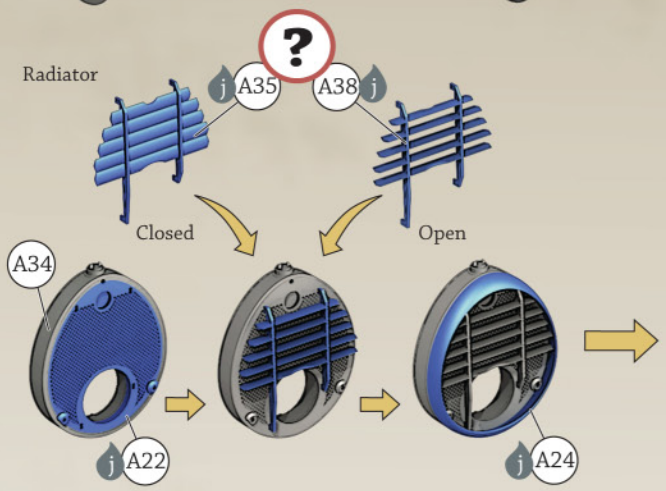
Firewall and water pump details.

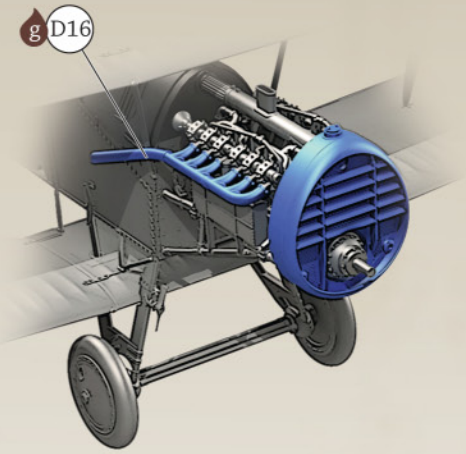


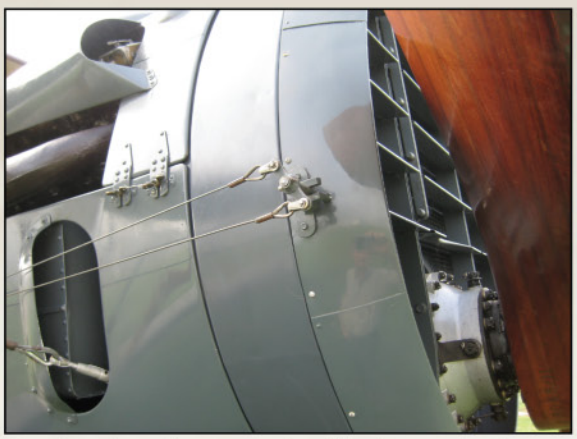
Engine bay showing oil tank and mount details.

Note the various gloss and matt tones present in the PC10 finish on the upper wings, possibly indicating repairs or replacement parts. The rib tapes are quite prominent in this view.

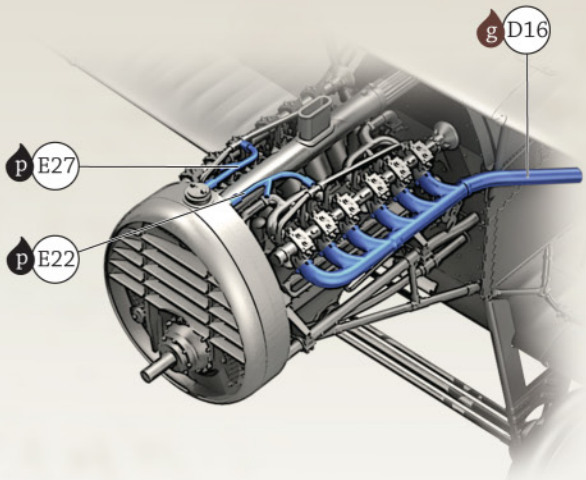
12 ENGINE BAY

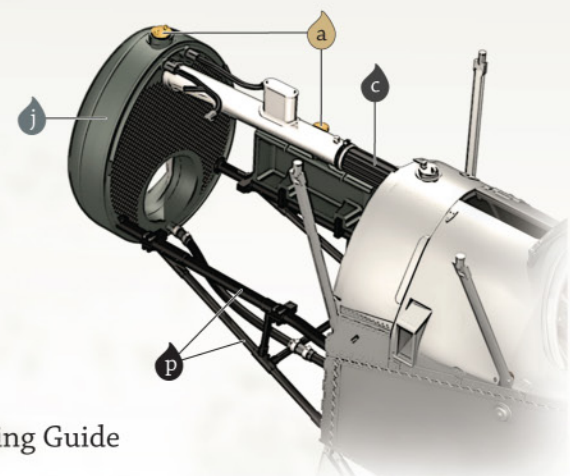






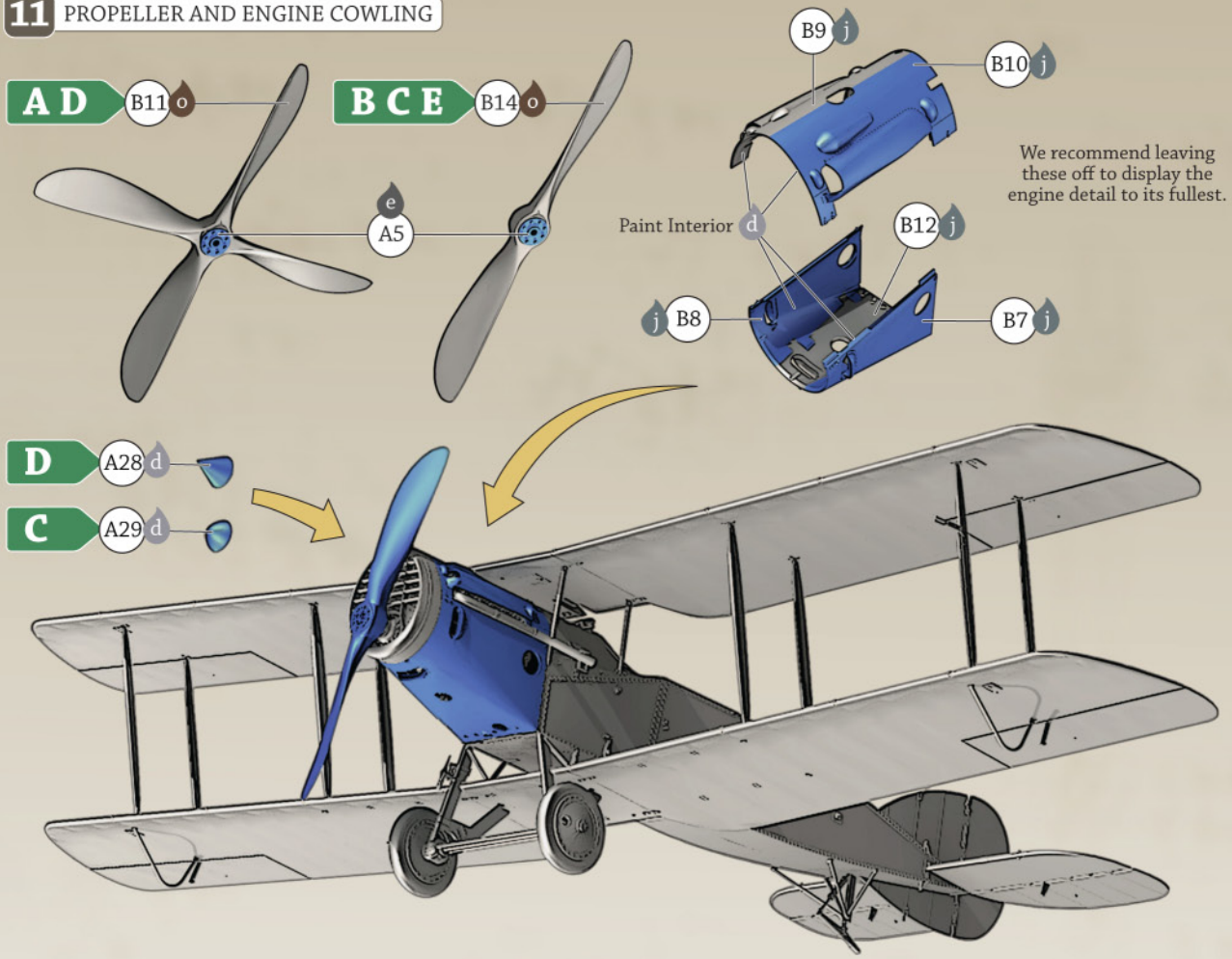
Note the radiator shutter controls and latches securing the upper engine cowl.





Painting Guide

11 PROPELLER AND ENGINE COWLING



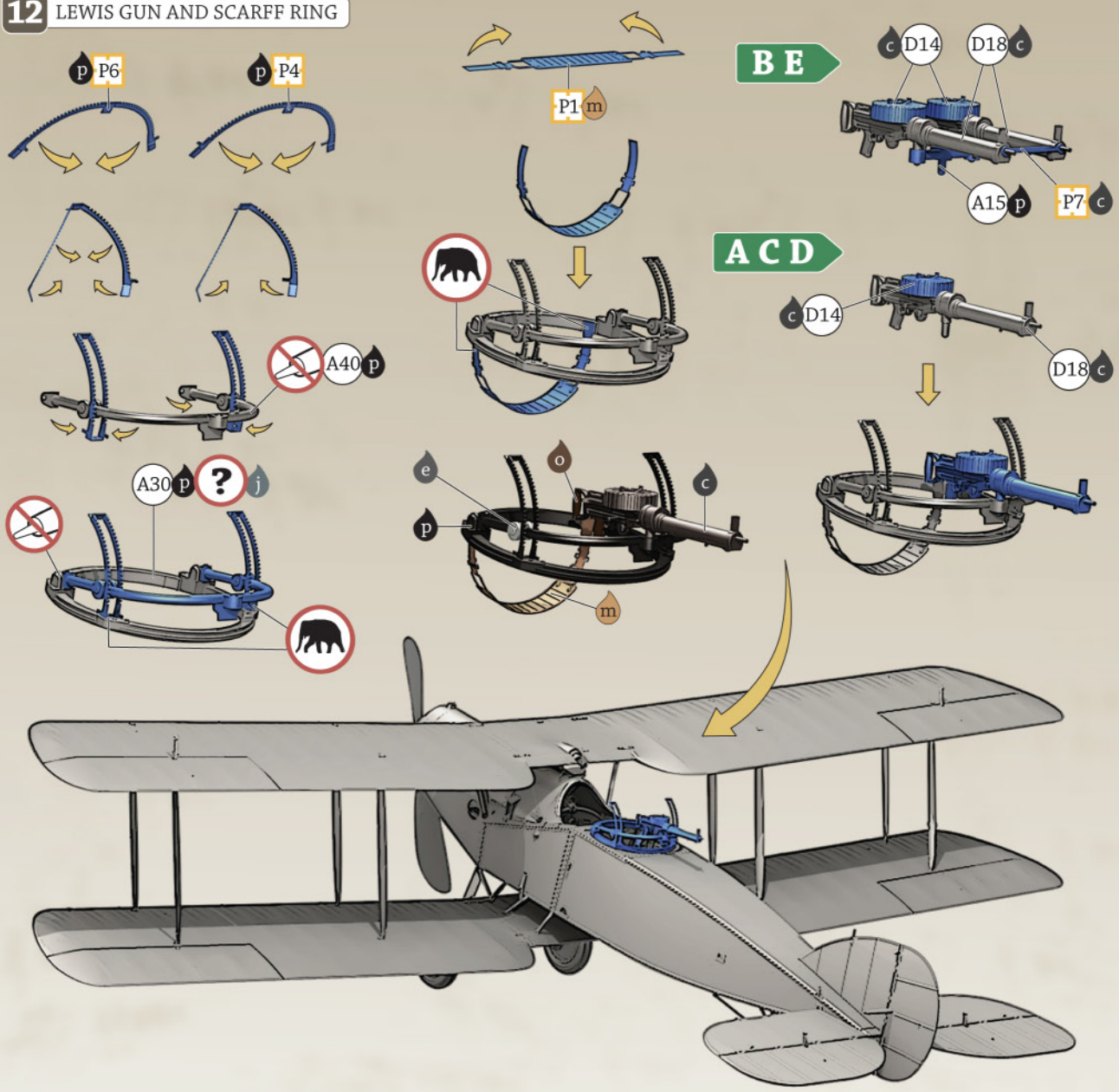
Note the propeller boss and open radiator shutter details.

Bristol propeller decal.

Engine cowl detail from D8084. Note the drift cable exiting the engine bay through the air scoop hole (the actual scoop has been removed). Period photos show that these cowling air scoops were often removed in service.

Interesting photo showing cowling, radiator and propeller details. Note the metal on the leading edge of the propeller and the carburettor drain pipe tap at the bottom of the radiator, details not always present in period photographs.

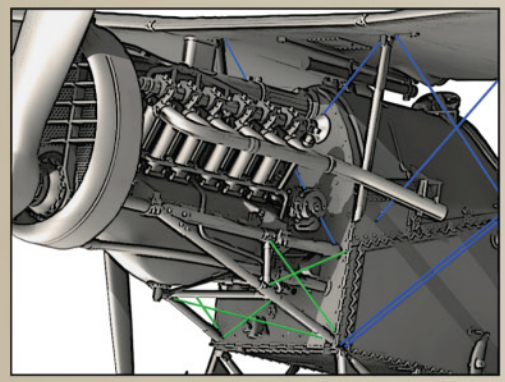
12 LEWIS GUN AND SCARFF RING

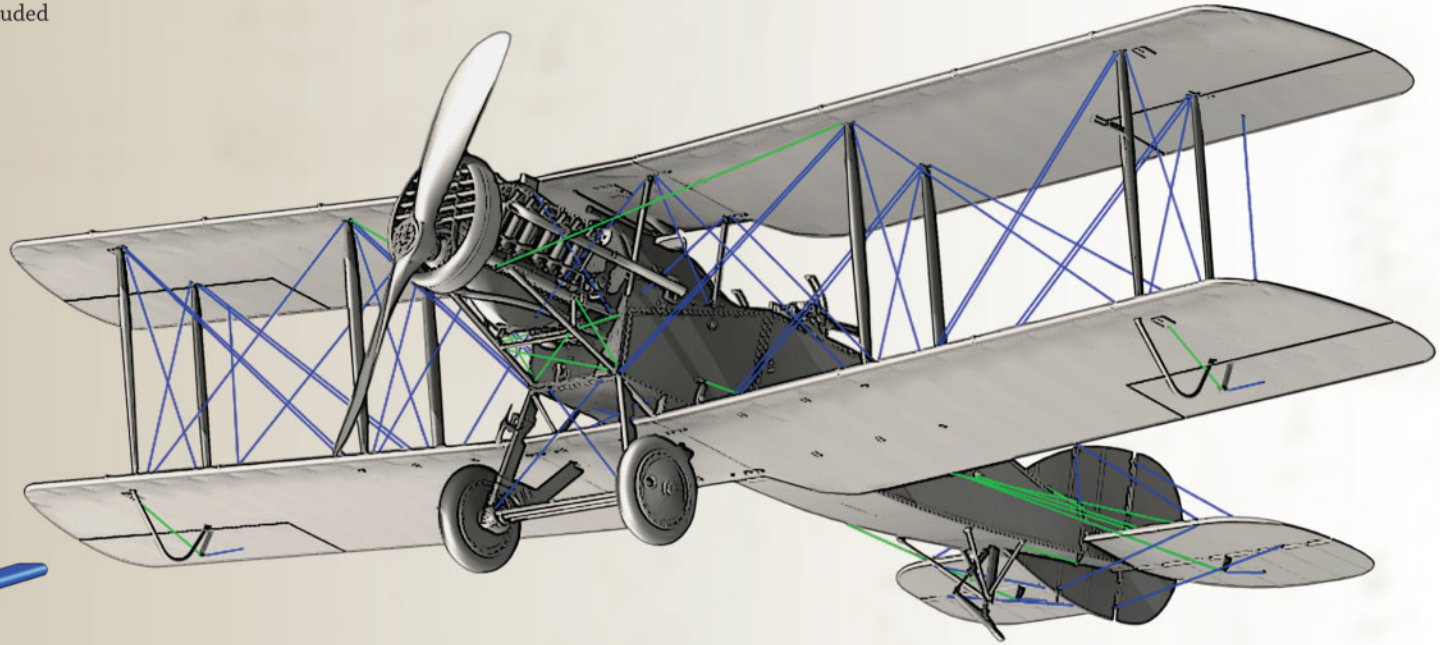


Scarff ring details, note the double Lewis Gun mounting.

15 RIGGING DIAGRAM

Rigging material not included





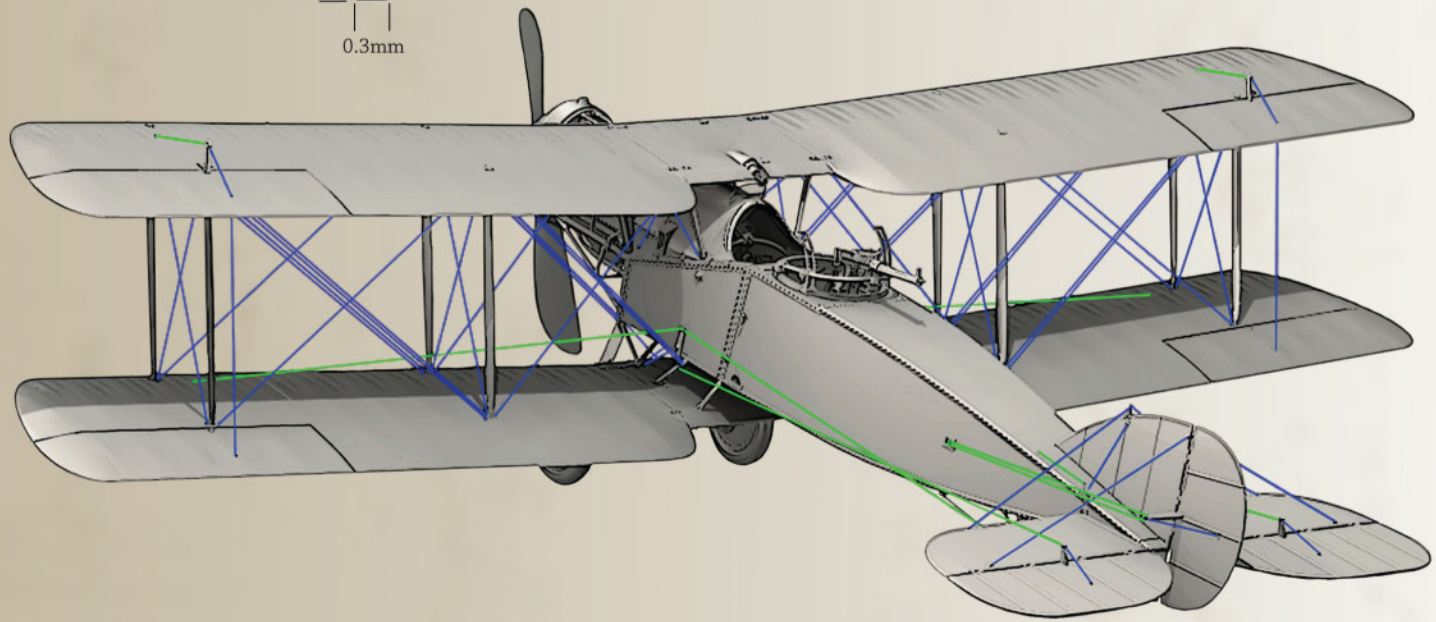
Control Cables

0.15mm

RAF Aerodynamic Wires

0.1mm

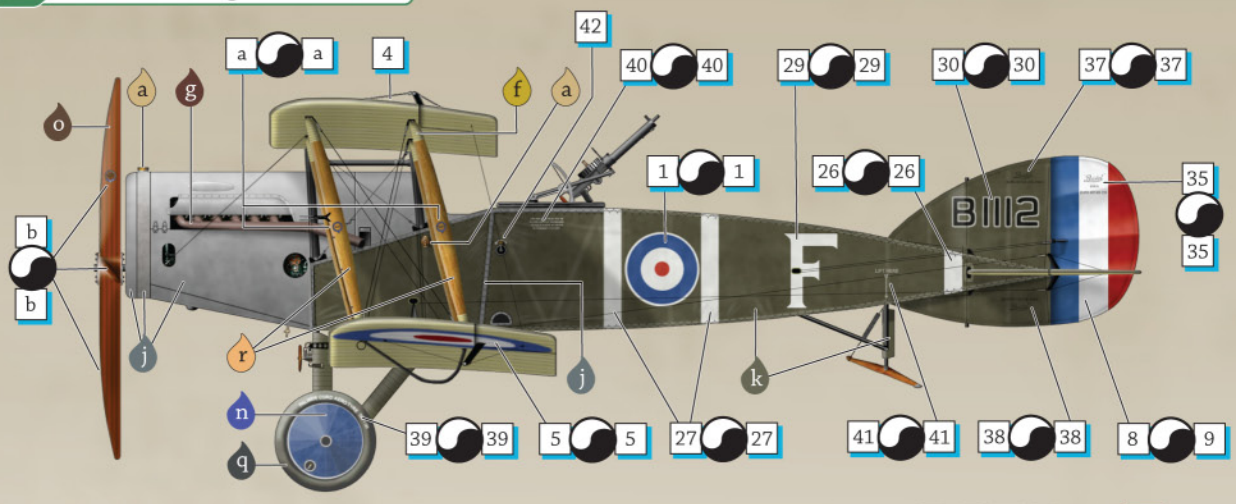
0.3mm



Port side fuselage view, note the taped strut ends.

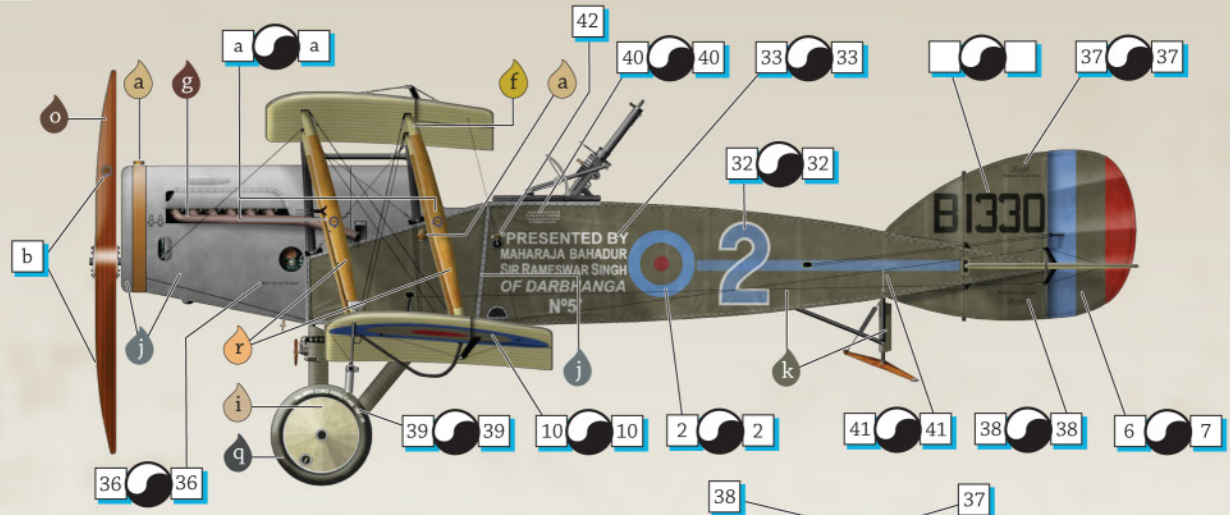
Atmospheric shot of D8084 on a misty morning at Hood Aerodrome, Masterton, New Zealand in 2008.

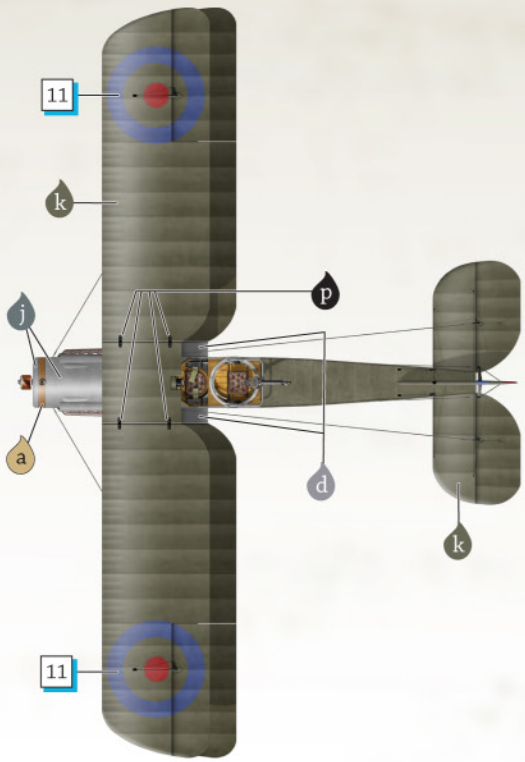
A Bristol F.2b Fighter 'F' B1112

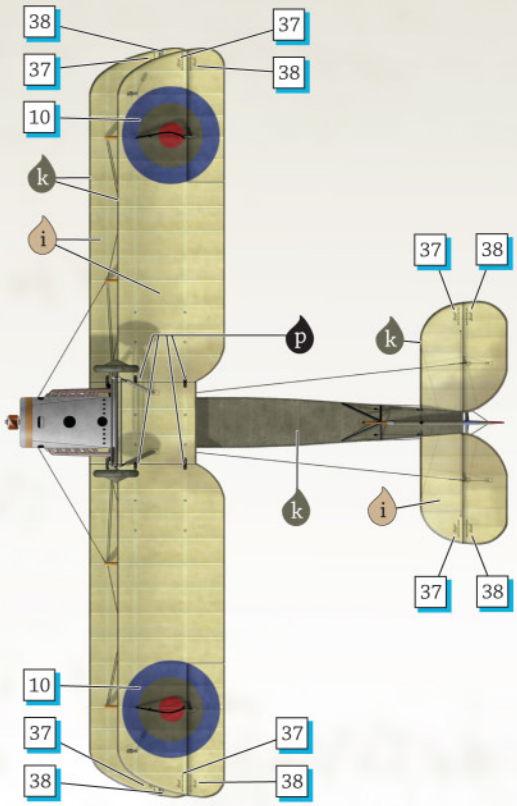


Apply decals 4 5 37 38 as per C

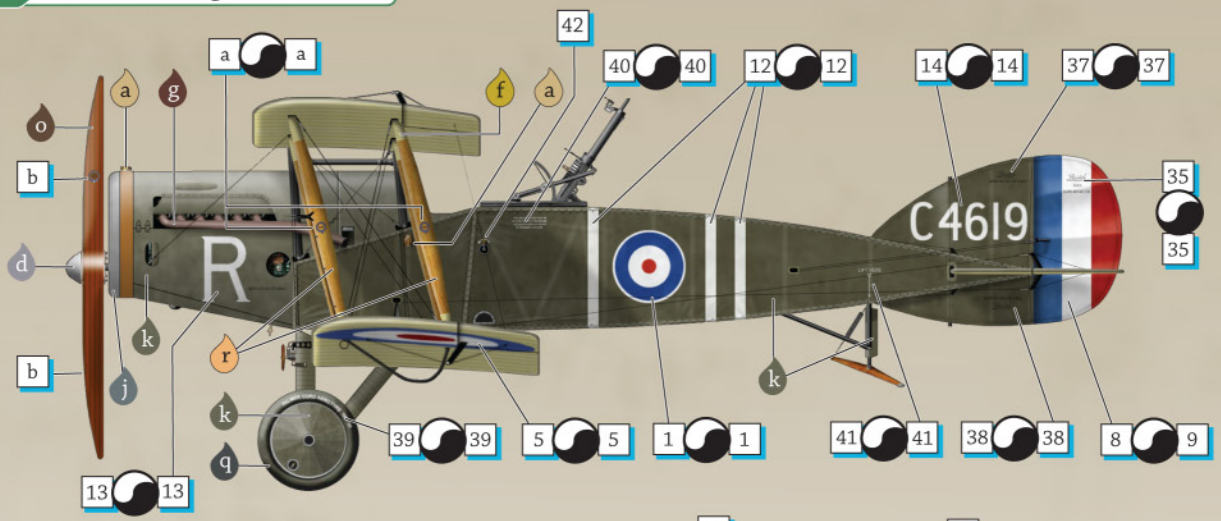
B Bristol F.2b Fighter '2' B1330

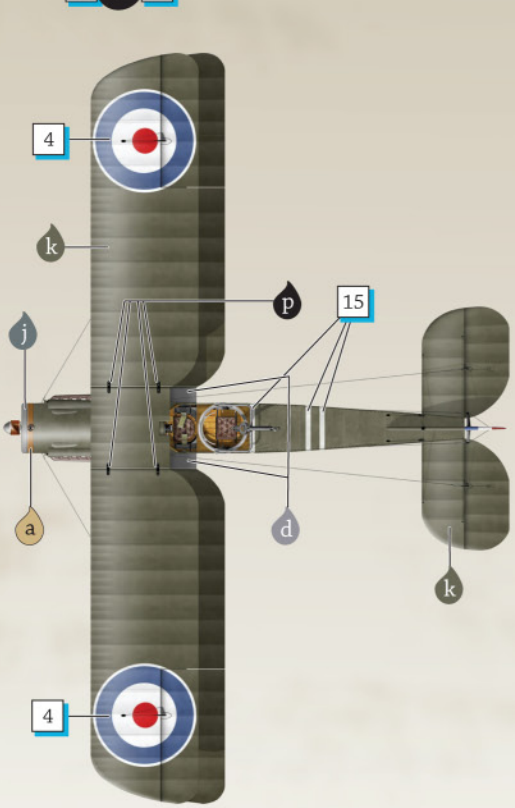


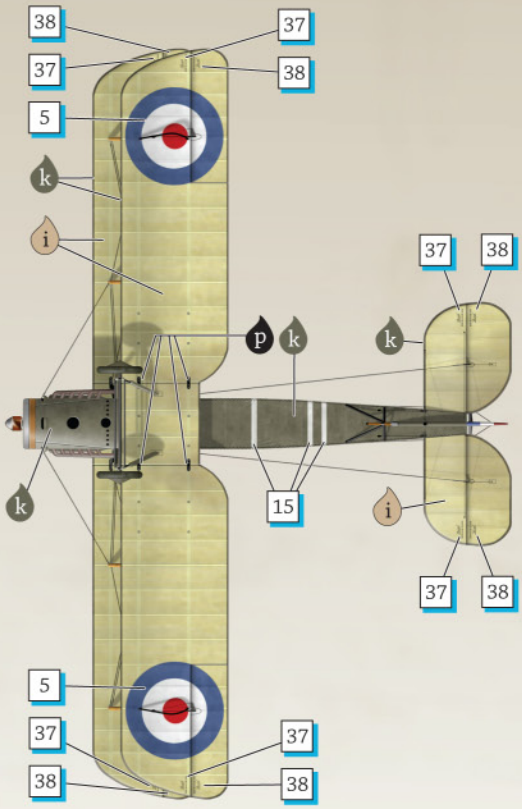




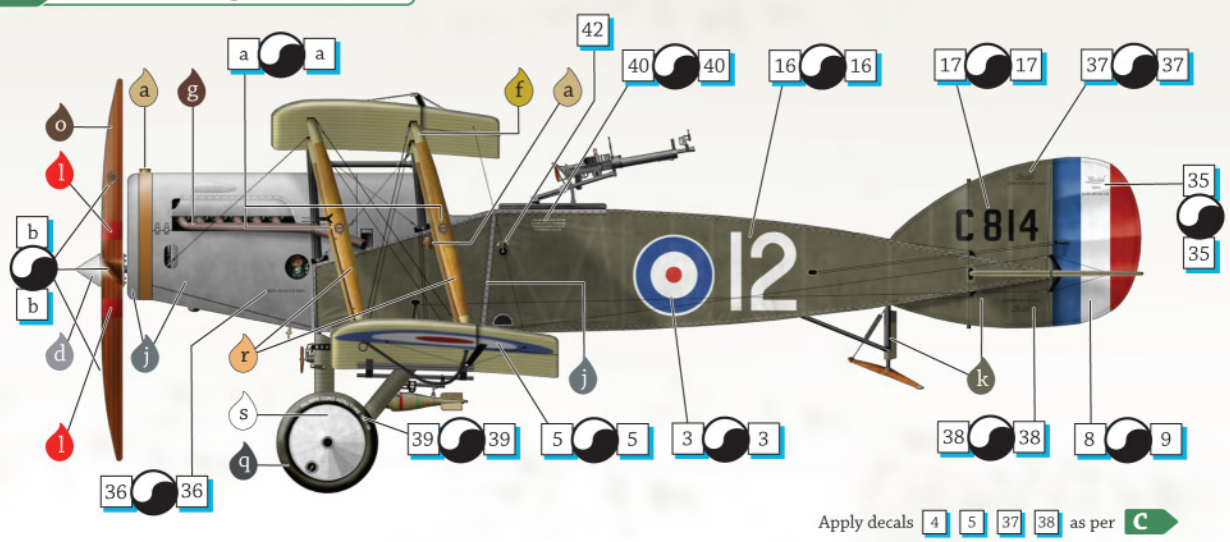
C Bristol F.2b Fighter 'R' C4619





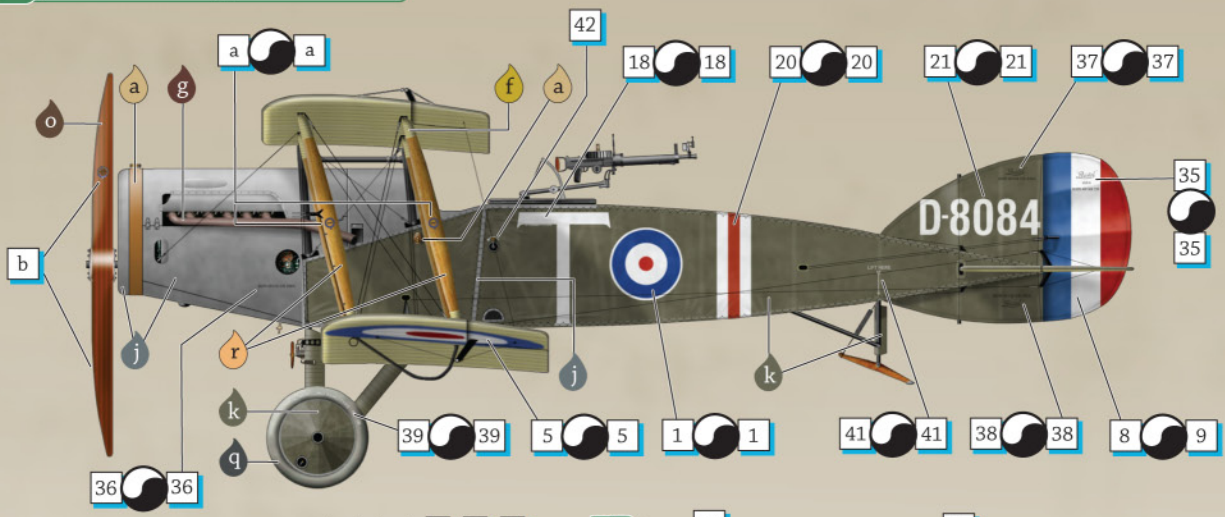


D Bristol F.2b Fighter '12' C814

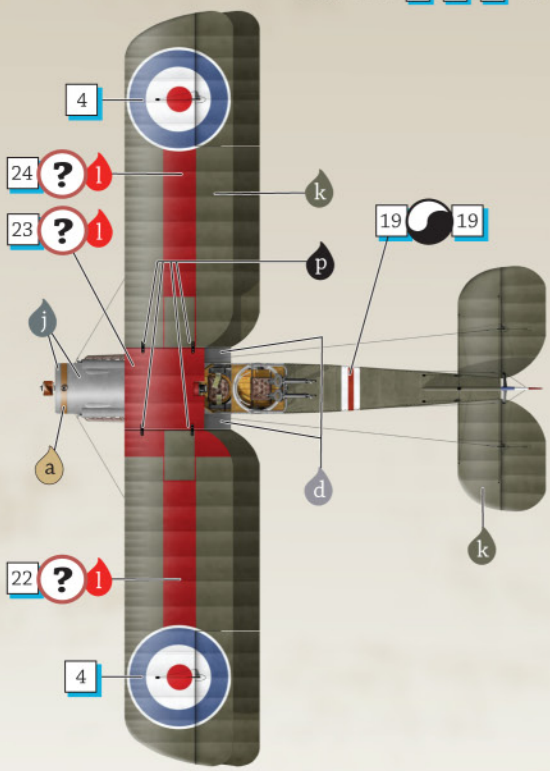


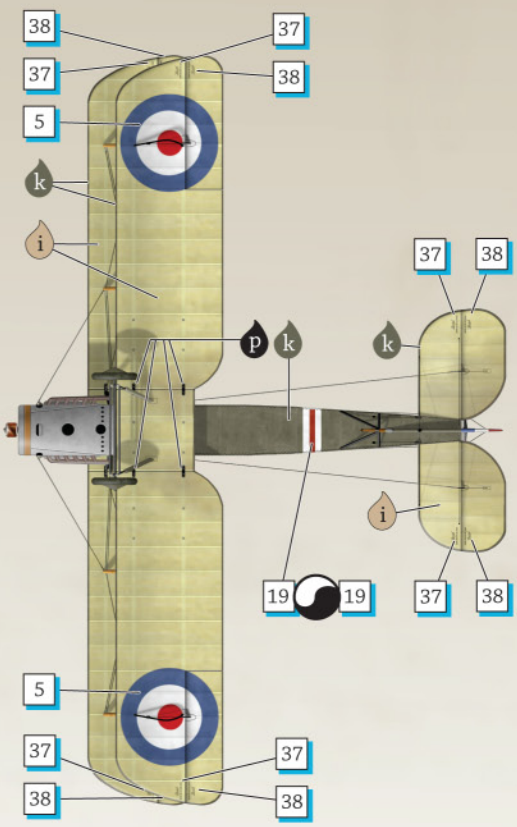
Apply decals 4 5 37 38 as per C

E Bristol F.2b Fighter 'T' D8084



Apply decals 5 37 38 as per C





Note the early style undercarriage V struts and small magneto access hole in the engine cowling of this presentation aircraft. For additional colour schemes, high resolution photos and ideas for modifying your model please visit www.wingnutwings.com.

An interesting diorama idea. Bristol Fighter Mk.IV J6611 gets a helping hand from a Hucks Starter truck. Based on the ubiquitous Model T Ford, the Hucks Starter was developed towards the end of the war but probably not widely used until after 1919. Note the late style radiator grill and engine cowling indicating that this is a post war Bristol Fighter Mk.IV.

The Bristol Fighter could be found in many wild colour schemes of which only a few are shown on this page. The box mounted to the side of C4695 was for collecting spent Vickers shells, indicating that this is a training aircraft. The nose marking colours are not known but could have been white and red or white and black. Note the small magneto access hole in the engine cowling.

Another colourful Biff, most likely also a training aircraft. Again the colours are not known but the nose and struts could have been painted white and red or white and black.

A line up of night fighters displaying a variety of interesting colour schemes. The colours are again unknown but could have been yellow with black or red stripes. Note the wing mounted generator and Holt landing flares on the aircraft in the foreground.

An interesting variety of flight gear can be seen in this photo of Cyril Davenport (3rd from left) and his squadron mates.

3-D Modelling by Matt Fitzgerald

As a qualified Mechanical Engineer Matt's many projects have seen him travel the world working on projects as varied as race cars in the UK, designing off roaders and golf carts in the US to advanced vehicle transmissions back home in Wellington. A keen racer in his youth, Matt started with Go-Karts achieving notable success before graduating to Formula 3 Race cars in later years.

Matt worked at Weta Digital for three years where he was able to continue his passion for challenging technologies and creative projects. For recreation Matt cycles and is an avid follower of many sports.

Box Art by Steve Anderson

Steve Anderson is an avid historian of military aviation, with a special interest in the many beautiful biplanes and triplanes of World War I. The aircraft and battles of famous World War I aces such as Baron Manfred von Richthofen (better known as the "Red Baron"), James McCudden, Raoul Lufbery, Ernst Udet, Werner Voss, and other pioneers of dogfighting are among Steve's favorite subjects.

An Artist Fellow of the American Society of Aviation Artists, Steve creates works that reflect scrupulous attention to historically accurate detail, from the colorful markings on the fuselages to the time of day of an actual battle.

Visit Steve's website at: www.anderson-art.com.

Profile Art by Ronny Bar

Ronny Bar developed a keen interest in airplanes from an early age, living close at the El Palomar Air Force Base in Buenos Aires. He first flew in the back seat of a T-34 Mentor trainer at the age of ten, and was soon drawing airplanes and building models: Spitfires and Messerschmitt first... Camels and Fokkers later.
He became a successful bass player with a career lasting over 35 years in several Rock bands, recording ten albums (one of them being a National hit selling more than 100,000 copies) and performing countless concerts, TV shows and tours all over Argentina.

Now retired from the R'n'R scene, his interest returned to his early passion: Aviation Artwork. Visiting the WW1 aircraft collection at Hendon focused his already growing interest for that historic period. His artwork is regularly appearing in journals and publications like Windsock Worldwide, Windsock Datafiles, Cross & Cockade and Over the Front.

You can contact Ronny at: ronibares@yahoo.com.ar
See artwork at: www.wwi-models.org/Images/Bar/Art/index.html

Project Co-ordinator, Richard Alexander

A native of Wellington New Zealand, Richard Alexander has a long term interest in military history, race cars & local drivers from motor sports golden era of the '60's. Other interests include mountain biking, scotch and cigars.
An accomplished modeller Richard's models have twice been awarded Best Overall in Show at IPMS(NZ) National Conventions and earned him the inaugural TamiyaCon(NZ) Master Modeller award (along with the associated trip to Japan) in 2001. Many of his works are in private collections around the world, though he no longer accepts commissions.

Richard has been in the model and hobby industry since 1991 and brings with him a keen eye for detail and a passion for ensuring our models are enjoyable to build. So if there is anything you don't like about this model, you can blame him.

If you do have comments, requests or suggestions, Richard is contactable at richard@wingnutwings.com

Historic Aircraft photos courtesy of the 1914-18 Aviation Heritage Trust.

32004	1/32 Bristol F.2b Fighter	Qty
0132004A	A parts	1
0132004B	B parts	1
0132004C	C parts	1
0132004D	D parts	2
0132004F	F parts	1
0132004P	Photo-etched metal parts	1
132E0003	E parts RR Falcon	1
7132004	Instructions	1
9132004	Decals	1

32001 - 1/32 Junkers J.1

32002 - 1/32 LVG C.VI

32003 - 1/32 SE.5a 'Hisso'

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