



Hansa-Brandenburg W.29 - Allegedly designed by Ernst Heinkel one night on the back of a cabaret wine list, the W.29 was essentially a Hansa-Brandenburg W.12 biplane with the top wing removed. The advanced monoplane design, with improved performance due to the reduction in drag afforded by the 50% reduction in wings, was achievable because of the highly rigid nature of the float and strut arrangement. The W.29 was a worthy successor to the W.12 in its task of patrolling the North Sea and harassing RNAS flying boats and British surface vessels. 199 W.29s were built in 2 versions, 156 C3MG (aircraft equipped with 3 machine guns) and 43 C2MGHFT (with 2 machine guns and wireless equipment). The W.29 was powered by 3 different engines during its production, the 185ps BMW IIIa, 185sp Benz Bz.IIIa and the 150hp Benz Bz.III which was the most numerous. The advanced design of the W.29 ensured that it saw lengthy post war service with the Deutsche Luft-Reederei (German Air Carrier) and Norway as well as being license built in Denmark and Japan.

From April 1918 onwards German seaplanes were directed to have all surfaces visible from above grey-brown, grey-blue and "grey-violet in regular hexagons...", areas visible from the sides painted "grey-blue", areas visible from underneath to be "light blue" except the fabric surfaces which could remain in their natural colour. Photographic evidence suggests that these directives were followed by Hansa-Brandenburg with the exception that the W.29 floats and struts were painted with black bituminous tar based paint for protection from salt water. Upper surface rib tapes are invisible in the photographs available to us and we are now of the opinion that the hexagon camouflage finish applied to Hansa-Brandenburg seaplanes was painted, and not printed onto fabric as previously thought. The grey-blue applied to the plywood fuselage sides appears matt while the grey-blue used on the cockpit cowlings and metal engine cowlings appears very glossy, in some cases with an almost 'mirror like' finish.

Wingspan:	Length:	Max Weight:	Max Speed:			
13.5m (44'4")	9.35m (30'8")	1463kg (3225lb)	164kph (102mph)			
No. Manufactured:	Production:	Engine:	Ceiling:			
199	April 1918 to December 1918	(W.29 2512) 150hp Benz Bz.III	Unconfirmed			

(C3MG) 1x 7.92mm (0.311") LMG 14/17 Parabellum and 2x 7.92mm lMG08 'Spandau' machine guns

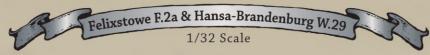
Felixstowe F.2a - The Felixstowe F.2a was probably the most successful flying boat of the First World War. With a crew of 5 it was capable of carrying out long range reconnaissance, anti-submarine and anti-shipping patrols of up to 10 hours duration. The development of the Felixstowe F.2a is staggeringly convoluted but was essentially an Anglo-American design which can trace its development from the pre war Glenn Curtiss & Cyril Porte designed 180hp twin engine 'America' flying boat design. This basic design was improved and strengthened successively by both Curtiss and Porte (having now returned to service in the RNAS after the outbreak of war) over the next few years until July 1917 when Porte arrived at the deep 'V' hull with full side fins so characteristic of the Felixstowe flying boats, so called because they were developed at the RNAS Seaplane Experimental Station at Felixstowe in Suffolk. Although technically now a wholly Porte design these flying boats were referred to as 'America class' by the Royal Navy and as 'Curtiss' types by the Germans. The twin 375hp Rolls Royce Eagle VIII engine powered Felixstowe F.2a featured a deep 'V' hull constructed using boat building techniques with diagonal planking on the bottom while the tops of the fins were ply and doped fabric. The sides of the upper hull were ply while the top coamings and rear were covered with linen, as were the wings and tailplane. Ply walkways were positioned on the coaming near the engineer's hatch and on the bottom wing under the engines. A modified Liberty engine powered version was manufactured by Curtiss in America as the H.16.

Felixstowe flying boat wings and tailplane upper surfaces usually appear very dark in photographs and have been recorded simply as 'green' with the bottom $surfaces \ remaining \ heavily \ varnished \ Clear \ Doped \ Linen. \ The \ bottom \ of \ the \ wooden \ planked \ hull, bow, side \ \& \ tailplane \ struts \ and \ fin \ tops \ were \ finished \ with \ gloss$ black bituminous tar based paint inside and out for waterproofing. The plywood panels of the superstructure were heavily varnished with their joints being sealed with the same bituminous tar based paint while the coamings often remained Clear Doped Linen (CDL) as did the lower surfaces of the wings and tailplane. In some instances the coamings were finished with the same protective dope as the wings and tailplane. All metal fittings were painted gloss black although those on the engine bearers and interplane struts appears to have been frequently overpainted Battleship Grey along with the wooden struts. Most surfaces featured a gloss finish when new which weathered to a dull matt appearance after short periods exposed to harsh saltwater. Many British flying boats featured brightly coloured dazzle paint finishes for identification purposes from the middle of 1918 onwards. Any history of these aircraft here is of necessity very brief, therefore we encourage you to seek the references listed below for a more thorough understanding of these significant aircraft. Richard Alexander 2014

Wingspan:	Length:	Max Weight:	Max Speed:
(Early) 95' 7" (29.13m)	46' 3" (14.1m)	11500 lb (5216kg)	85kn (156kph)
No. Manufactured:	Production:	Engine:	Ceiling:
(F.2a) approx 100	1917 to 1919?	2x 375hp Rolls Royce Eagle VIII	10000' (3048m)

5x .303" (7.7mm) Lewis guns and 460lb (208kg) bombs

Brandenburg W.29 Datafile 55, P.M Grosz, 1996 - Over The Front, Volume 24 number 4, 2006 - Windsock Datafile 82, Felixstowe F.2a, JM Bruce 2000 -Technical Notes, F.2A Flying Boat (Large America), RAF 1918 - Windsock International, volume 17 #2 & #3, 2001 Flight, 2, 16 & 23 December 1955 and 20 January 1956 - The Vintage Aviator Ltd - 1914-18 Aviation Heritage Trust - Colin Owers - Private Collections



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.

If installing rigging please drill out all location holes with a 0.5mm drill bit to a depth of at least 1mm.

Painting: Only use paints **designed and 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 (not just clear coated plastic). 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.

Hints & Tips: Please visit our website for additional photos, hints and tips to assist you in getting the best result from

your Wingnut Wings model.

1 Construction Step



Choose



Attention



Remove



Rigging:

Part Number

Decal



Do Not Cement



Option



Drill



Photo Etch Part



Cement For Metal



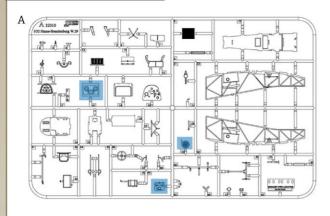
Other Side

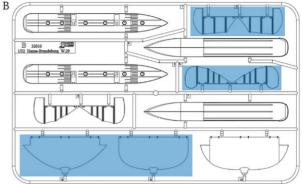


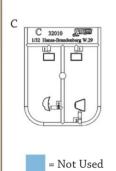
Paint Colour

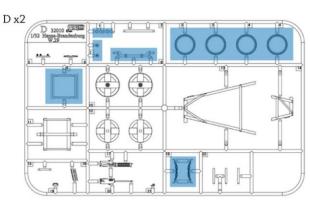
All colours	Tamiya	Humbrol	Federal Standard
	X31	54	rederai Staildard
a Brass b Gun Metal			
	X10	27004	
d Rlack - semi gloss	XF16	27001	
Didek Seili gloss	X18	85	
e Clear Doped Linen (CDL) German - gloss	XF57	121	20475
f Dark Yellow - matt	XF60	83	33440
g Rust	XF9	113	30045
h Leather - semi gloss	XF52	62	30219
Clear Doped Linen (CDL) British - semi gloss	XF55	28	26405
j White - semi gloss	XF2	130	
k Proprietary Khaki - semi gloss	XF58	30	34096
Dark Green - semi gloss	XF11	195	34092
m Battleship Grey - matt & semi gloss	XF82	106	35164
n Tar based bituminous sealer - gloss	X1	21	17038
o Dark Wood* - semi gloss	XF79*	98*	30111*
p Copper	XF6	12	
q Rubber - matt	XF69	66	35042
r Light Wood* - semi gloss	XF78*	93*	30340*
s Grey-Blue - matt & gloss	XF83	165	26293
t Steel	XF56	27003	
u Interior Grey Green - semi gloss	XF76	240	24424
v Red - semi gloss	X7	19	
w Light Blue - semi gloss	XF2(x10)+XF18(x1)	34(x1) + 96(x1)	25550
x Dark Grey - semi gloss	XF22	92	24159
		<u> </u>	1

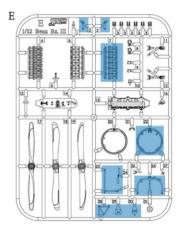
Hansa-Brandenburg W.29

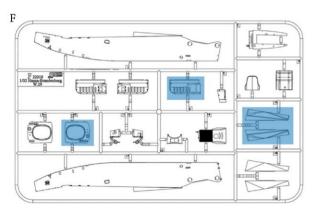


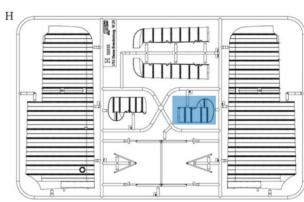


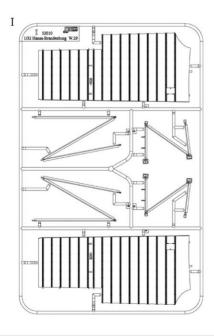


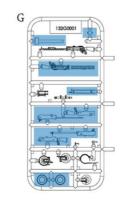




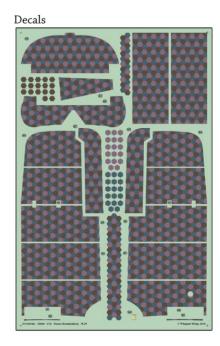




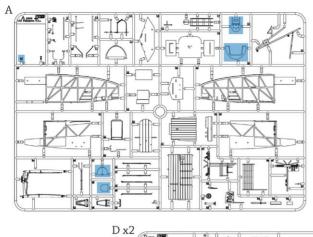


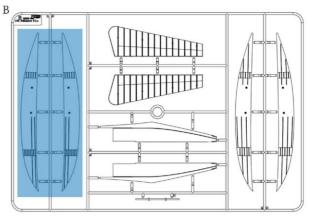


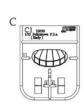




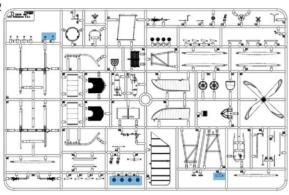
Felixstowe F.2a

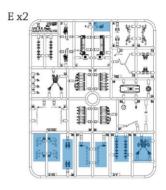


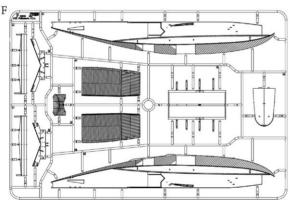


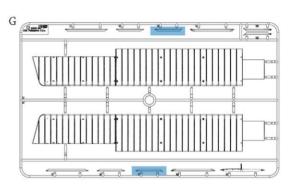


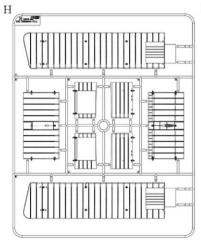


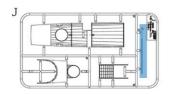












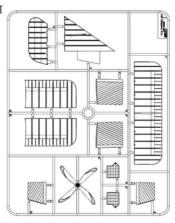
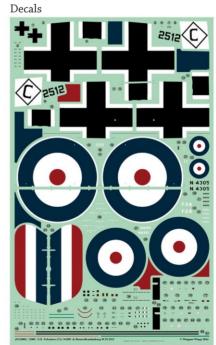
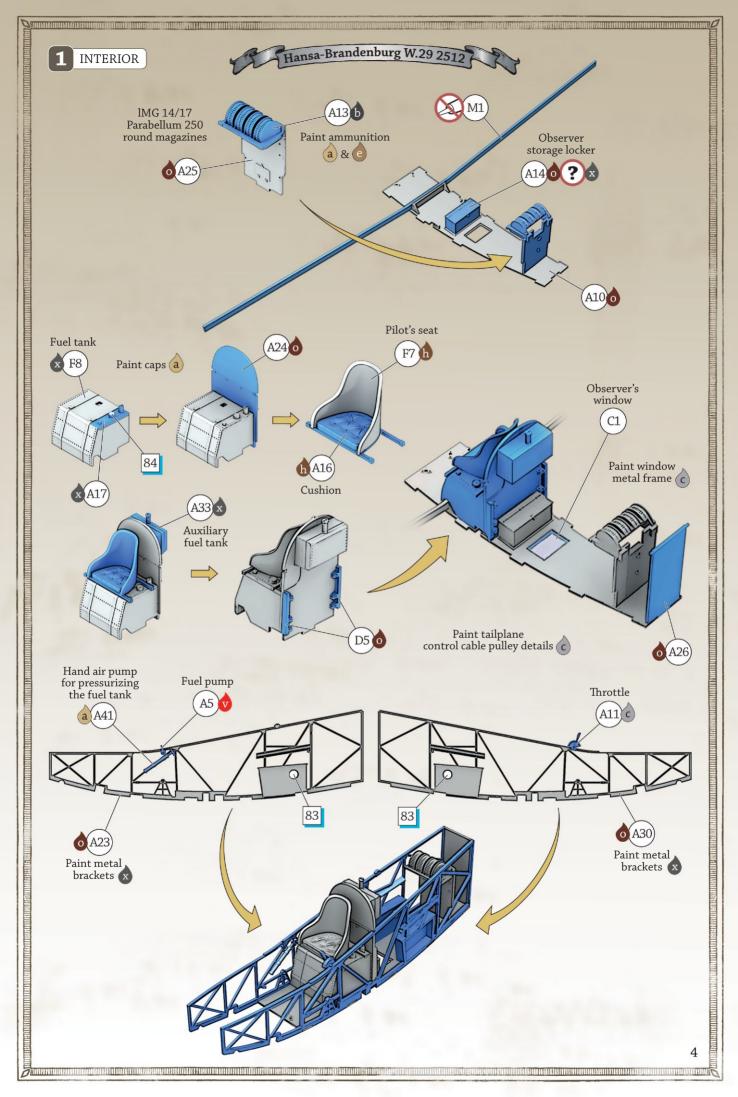
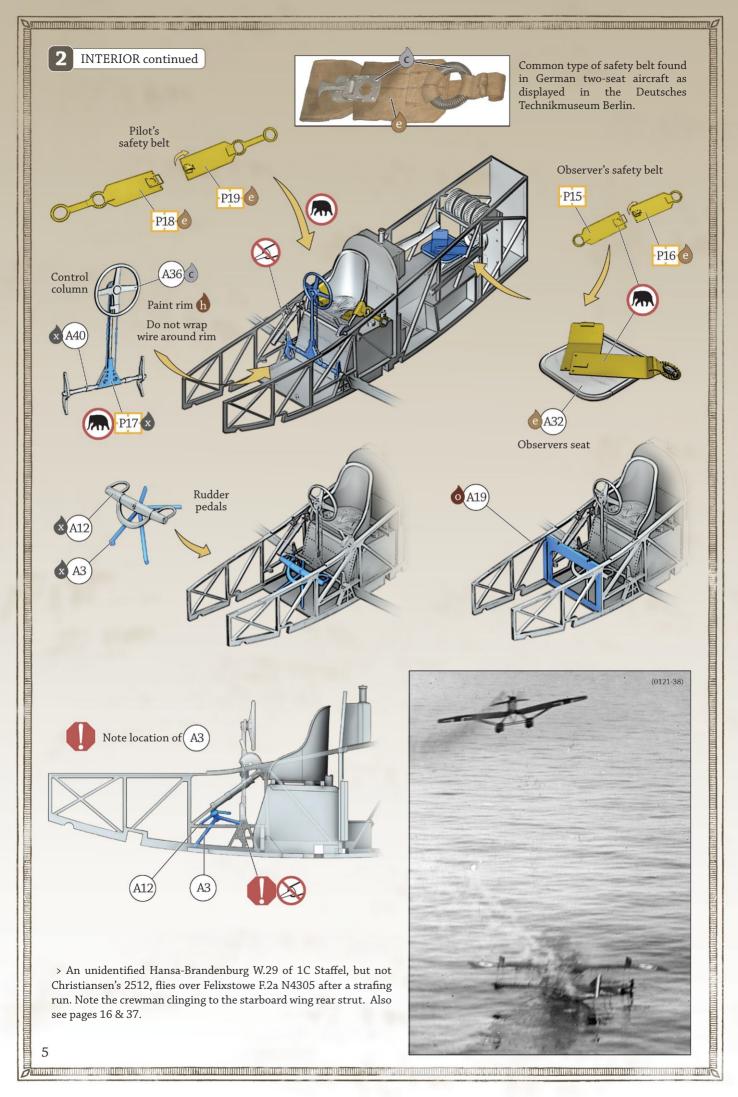


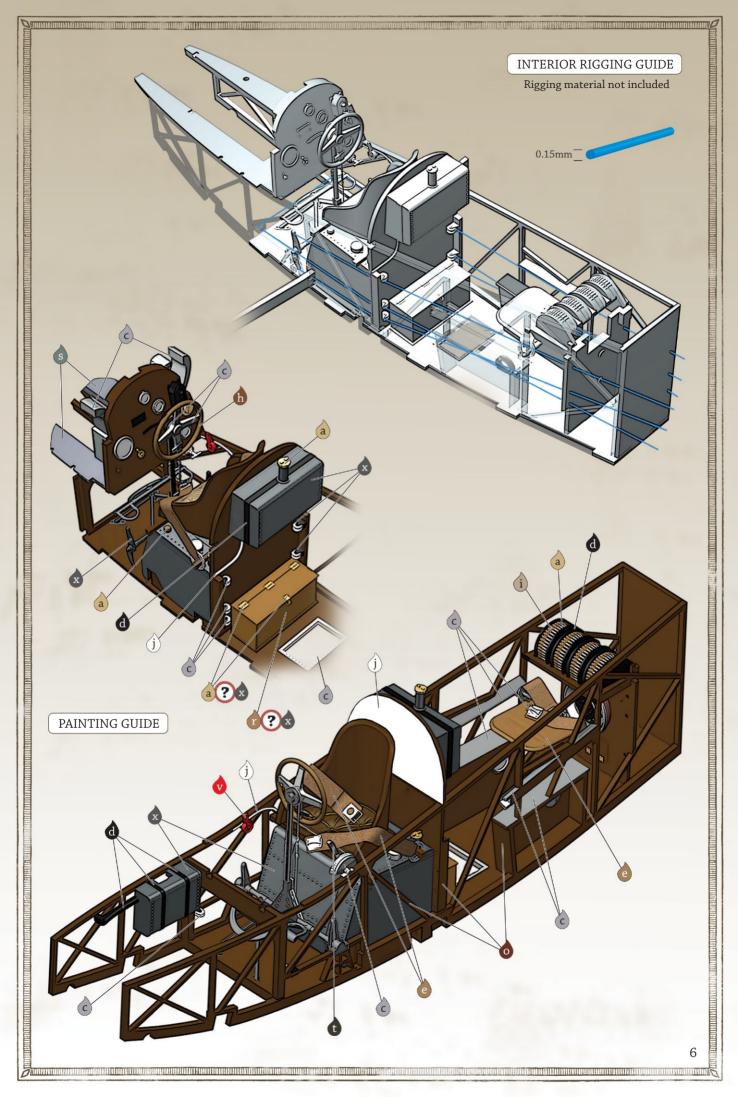
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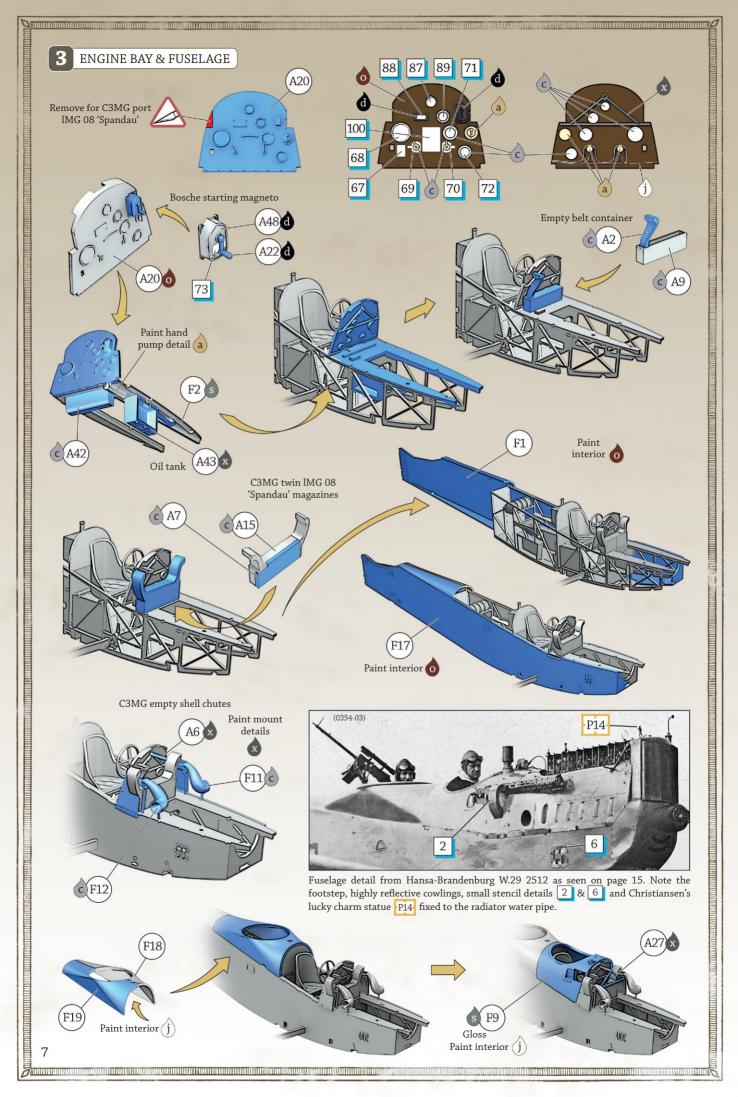
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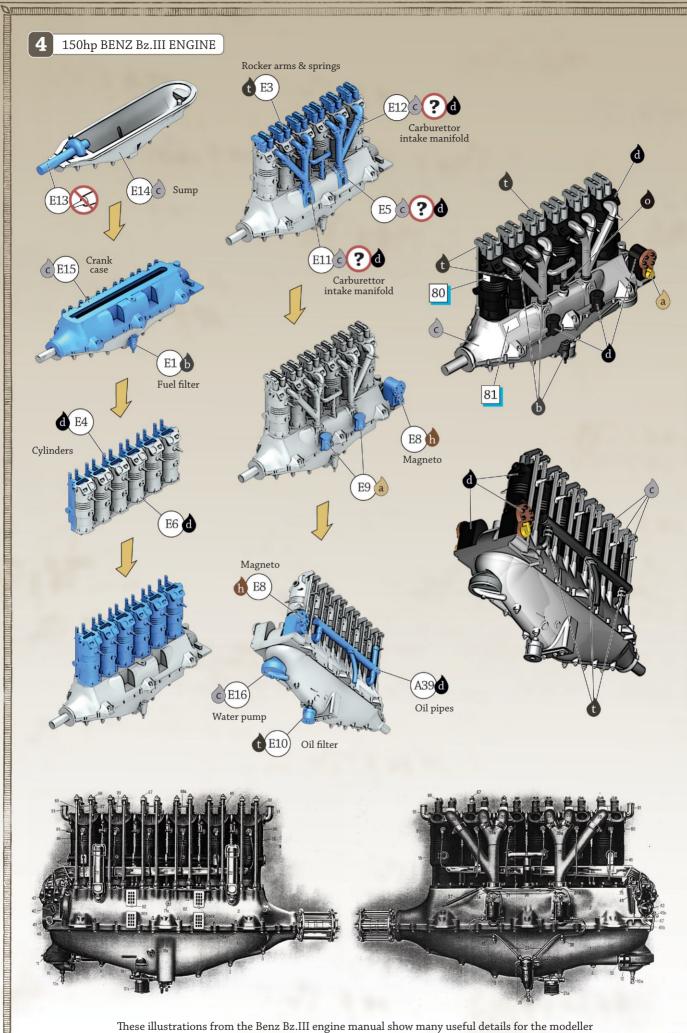


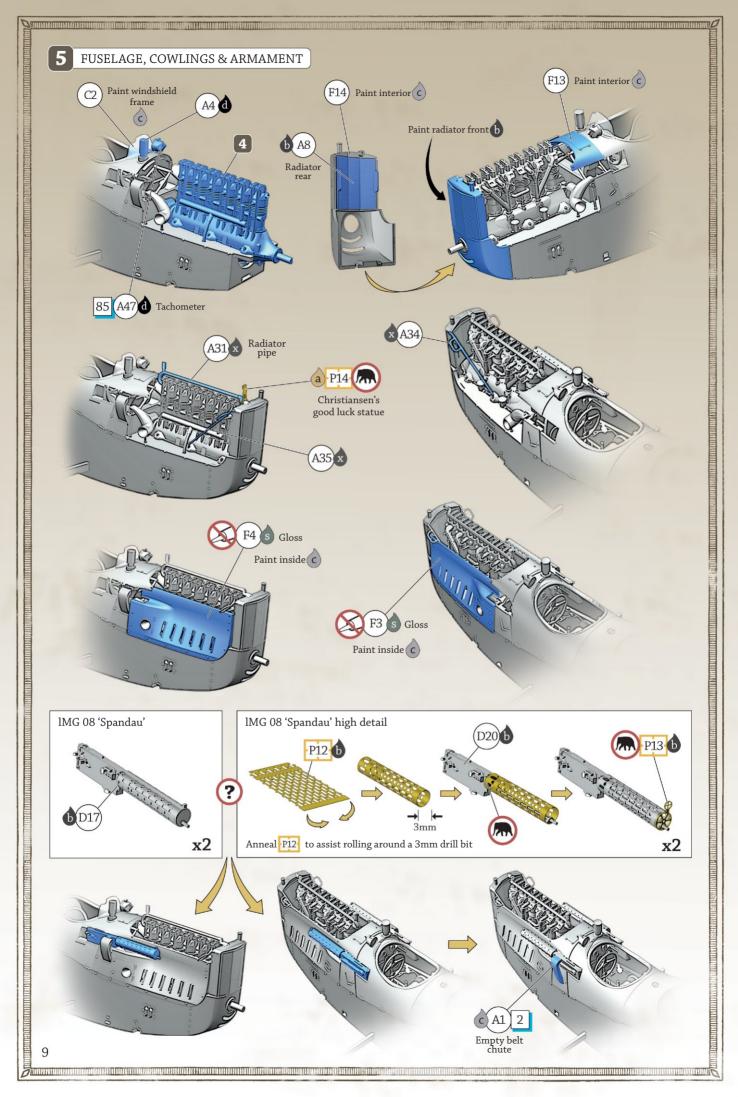


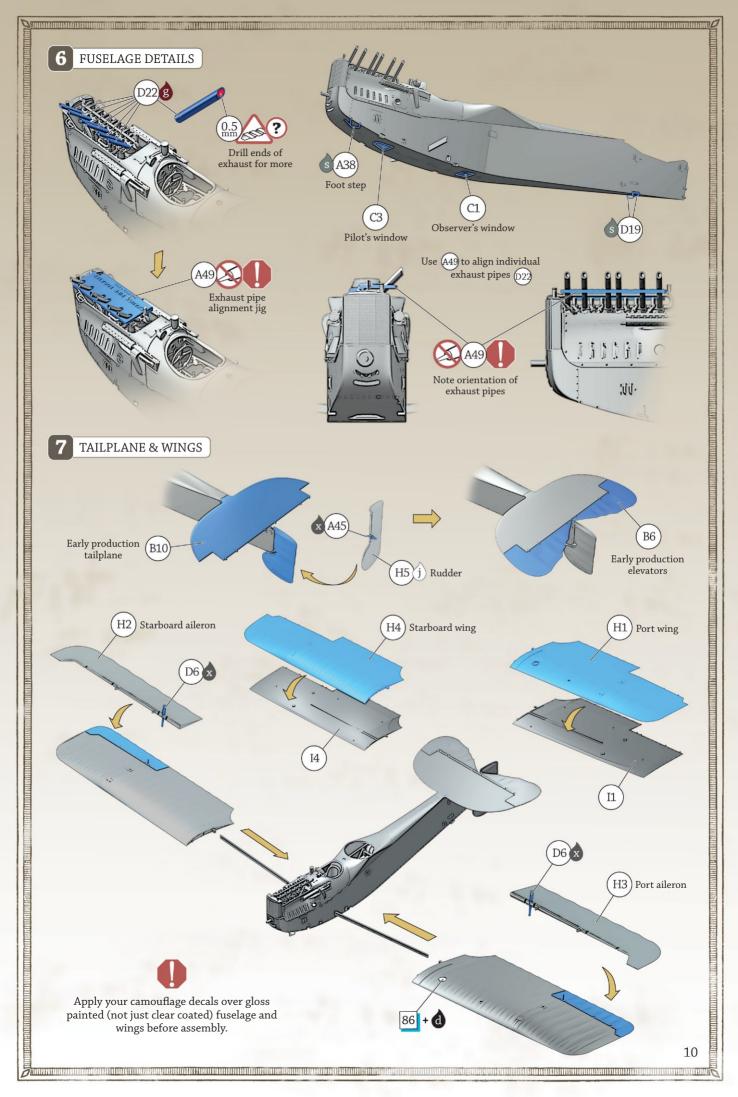


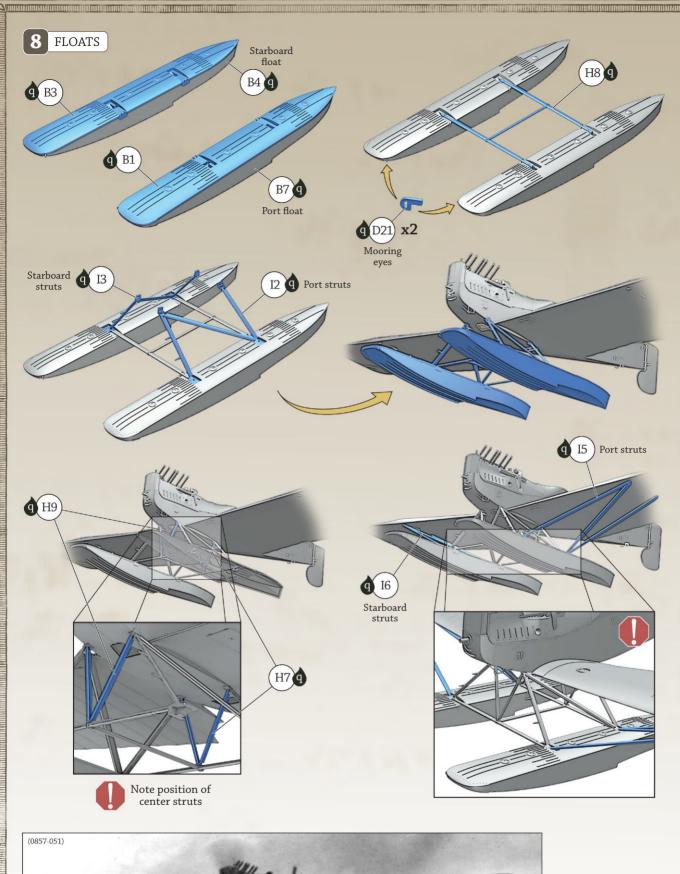






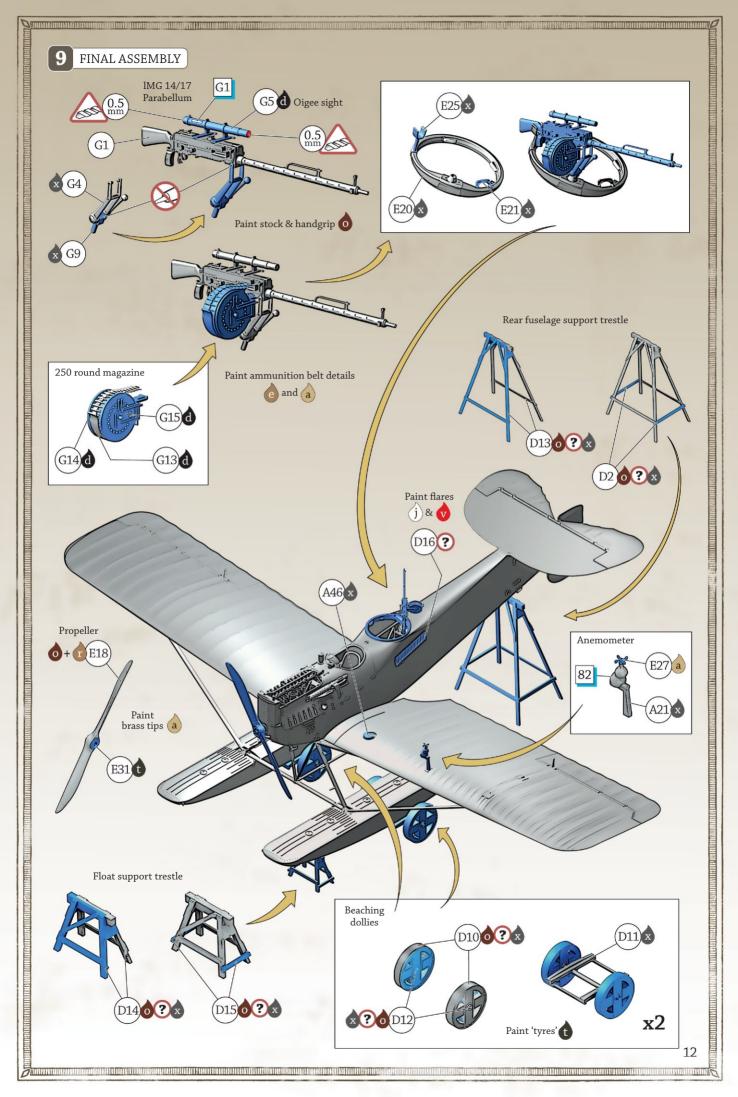


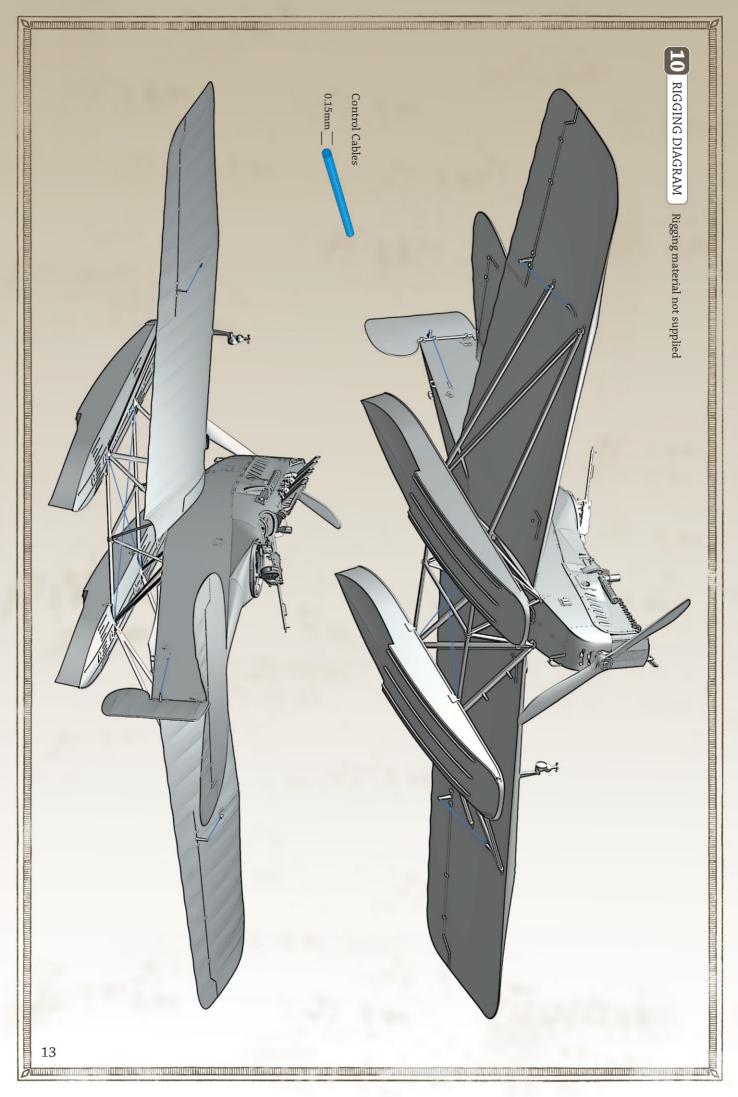




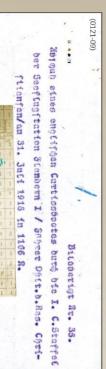


An unidentified Benz Bz.III powered C3MG Hansa-Brandenburg W.29 with the same style of exhaust and wing crosses worn by Christiansen's 2512 on 31 July 1918.





Illustrated combat report on the shooting down of Felixstowe F.2a N4305 by 1. C Staffel Hansa-Brandenburg W.29 from Zeebruggee led by Friedrich Christiansen on 31 July 1918





Mogertogener Aurs der Staffet. 25 Mefanfftette in 1166A



Beft. 2214.
Boot with any Englung geswungen. W. Anfinise find out Secuerbort-foite for Standoote gut su er ennen. Aufinige seigt beutily ben Gestanunteristed aufigen dem Curtiss-Groftugboot und bem Aranborturg-Einberhet.



Die Unfragme wurde Kurg nag ber Candung bes Grennend abgeführfenen Gurtferbooten ungefertigt.

Translation

Image 35. The shooting down of an English Curtiss boat by 1. C Staffel der Seeflugstation Flandern 1 / Commander OBlt. d. Res. Christiansen / on 31. July 1918 in 1166R.

The route flown by the Staffel. $extcolor{+}$ Crash site ir 1166R.

Image 2214. The boat is forced to land. The 'M.G' impacts are highly visible to the starboard of the boat. Photo clearly shows the size difference between the large Curtiss flying boat and the Brandenburg-Eindecker.

Image 2215. This photo was taken shortly after the landing of the burning and shot down Curtiss boat.

Image 2216. The fuel tanks are exploding and so does the ammunition at the same time. The big and bright flames are highly visible. Some members of the crew jumped over board. One man is sitting on the outer end of the lower starboard wing.

Type of the shot down boat: Curtiss – large flying boat, three part wings, on the top wings are the two typical stabilization fins, the bottom wings are significantly shorter than the upper and have floats attached. The two engines attached in between the wings have two (sic) blade propellers.

Der Brand

B.Hr.

2218.

Image 2218. The fire escalates quickly.

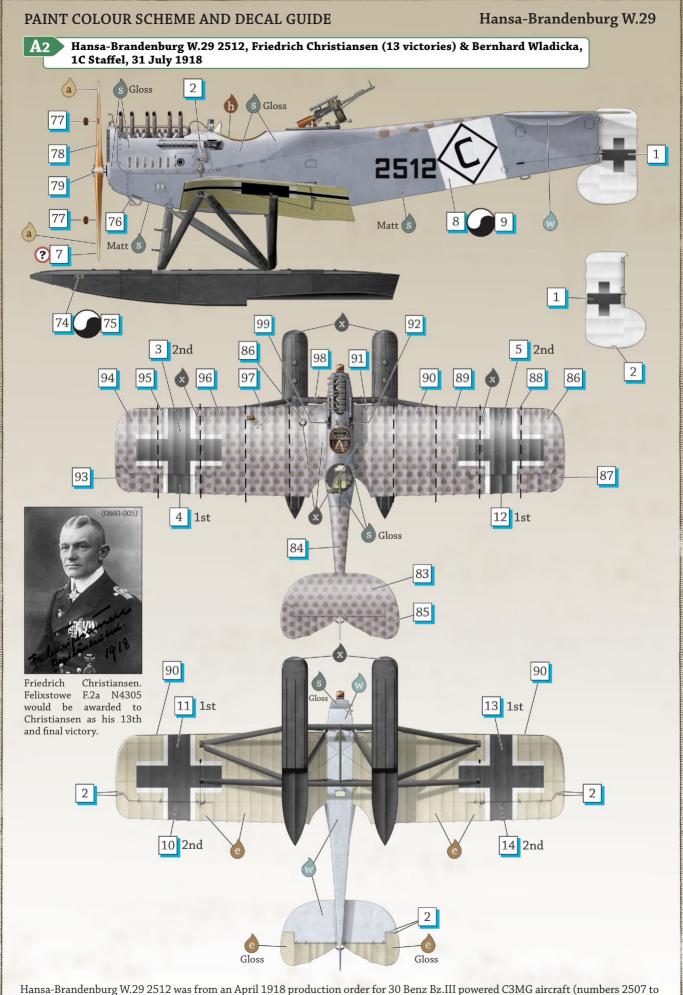
Image 2217. The wings of the boat start to burn and the whole boat is burned down in no time. This photo shows the type of construction of the fuselage, control surfaces and the position of the wings in relation to the fuselage.



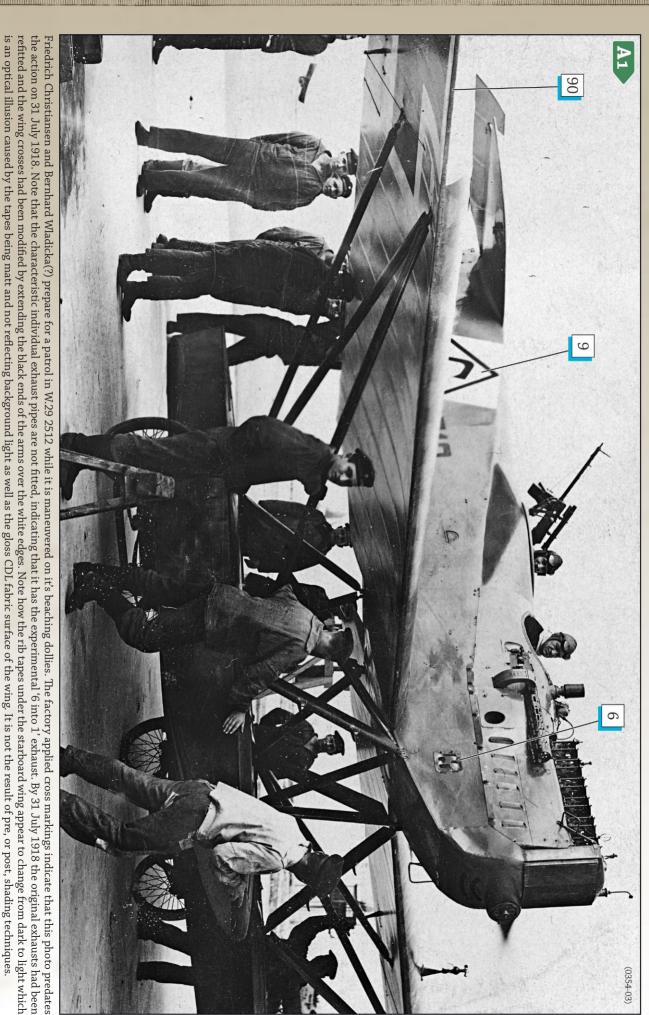


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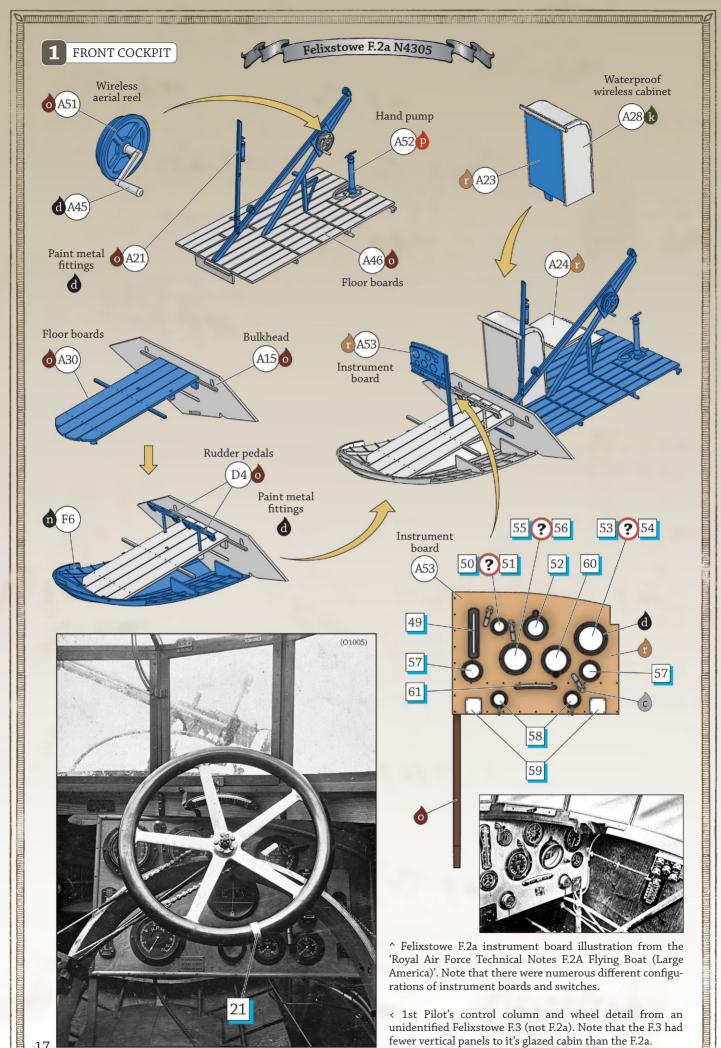
Storen B.Tr. 2217.

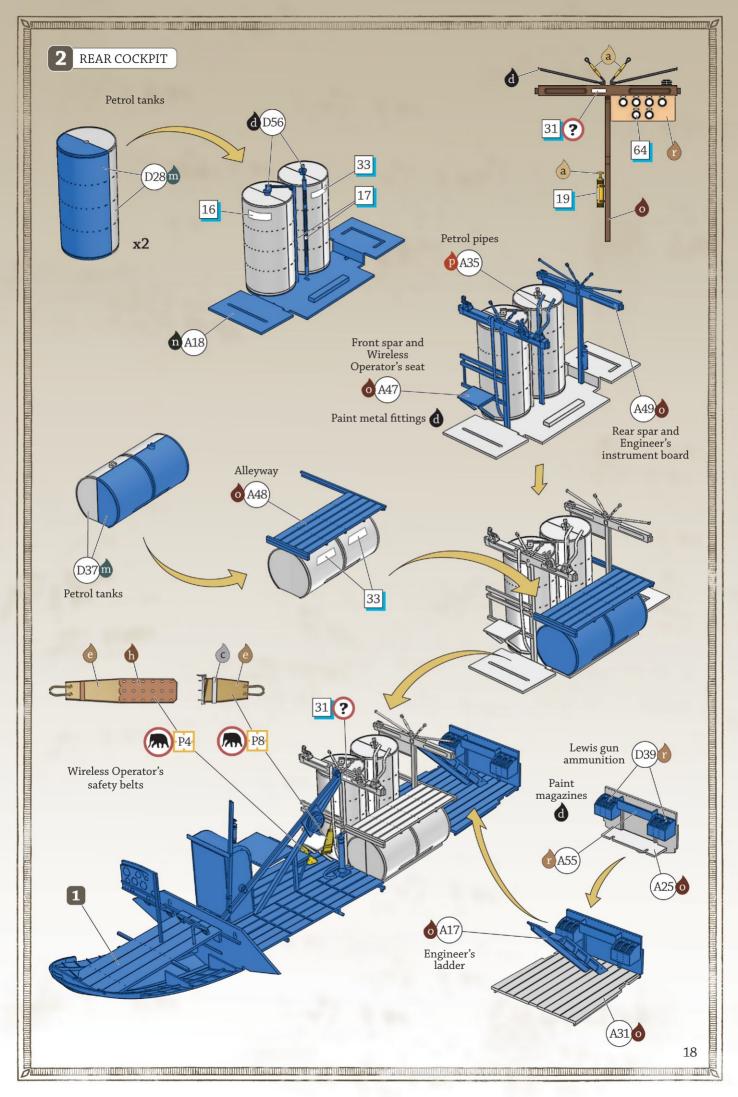


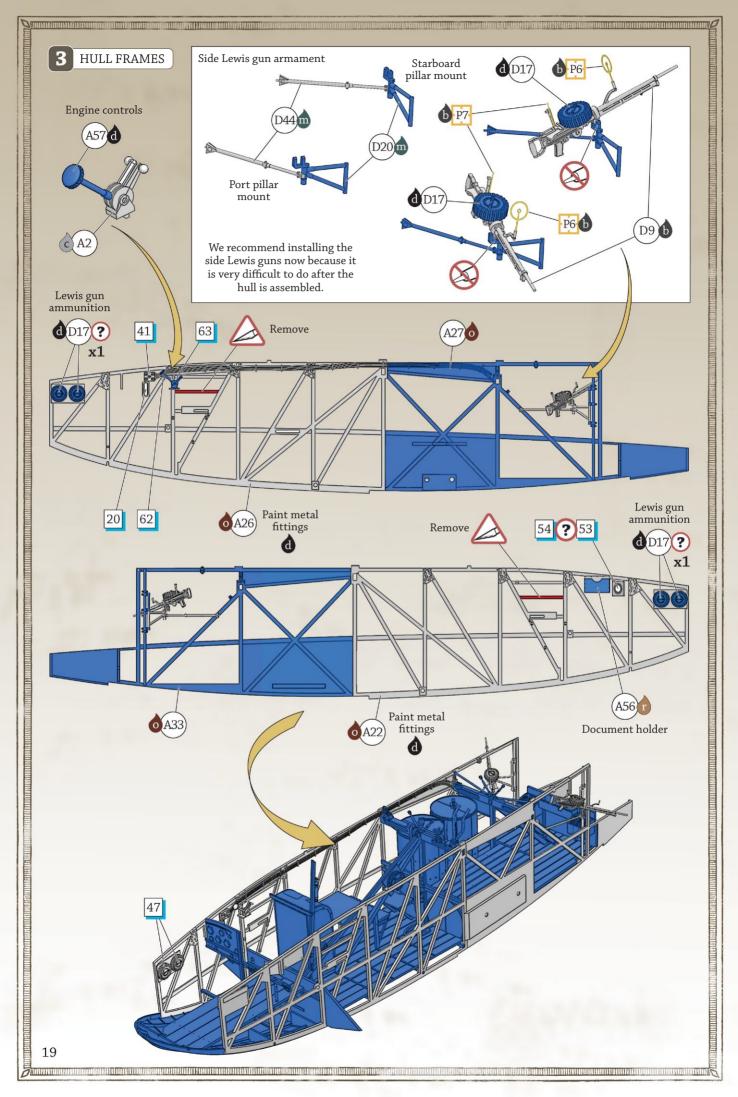
Hansa-Brandenburg W.29 2512 was from an April 1918 production order for 30 Benz Bz.III powered C3MG aircraft (numbers 2507 to 2536) and was stationed at Seeflugstation Zeebrugge. Note the modified balkenkruez, understood to be a rarely seen interim measure, which were being worn by 1.C Staffel W.29 during June-July-August 1918.

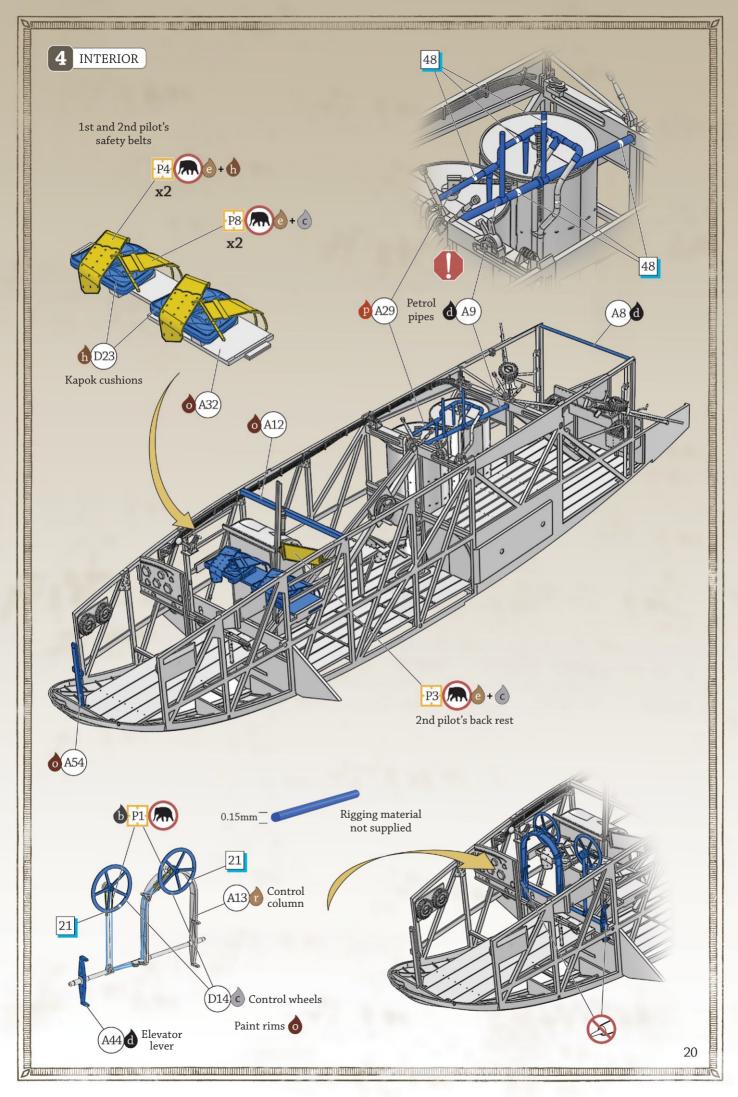


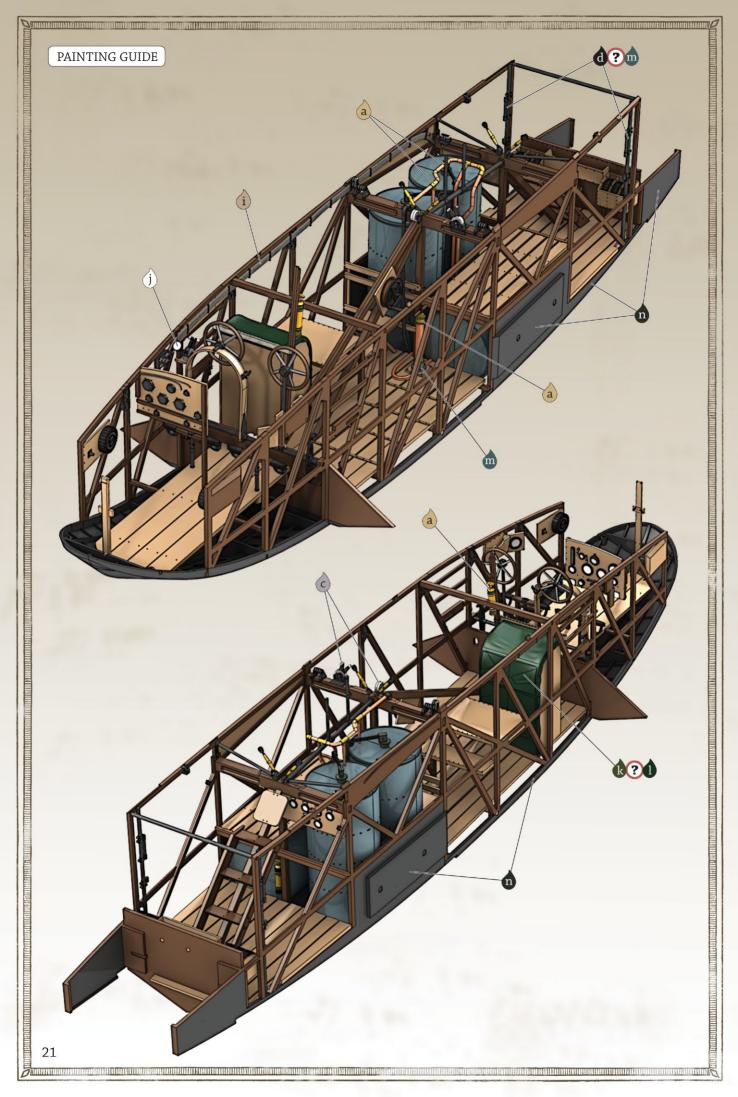
is an optical illusion caused by the tapes being matt and not reflecting background light as well as the gloss CDL fabric surface of the wing. It is not the result of pre, or post, shading techniques. refitted and the wing crosses had been modified by extending the black ends of the arms over the white edges. Note how the rib tapes under the starboard wing appear to change from dark to light which the action on 31 July 1918. Note that the characteristic individual exhaust pipes are not fitted, indicating that it has the experimental '6 into 1' exhaust. By 31 July 1918 the original exhausts had been

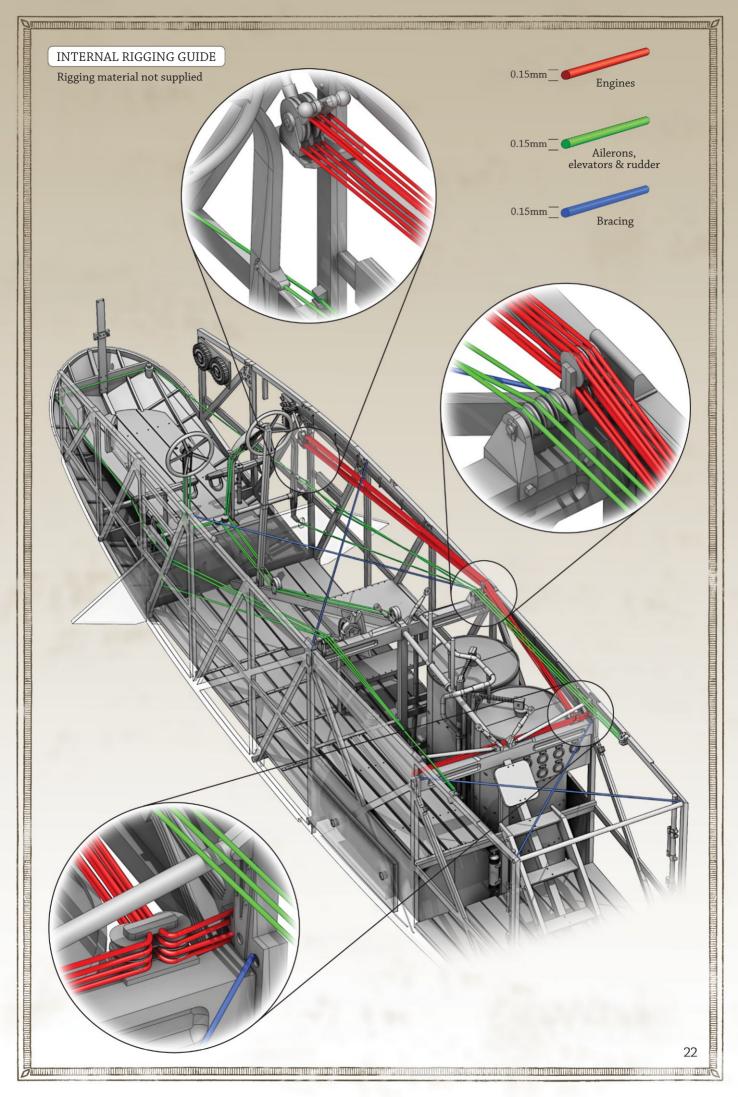


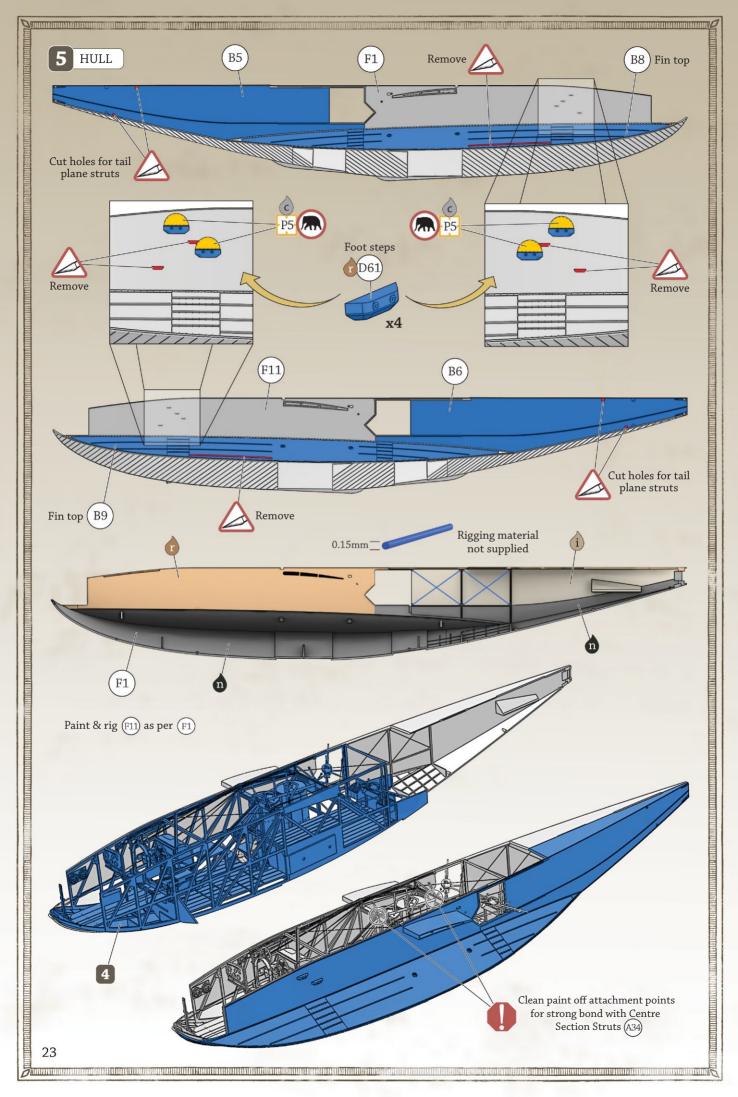


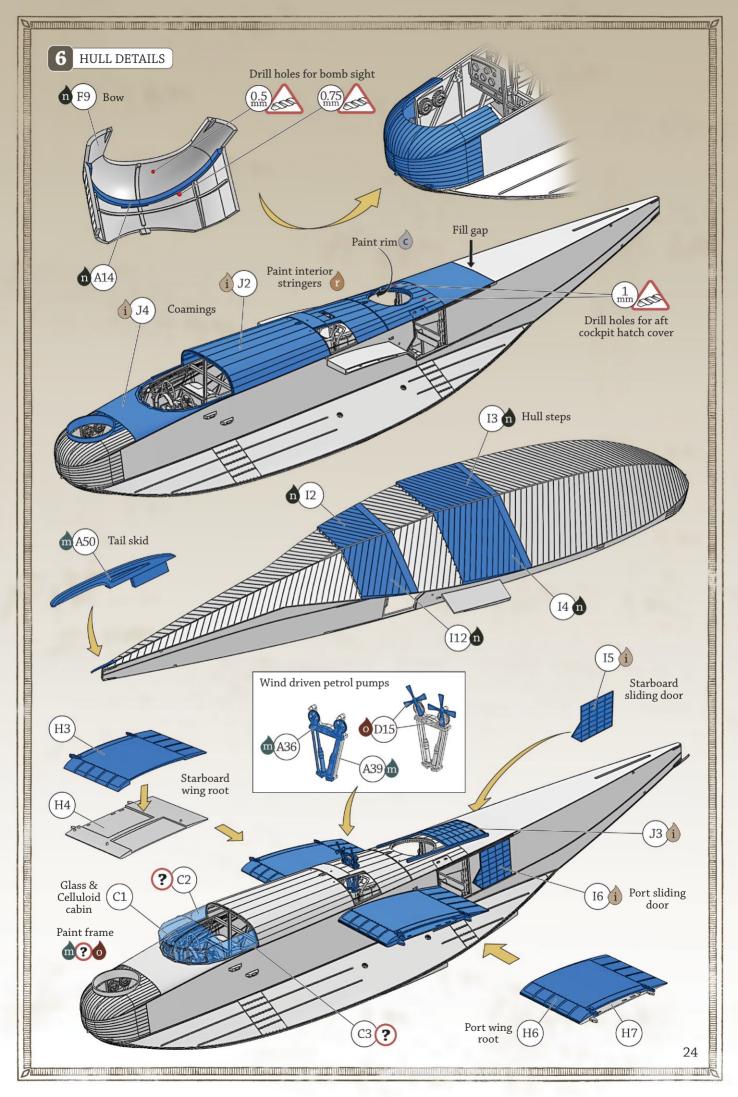


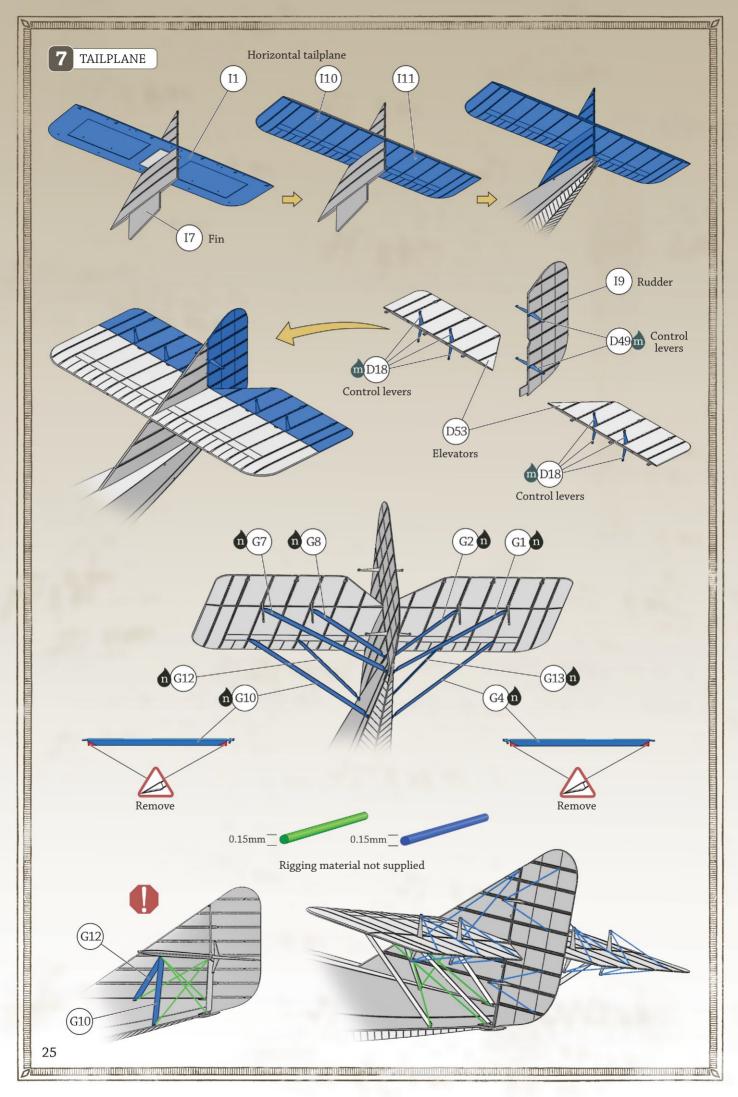


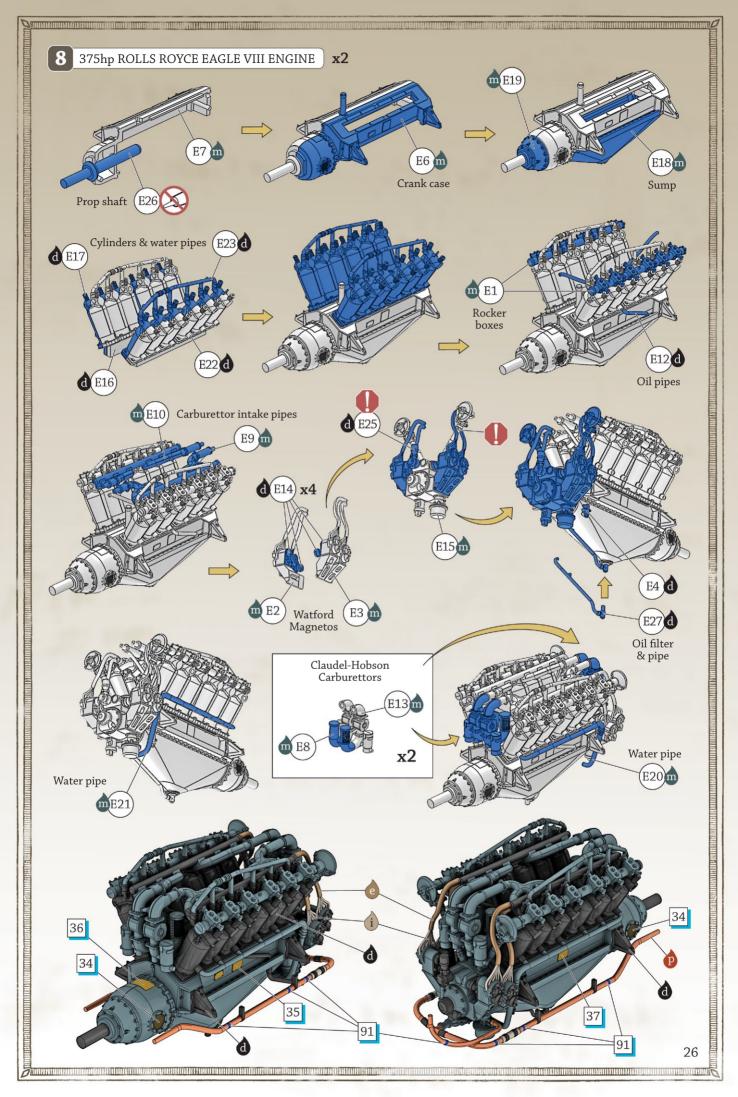


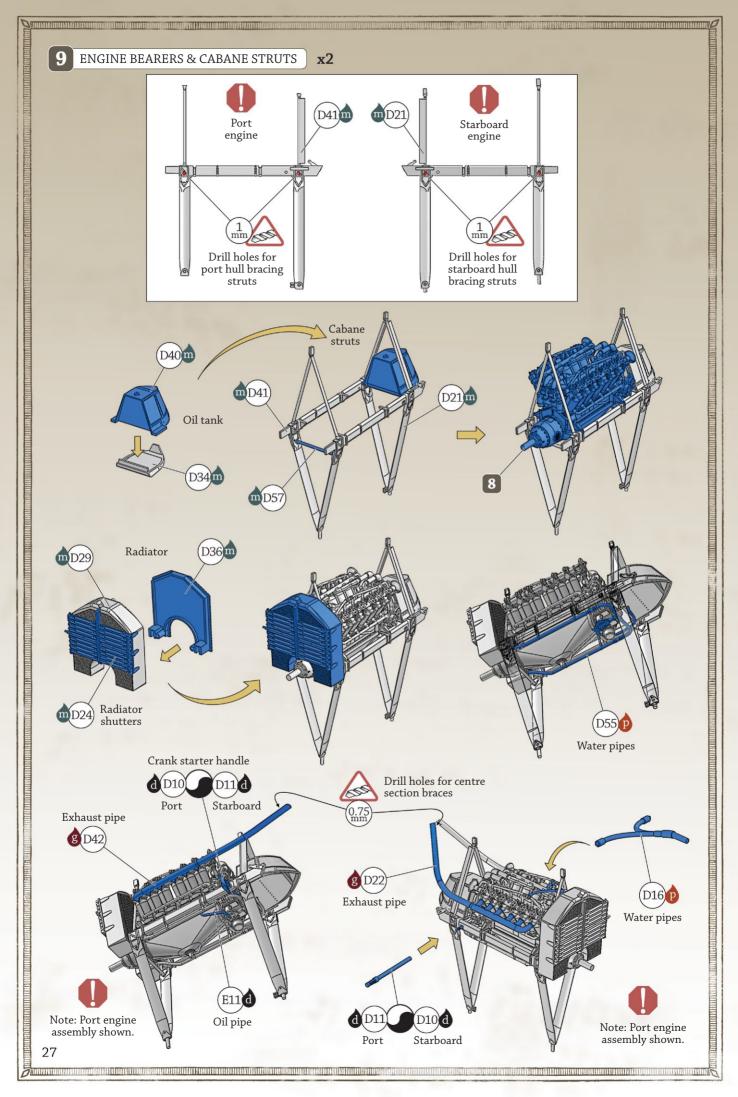


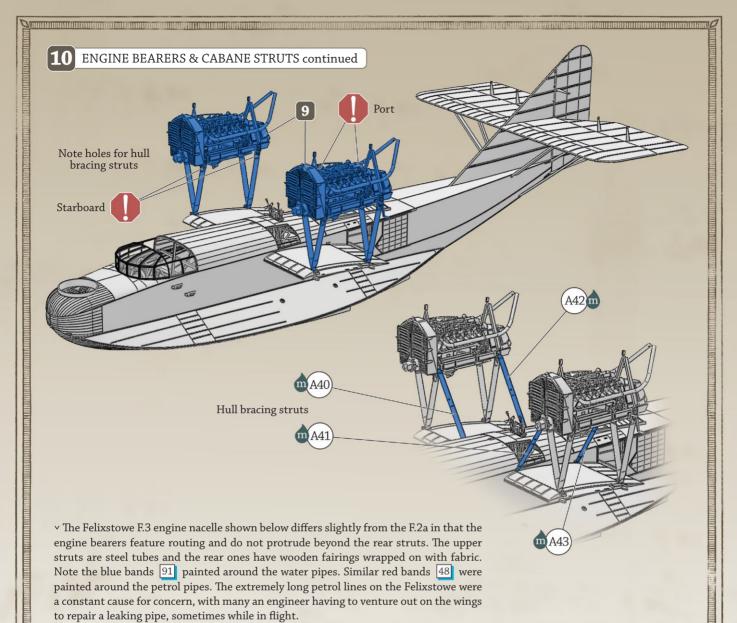


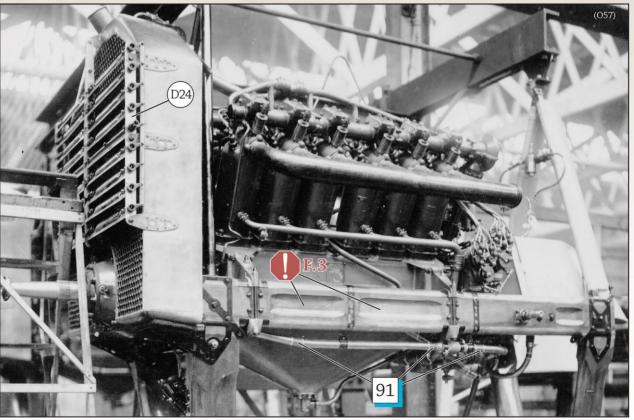


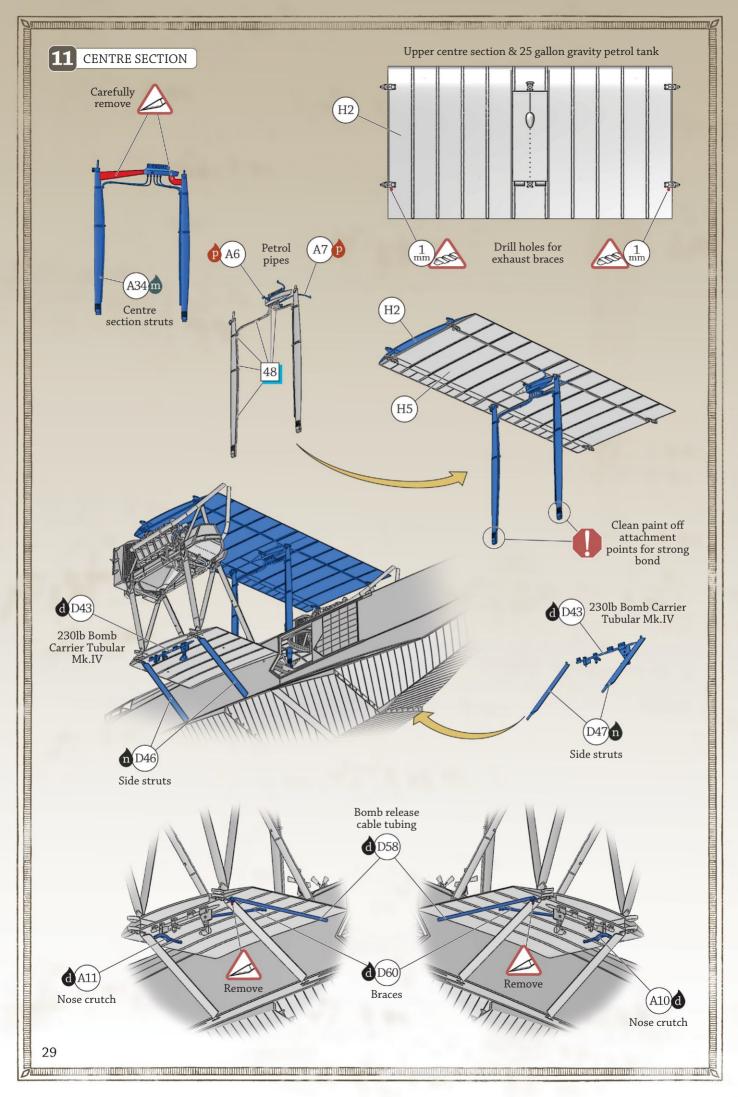


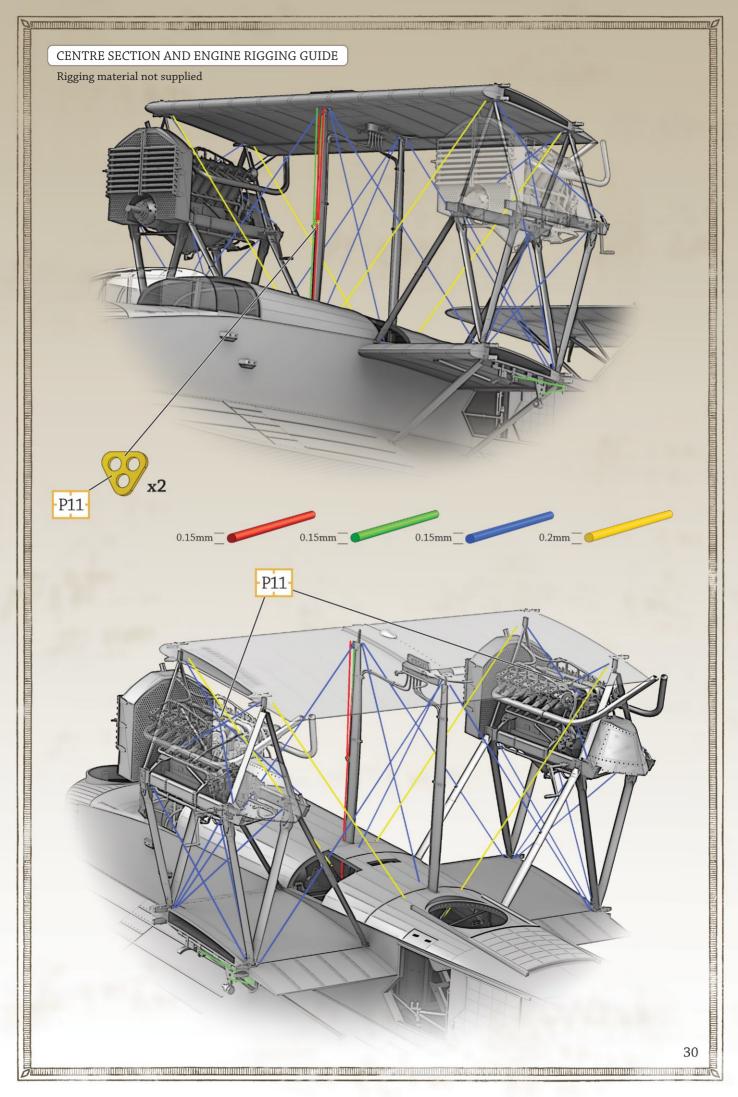


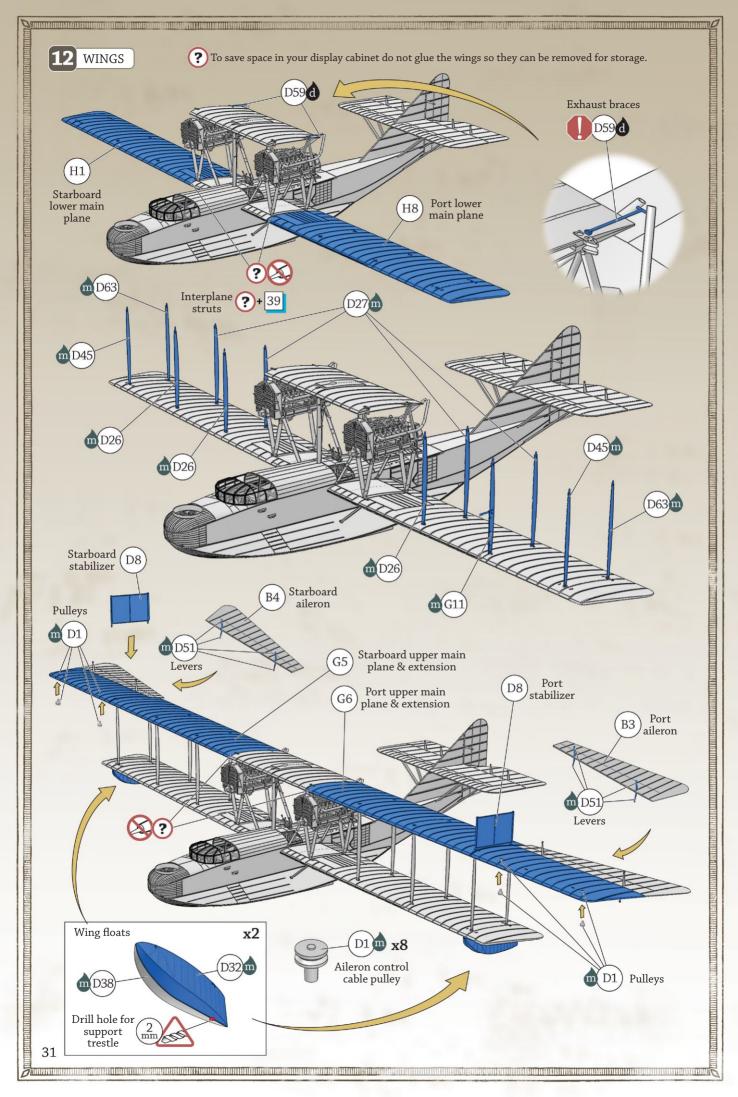


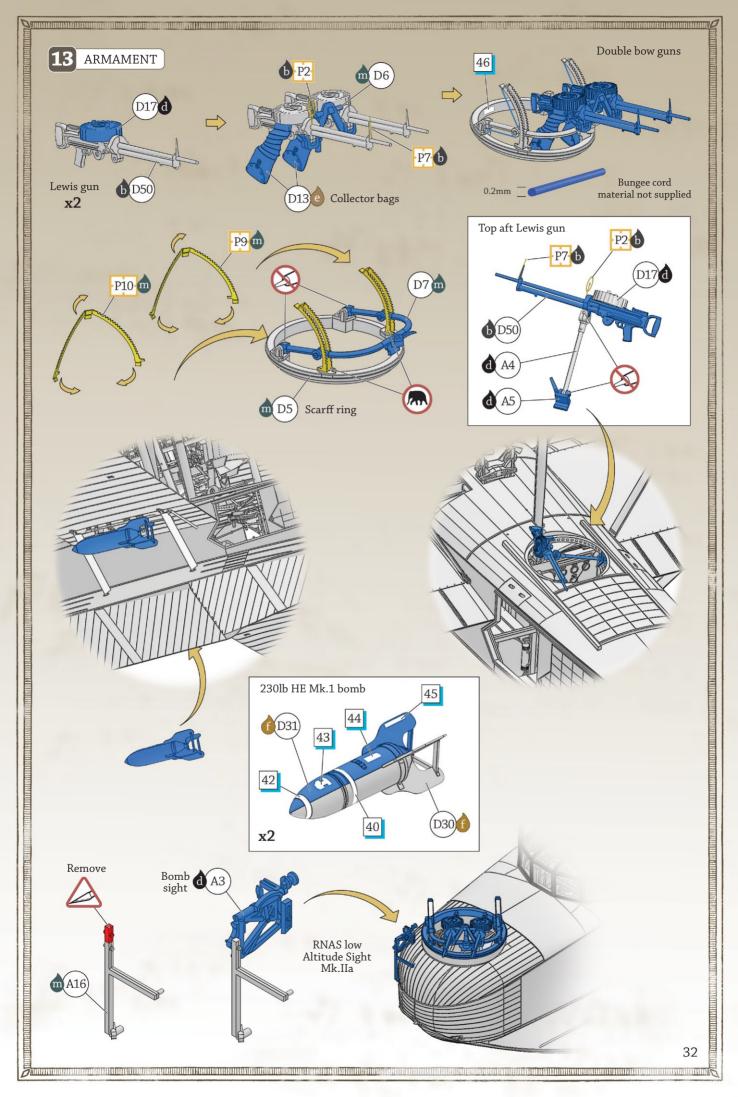


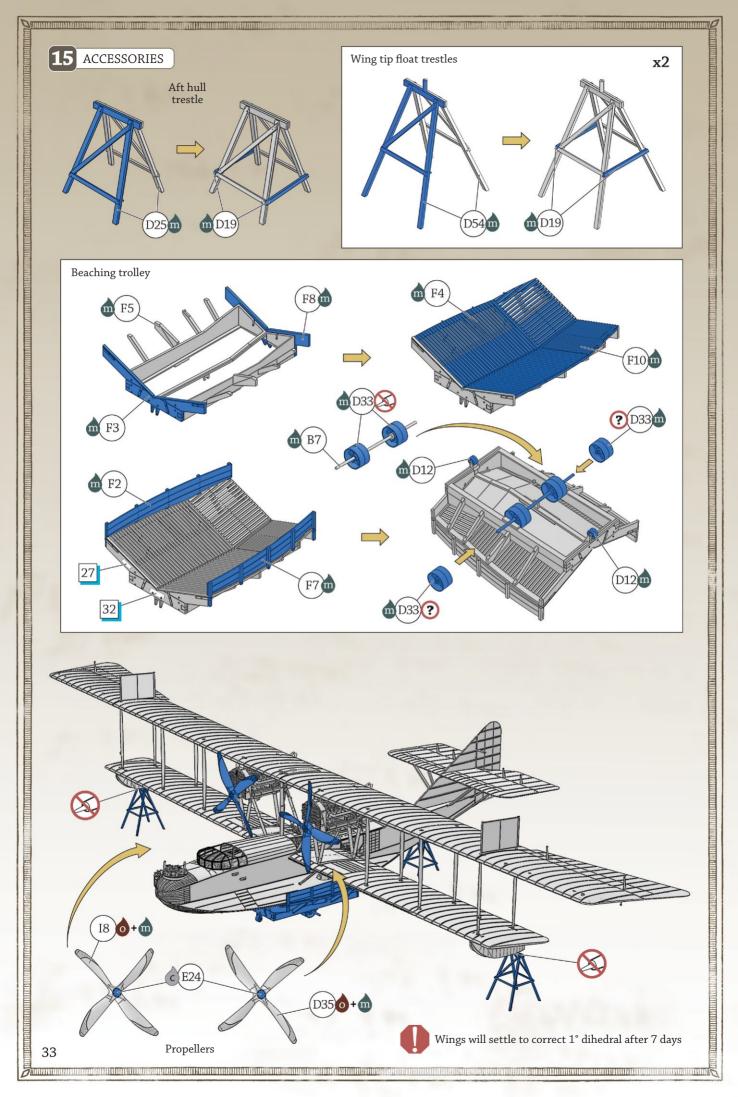












Felixstowe F.2a N4305 is attacked by 5 Hansa-Brandenburg W.29 of 1. C Staffel on 31 July 1918

Felixstowe F.2a N4305 crewed by 1st Pilot Capt EA Mossop, 2nd Pilot Lt G Hodgson, Engineer Pte Cooper, Wireless Telegraphy Operator Pte Dingley and Gun Layer Pte Greenwood took off at 6pm from Great Yarmouth air station for a routine patrol on 31 July 1918. They had been patrolling for a short while when they saw 2 aircraft on their starboard bow which they initially thought were their missing DH.9 escorts before they observed 3 more below them off the port bow. Realizing they were about to be attacked by 5 German W.29 seaplanes with superior performance, Mossop dived away at full throttle reaching 90kn (166kph). The 2 W.29 on the starboard bow came straight at them killing Pte Dingley, who was manning the double bow guns, with a shot through the neck. All 5 W.29 now positioned themselves behind N4305 and pressed home the attack with bullets whistling by and striking the hull with a 'crack-crack'. The gravity tank in the centre section was shortly riddled with holes and spraying petrol which the pumps could not replace quick enough leading to the engines slowing down and then stopping, forcing Mossop to set down on the relatively calm sea.



< With engines stopped Mossop sets N4305 down while an unidentified W.29, probably not Christiansen's 2512, continues its attack.

Shortly after landing Mossop sent off a carrier pigeon to report their plight and was in the process of sending a 2nd when 1. C Staffel returned, attacking in line ahead formation. Mossop ordered the crew out to the wingtips for safety but the petrol tanks exploded into flames and it is believed that this was when Cooper was killed.

> Felixstowe F.2a N4305 under continued attack. Mossop or Hodgson, who were both clinging to the starboard wing tip can be seen clearly. The heat from the fire starts setting off the ammunition.

Suffering severe burns, Greenwood jumped into the sea by the bow even though his lifejacket was damaged and he could not swim. He of course sank and Mossop and Hodgson left the relative safety of their wing tip to rescue him. Mossop later describing the burnt and drowning Greenwood as 'a little excitable' but 'very brave'.

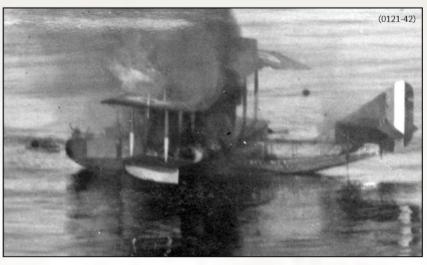


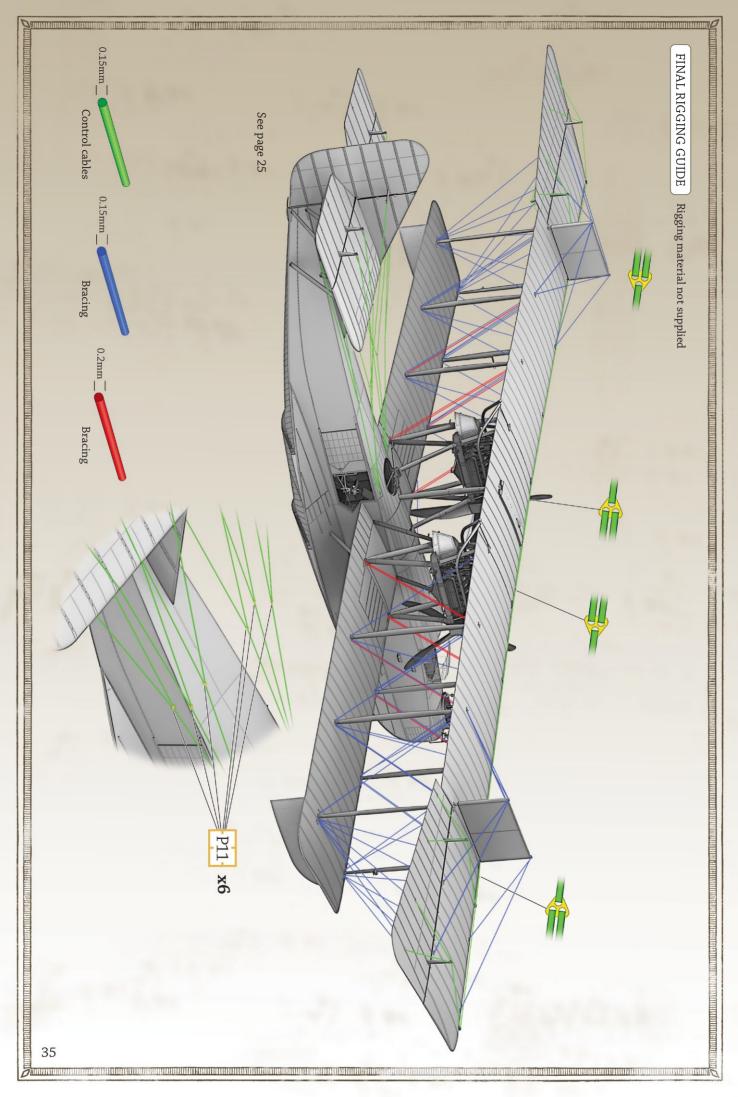
< In this photo it appears that we can see Mossop and Hodgson swimming to the rescue of Greenwood.

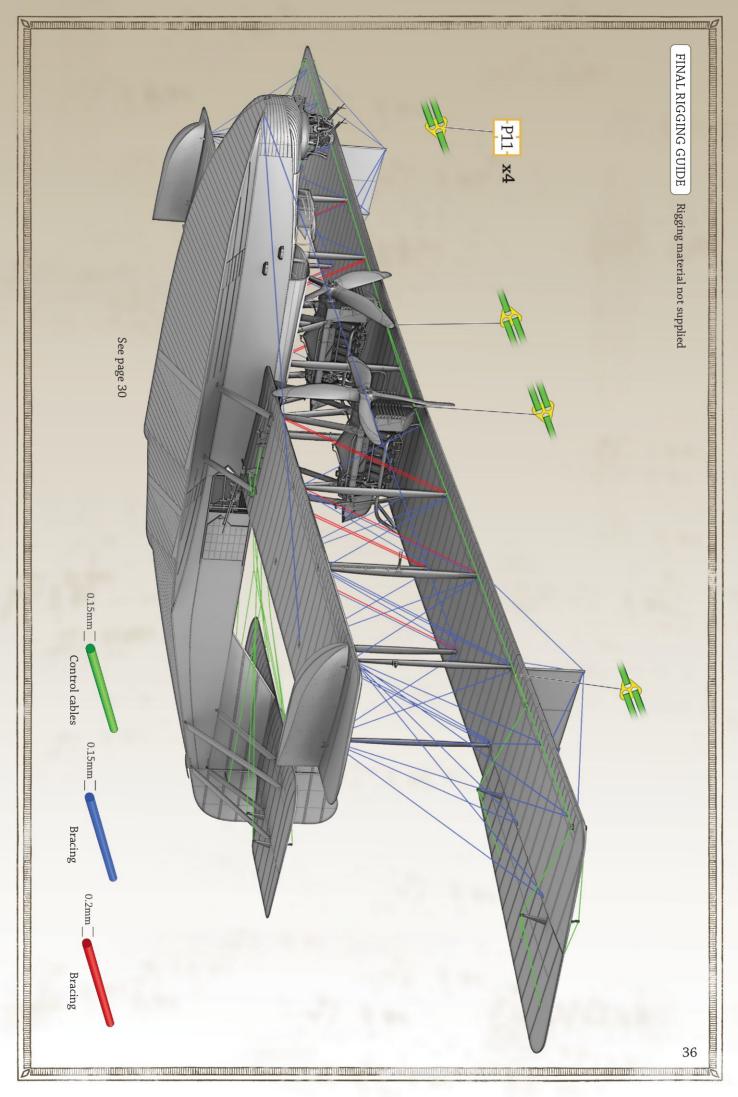


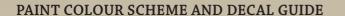
Y Felixstowe F.2a N4305 'was soon a blazing inferno'. The fabric rear of the hull has almost completely burned away, no doubt helped by petrol sprayed back from the leaking gravity tank. While supporting Greenwood with the help of Hodgson, Mossop recalled seeing 'the observer of the last enemy machine stand up and take a photograph' and this could well be that moment.

N4305 would shortly sink beneath the surface leaving only a dangerous pool of burning petrol which Mossop and Hodgson had to swim away from while taking care of Greenwood. When they were at a safe distance Hodgson discarded his issued flying helmet etc as it was not particularly helpful while trying to keep afloat in the sea but Mossop kept hold of his as he had paid for them himself! They took turns supporting Greenwood and drank brandy from Mossop's flask to lift their spirits before they were rescued by an HMS Halcyon approximately 35 minutes later, being delivered back to Yarmouth before midnight. Read more about this and other Great Yarmouth Air Station operations in The Story of a North Sea Air Station by CF Snoden Gamble, published by Neville Spearman Ltd, 1967.



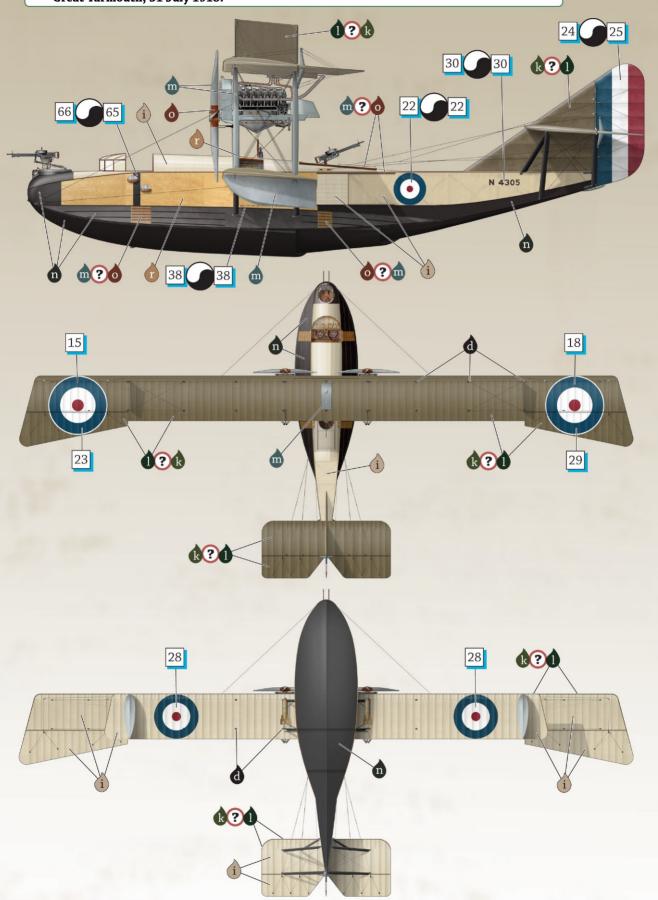




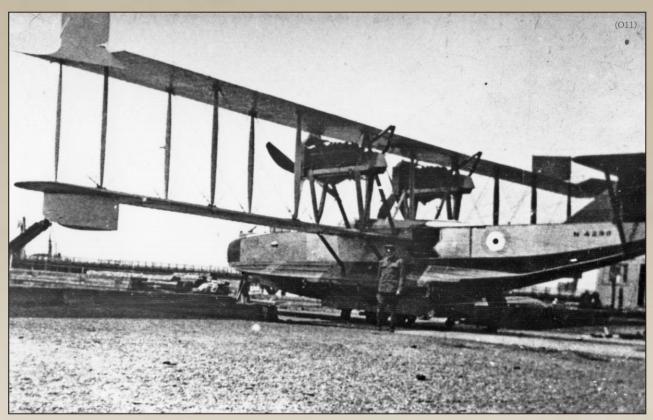


Felixstowe F.2a

Felixstowe F.2a N4305, EA Mossop, G Hodson, GL Greenwood, RRN Cooper, WHD Dingley, Great Yarmouth, 31 July 1918.



Felixstowe F.2a N4305 was from a production order placed with SE Saunders Ltd for 30 aircraft (numbers N4280 to N4309) and was delivered to Felixstowe Station on 17 June 1918. It was then sent to Great Yarmouth Air Station on 22 July 1918 and 7 days later on the 29th it was under the command of Lt JC Grant when it was sent out to patrol for an enemy aircraft of unknown type. Two days later N4305 was wreckage on the bottom of the North Sea 16.2NM (30km) East of Great Yarmouth.



SE Saunder Ltd built Felixstowe F.2a, thought to be N4298 from the same production order as N4305, which displays many, but not all, of the same features as N4305. The gloss black hull, fins and bow are particularly noteworthy. Although this is not a very good print we should still expect to see black painted metal fittings on the engine bearers and struts unless they were all overpainted with Battleship Grey.



3-D Modelling by Jason McAdam

From a very early age Jason has embraced his creative side, whether it be through drawing or modelling. This creative nature was strongly grafted with a passion for transportation design, whether it be by land, air or sea.

Having graduated with an honours degree in Industrial Design Jason has gone on to develop his skills further in his design work with Weta Digital. While at Weta, Jason has continued to push the boundaries of software technologies and applications, with a keen eye for detail. This passion for design comes hand in hand with a love of sport and recreation, with motorbike riding being among the more popular of pass times.



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

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.

Visit Ronny's website at: www.ronnybarprofiles.com



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.



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 have any questions about this model, comments, requests or suggestions, Richard is contactable at richard@wingnutwings.com



32801	1/32 Felixstowe F.2a & Hansa-Brandenburg W.29	Qty
0132010A	A parts Hansa-Brandenburg W.29	1
0132010B	B parts Hansa-Brandenburg W.29	1
0132010C	C parts Hansa-Brandenburg W.29	1
0132010D	D parts Hansa-Brandenburg W.29	2
132E0009	E parts Bz.III engine	1
0132010F	F parts Hansa-Brandenburg W.29	1
132G0001	G parts Parabellum LMG 14/17	1
0132010H	H parts Hansa-Brandenburg W.29	1
0132010I	I parts Hansa-Brandenburg W.29	1
0132010M	Metal wing spar Hansa-Brandenburg W.29	1
0132050A	A parts Felixstowe F.2a	1
0132050B	B parts Felixstowe F.2a	1
0132050C	C parts Felixstowe F.2a	1
0132050D	D parts Felixstowe F.2a	2
132E0022	E parts RR Eagle engine	2
0132050F	F parts Felixstowe F.2a	1
0132050G	G parts Felixstowe F.2a	1
0132050H	H parts Felixstowe F.2a	1
0132050I	I parts Felixstowe F.2a	1
0132050J	J parts Felixstowe F.2a	1
0132801P	Photo-etched metal parts	1
7132801	Instructions	1
9132801	Decals	1
9132010c	Naval camouflage Hansa-Brandenburg W.29	1

If you have any damaged or missing parts please contact help@wingnutwings.com for assistance.



32035 - 1/32 AMC DH.9



32016 - 1/32 Sopwith Pup RNAS



32023 - 1/32 Rumpler C.IV Early

Also available from www.wingnutwings.com

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