

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 it was essentially an Anglo-American design which can trace its roots to the pre war Glenn Curtiss & Cyril Porte designed 180hp twin engine 'America' flying boat design. This basic design was improved, enlarged, strengthened and repowered successively by both Curtiss and Porte (having now returned to service in the RNAS after the outbreak of war despite suffering from Terberculosis) over the next few years until July 1917 when Porte arrived at the characteristic deep 'V' hull with full side fins. Although technically now a wholly Porte design these Felixstowe flying boats, so named because they were developed at the RNAS Seaplane Experimental Station at Felixstowe in Suffolk, were referred to as 'Large Americas' by the British and as 'Curtiss' types by the Germans.

The twin 375hp Rolls Royce Eagle VIII 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 plywood and doped fabric. The sides of the forward superstructure were also plywood and the top coamings were covered with linen, as were the wings and tailplane. Ply walkways were positioned on the top coaming near the engineer's hatch and on the bottom wings below the engines. Early production F.2a as depicted in this kitset were delivered with a glazed cabin, fabric covered sides of the rear hull and large unbalanced ailerons. Later developments included replacing the cabin with an open cockpit, balanced ailerons and strengthening the rear hull sides with ply or diagonally applied 'Consuta' planks. Some early aircraft delivered with glazed cabins were later converted to open top configuration. A modified V12 Liberty engine powered version was manufactured by Curtiss in America as the H.16. The Felixstowe F.3, superficially similar in appearance to the F.2a but slightly larger and capable of carrying twice the bomb load, was put into production despite being considered inferior to the F.2a. The larger still Felixstowe F.5 similarly featured poorer performance but arrived too late to see operational service before the Armistice and a modified V12 Liberty engine powered version was manufactured by Curtiss in America as the F.5L. Any history of these aircraft here is of necessity very brief, therefore we encourage you to seek out the references listed below for a more thorough understanding of these significant aircraft.

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 (CDL). The bottom of the hull, bow, tops of the fins, and rear hull washboards were finished with gloss black bituminous tar based paint inside and out for waterproofing, as were the fabric wrapped side struts and tailplane struts. The plywood panels of the superstructure were heavily varnished with their joints often being sealed with the same bituminous tar based paint while the top coamings frequently remained CDL. In some instances the coamings were finished with the same dark protective dope as the wings and tailplane. All metal fittings were painted gloss black although those on the engine bearers and interplane struts appear to have frequently been overpainted with Battleship Grey (BSG) along with the wood. Most surfaces featured a gloss finish when new which quickly weathered to a dull matt appearance after short periods exposed to the harsh saltwater environment. Many British flying boats featured brightly coloured dazzle paint finishes for identification purposes from the middle of 1918 onwards.

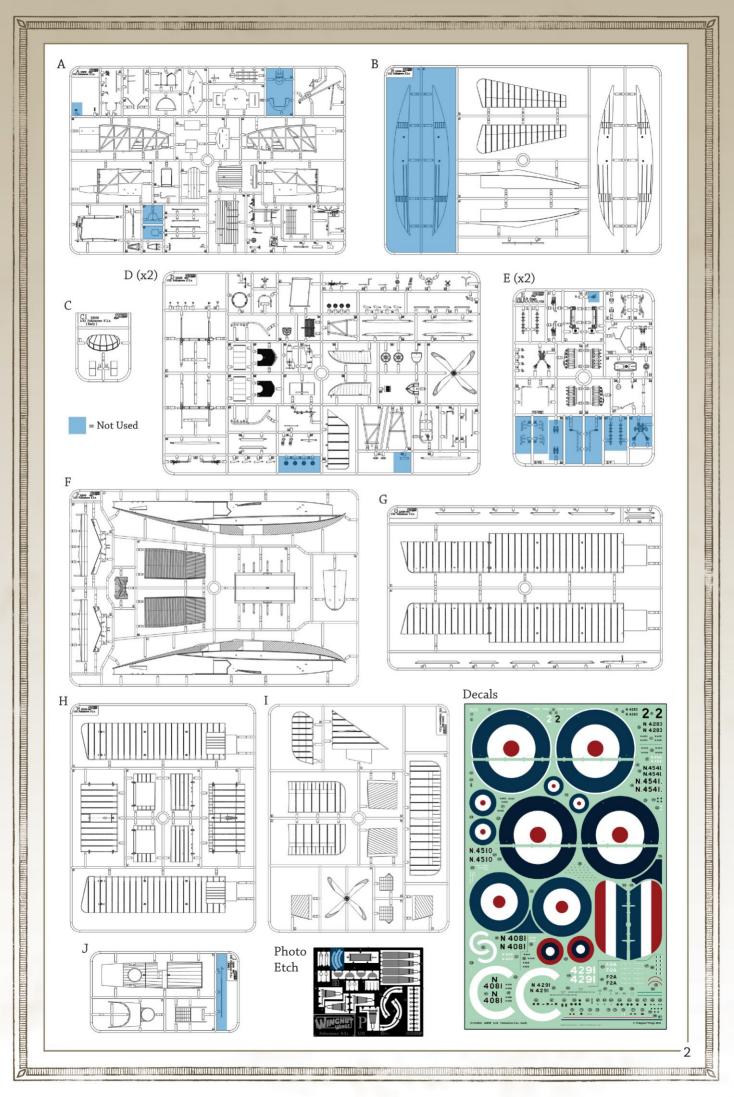
Richard Alexander 2014

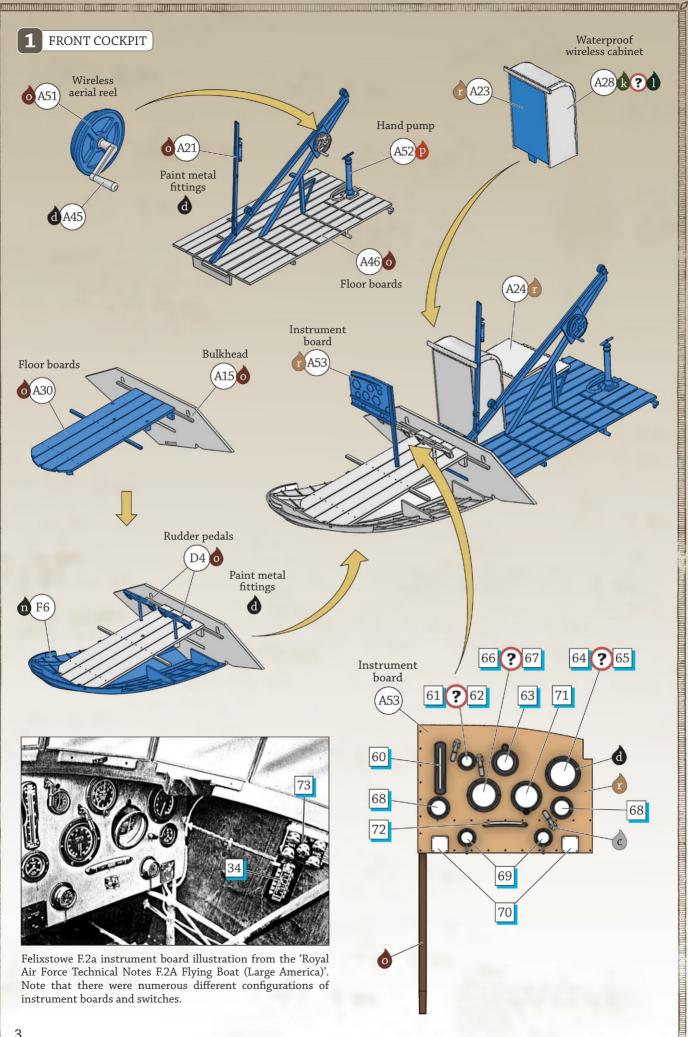
Wingspan:	Length:	Max Weight:	Max Speed:				
(Early) 95' 7" (29.13m)	46' 3" (14.1m)	11500 lb (5216kg)	85kn (156kph)				
No. Manufactured:	Production:	Engine:	Ceiling:				
(F.2a) approx 100	1917 to 1918	2x 375hp Rolls Royce Eagle VIII	10000' (3048m)				
Armament:							
5 .303" (7.7mm) Lewis guns and 460lb (208kg) bombs							
References:							
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							

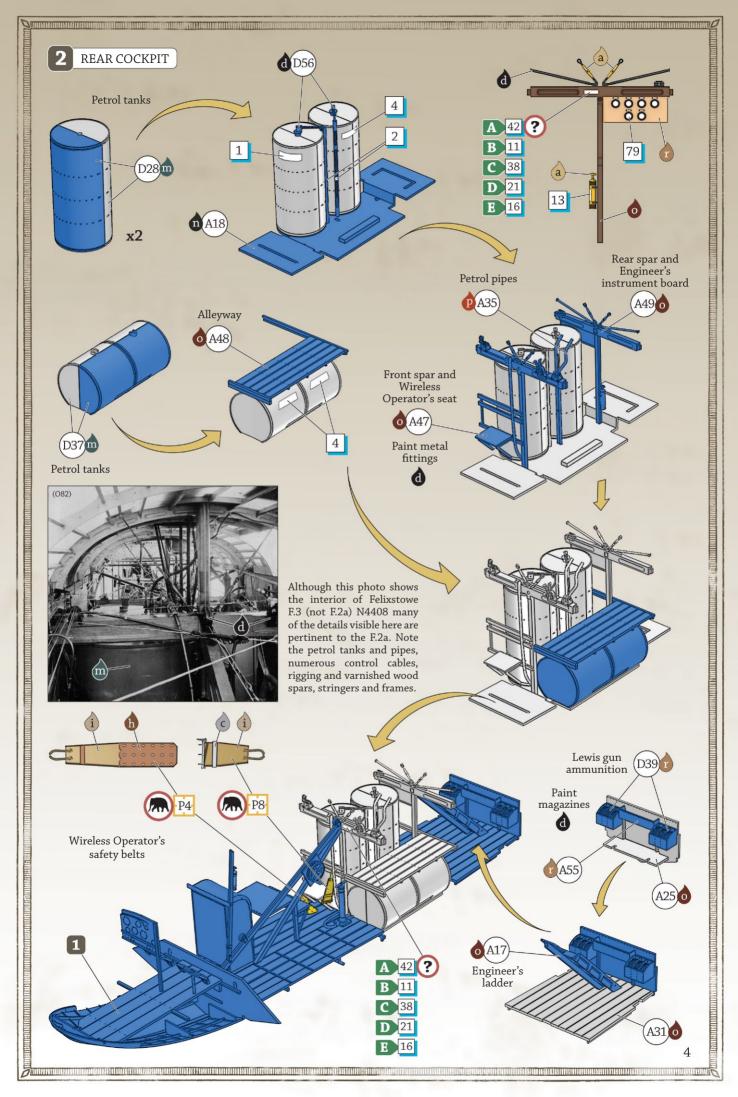
	Feli	xstowe F.2a	Early	6	
Narning: Choking hazard. Keep small parts and plastic bags away from children. Use glue and paint in a well ventilated area. Always wear protective eyewear when cutting and a protective mask when painting, gluing and sanding. Do not breathe dust from polyurethane resin parts (if included). Beware of sharp edges on metal parts.					
semł		- Efully before starting a (if included) using Cyano	acrylate (CA) or epoxy gl	ue.	
gging	g: If installing rigging please drill o	out all location holes with	n a 0.5mm drill bit to a de	epth of at least 1mm.	
intin	· · · ·	uitable for plastic mode	el kitsets.		
cals:	Cut out each decal as required. So <b>surface of model (not just clea</b> area they are being applied to. Thi	r coated plastic). For larg	ge decals it is helpful to ap	oly a drop of water to th	
nts 8	& Tips: Please visit our website for addit your Wingnut Wings model.	tional photos, hints and t	tips to assist you in gettii	ng the best result from	
1 Construction Step		hoose	Attention	Remove	
	A1) Part Number 5 Decal	o Not Cement	Option	Drill	
-	P1 Photo Etch Part 🕢 C	ement For Metal	Other Side	e Paint Colour	
	All colours	Tamiya	Humbrol	Federal Standard	
а	Brass	X31	54		
b	Gun Metal	X10	27004		
с	Aluminium	XF16	27001		
d	Black - semi gloss	X18	85		
е	Blue - semi gloss	XF8	25	25056	
f	Dark Yellow - matt	XF60	83	33440	
g	Rust - matt	XF9	113	30045	
h	Leather - semi gloss	XF52	62	30219	
i	Clear Doped Linen (CDL) - semi gloss	XF55	28	26405	
j	White - semi gloss	XF2	130		
k	Proprietary Khaki - semi gloss	XF58	30	34096	
1	Dark Green - semi gloss	XF11	195	34092	
m	Battleship Grey - matt & semi gloss	XF82	106	35164	
-	Tar based bituminous sealer - gloss	X1 XF68*	21 98*	17038	
n	Dark Wood* - semi gloss Copper	XF68 XF6	12	30111*	
0	Rubber - matt	XF69	66	15042	
o p	Light Wood* - semi gloss	XF78*	93*	30340*	
0	0				
o p q					
o p q					

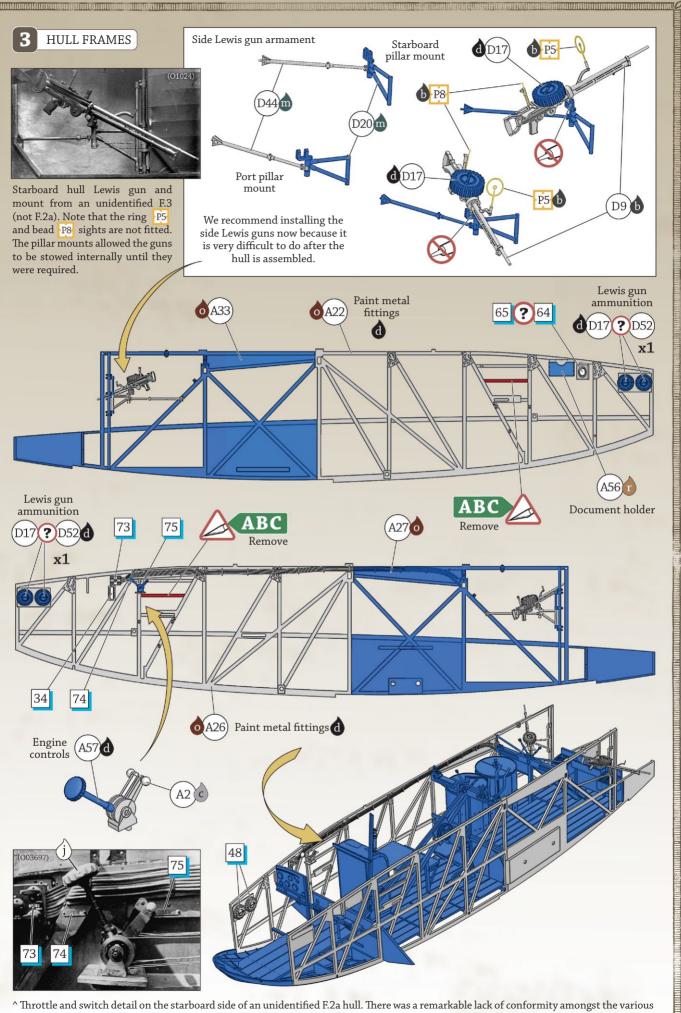
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1 **Note:** Apply clear varnish to achieve the desired gloss or semi-gloss finish. \*See our website hints and tips for painting wood.



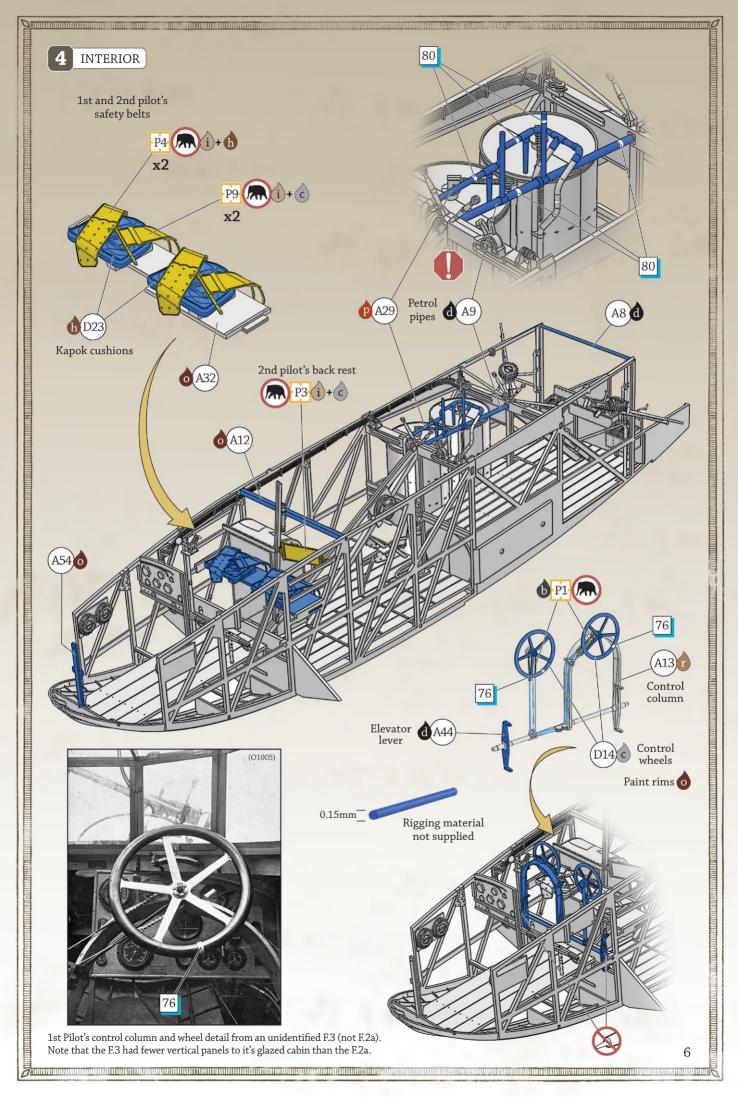




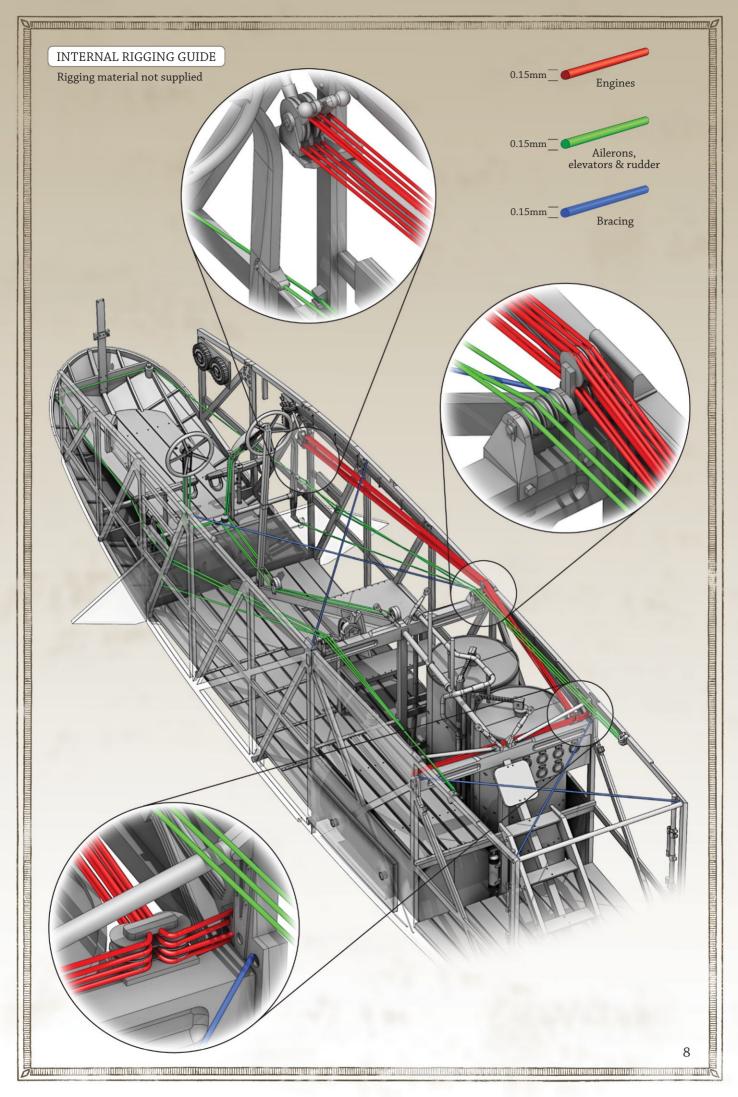


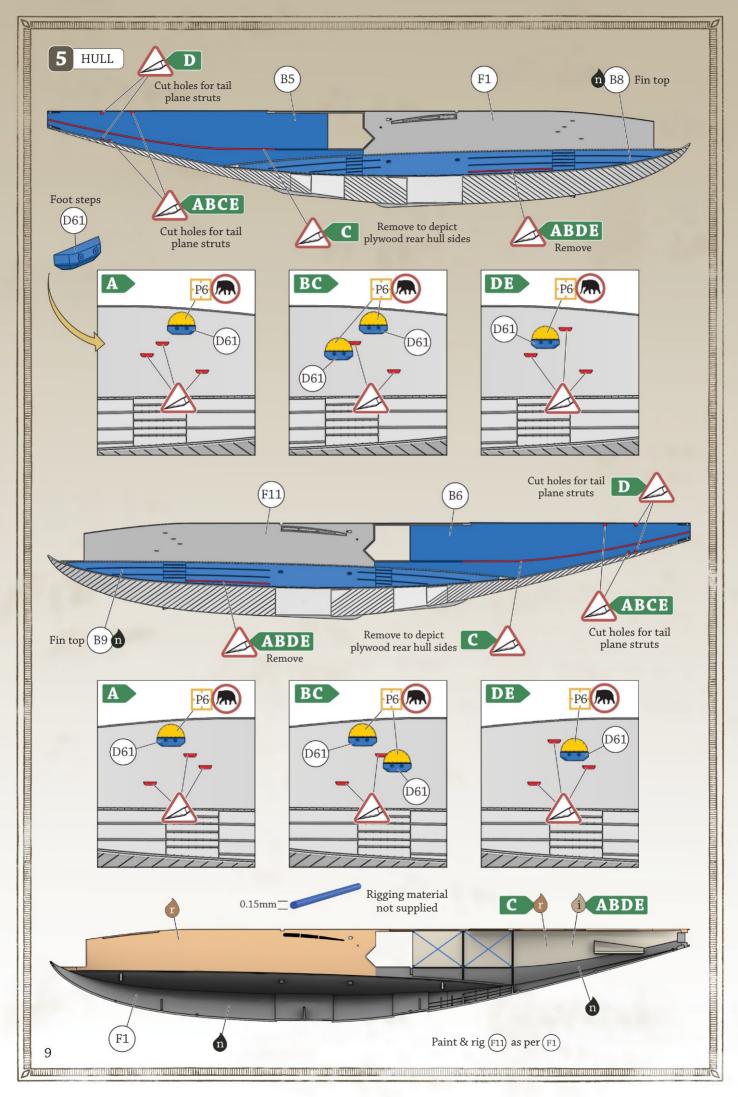
F.2a constructors as well as modifications done at unit level so while we have done our best to provide accurate interior details they will not be correct for every aircraft.

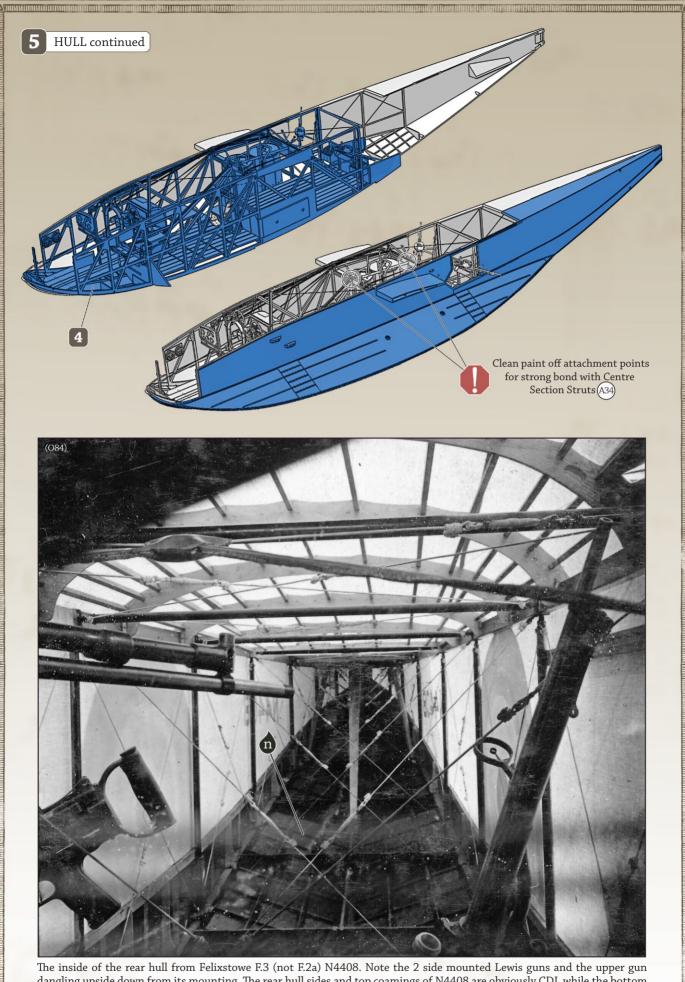
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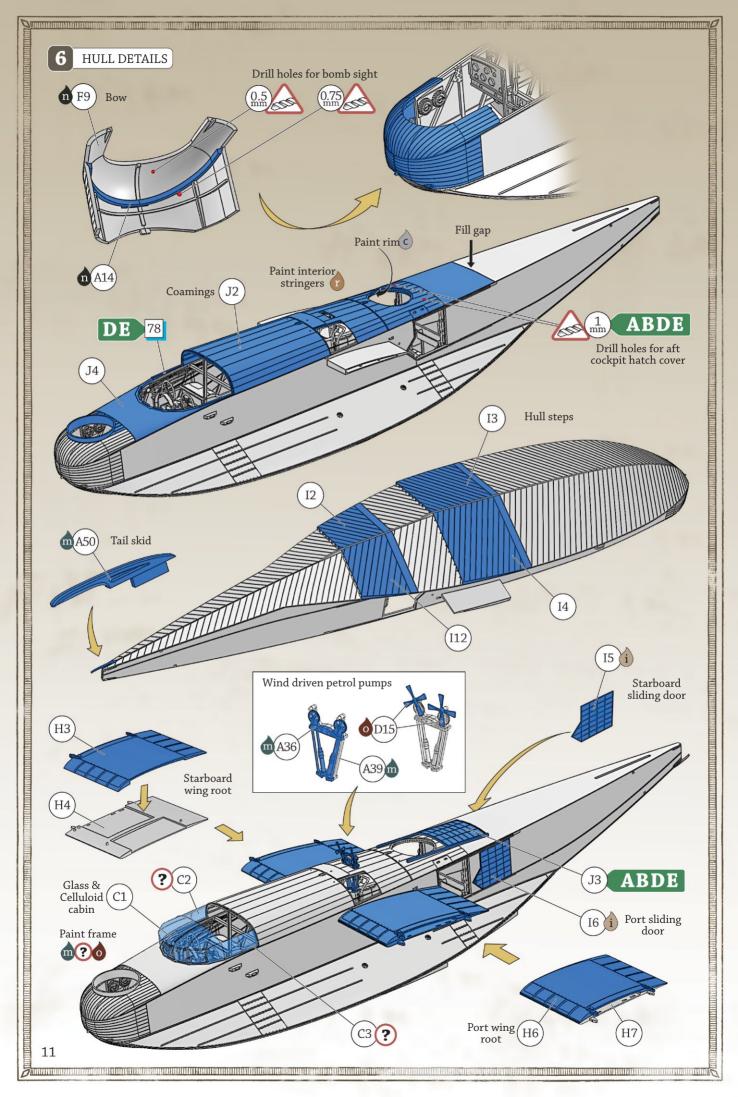


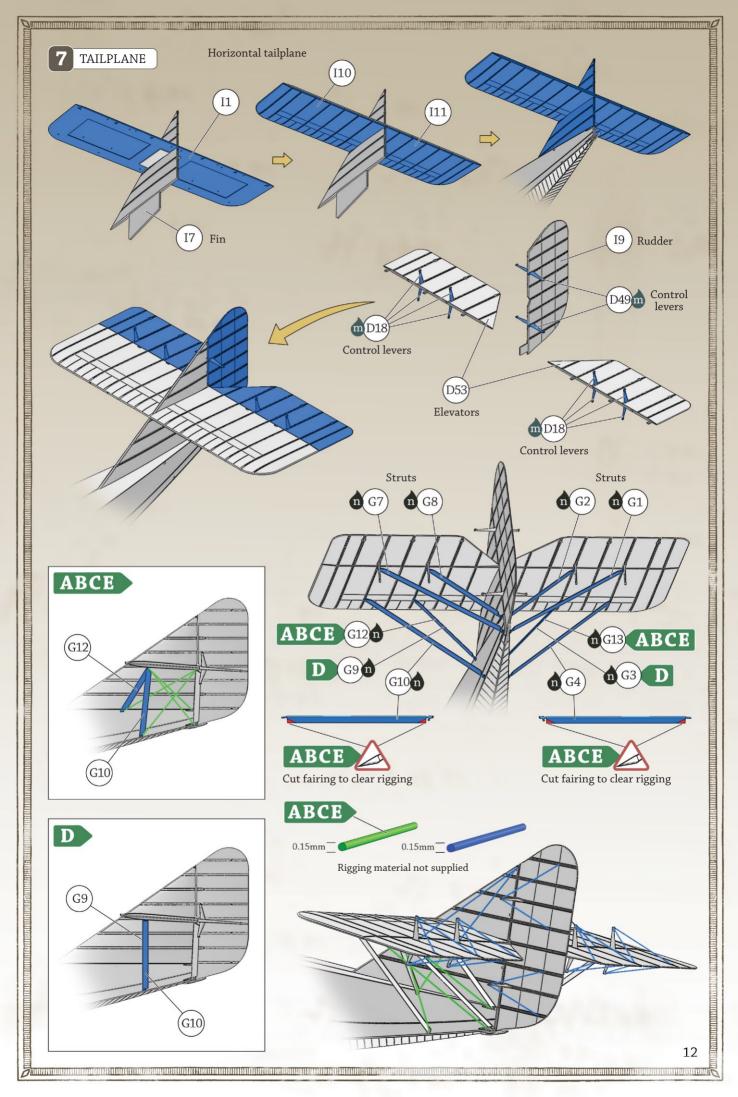


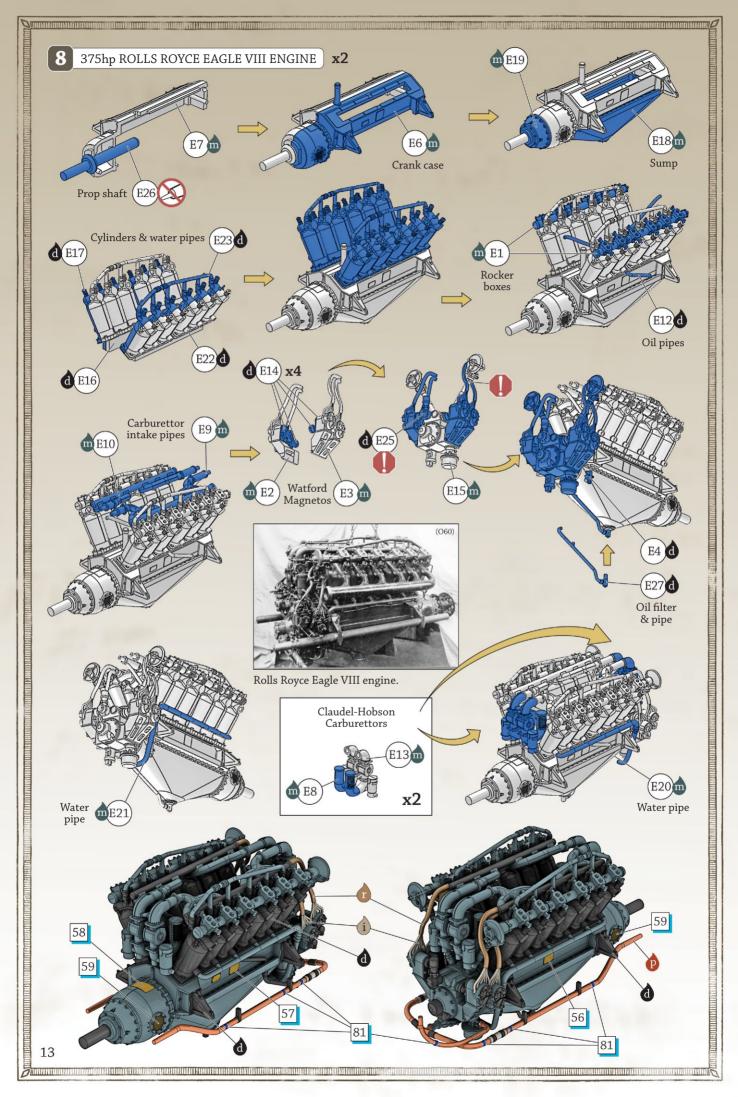


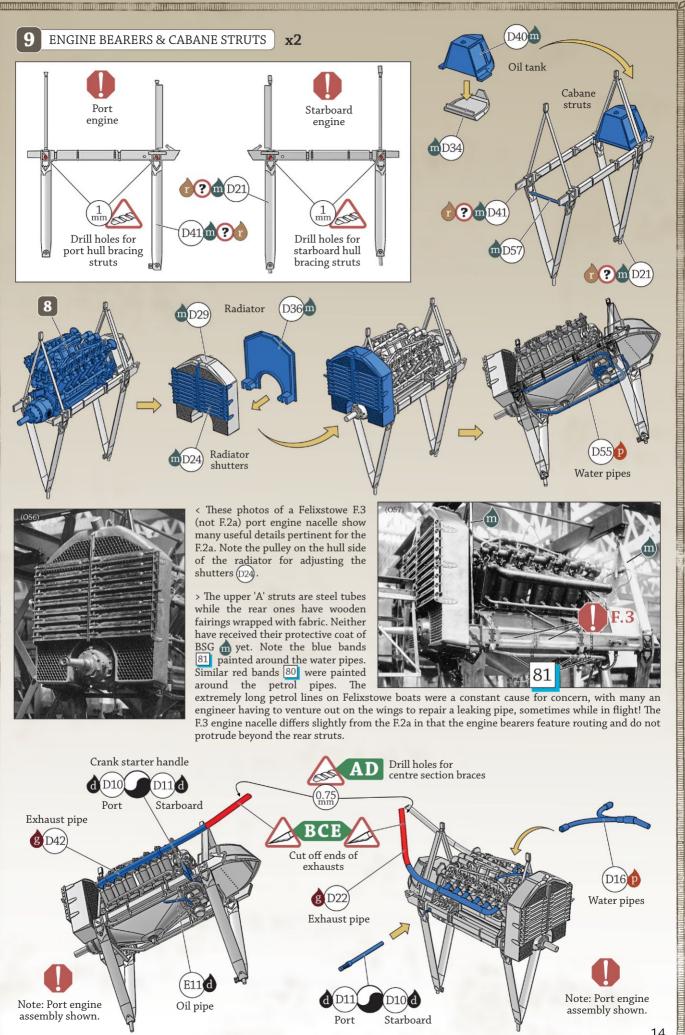
Ine inside of the rear hull from Feixstowe F.3 (hot F.2a) N4408. Note the 2 side mounted Lewis guns and the upper gun dangling upside down from its mounting. The rear hull sides and top coamings of N4408 are obviously CDL while the bottom and washboards have received a coat of protective black bituminous tar based paint. Unlike the F.2a, the tapering top coaming of the F.3 extended all the way to the leading edge of the fin. It appears that much of the internal bracing cables have been painted, possibly in bright colours to make them more visible and/or to resist corrosion. Note the substantial padding applied to the 'X' bracing cables beneath the aft cockpit hatch.

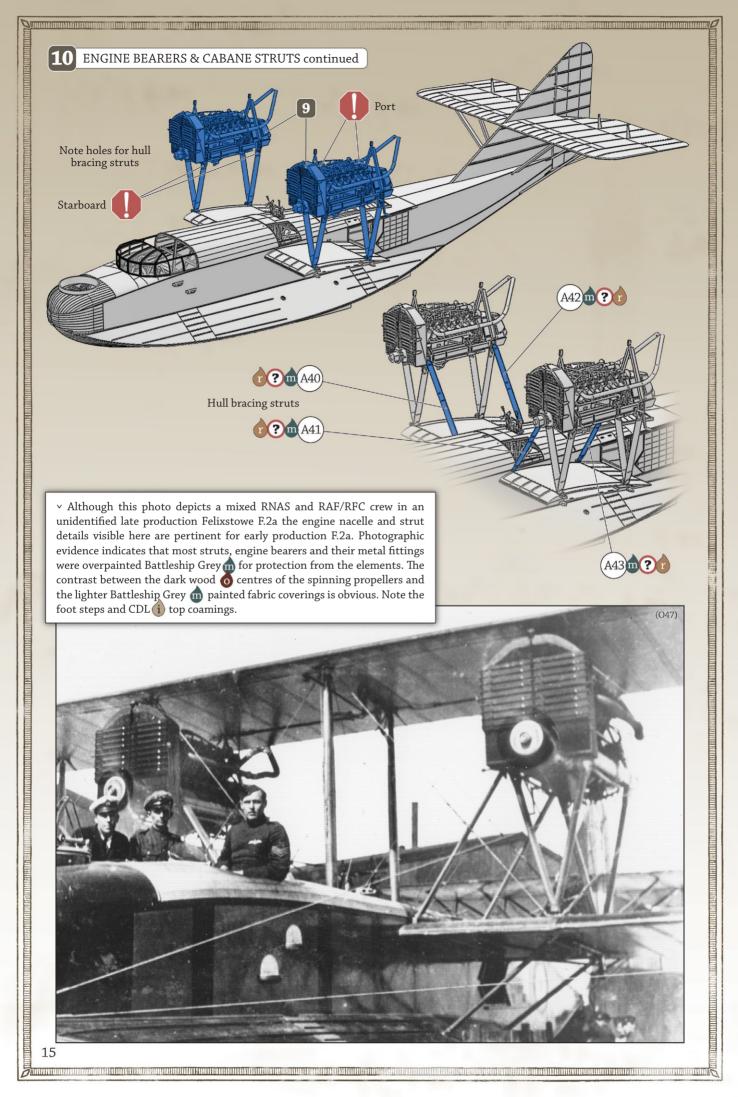
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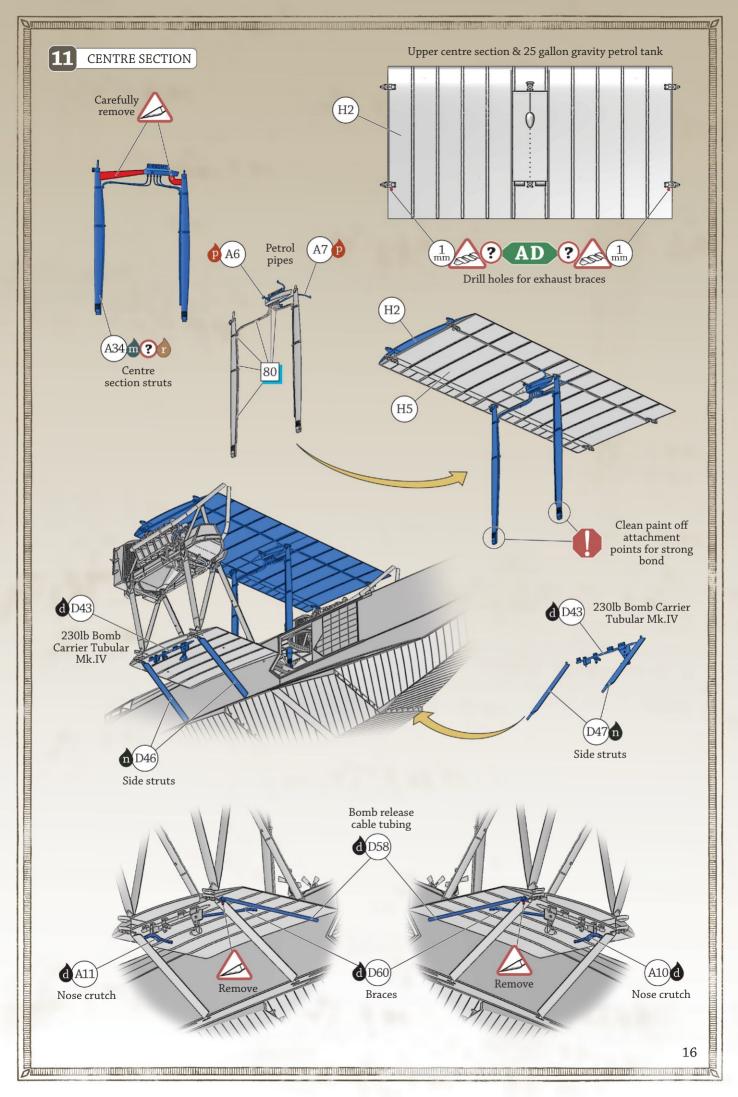


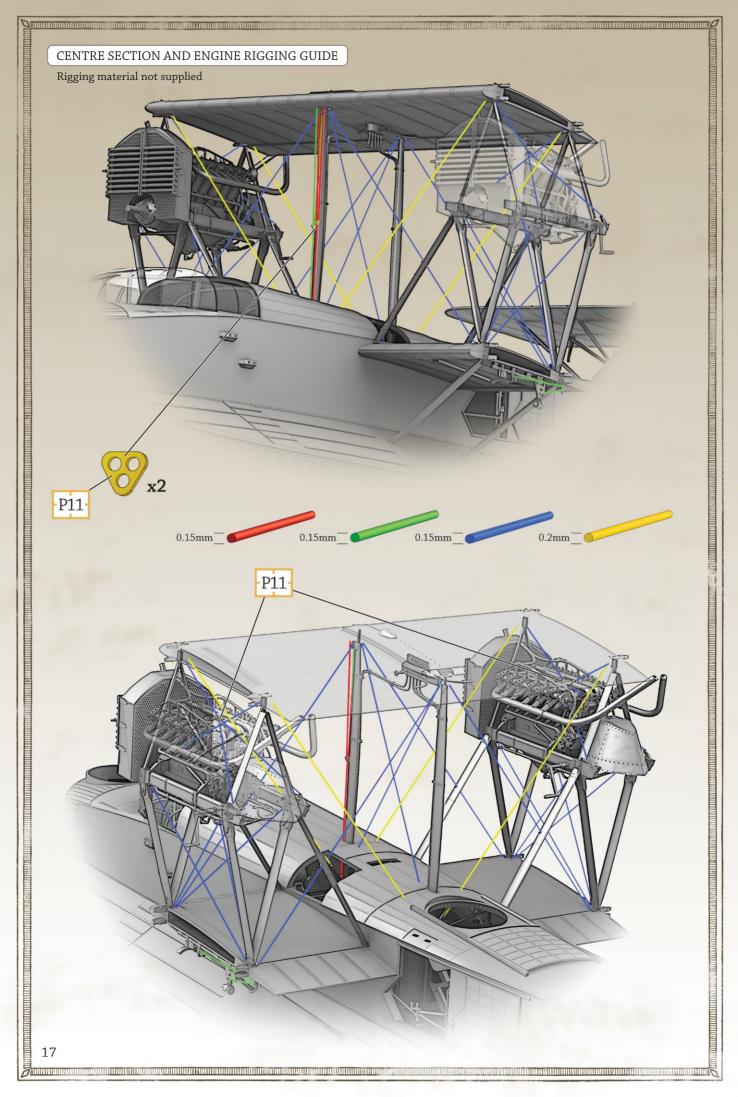


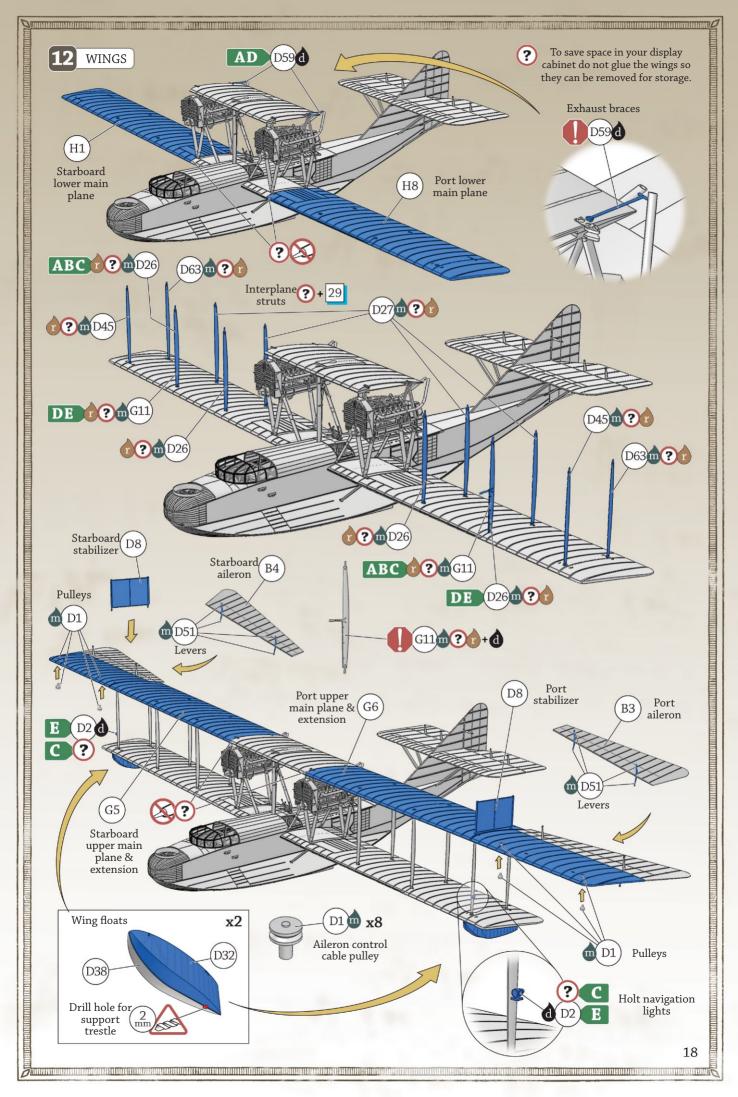


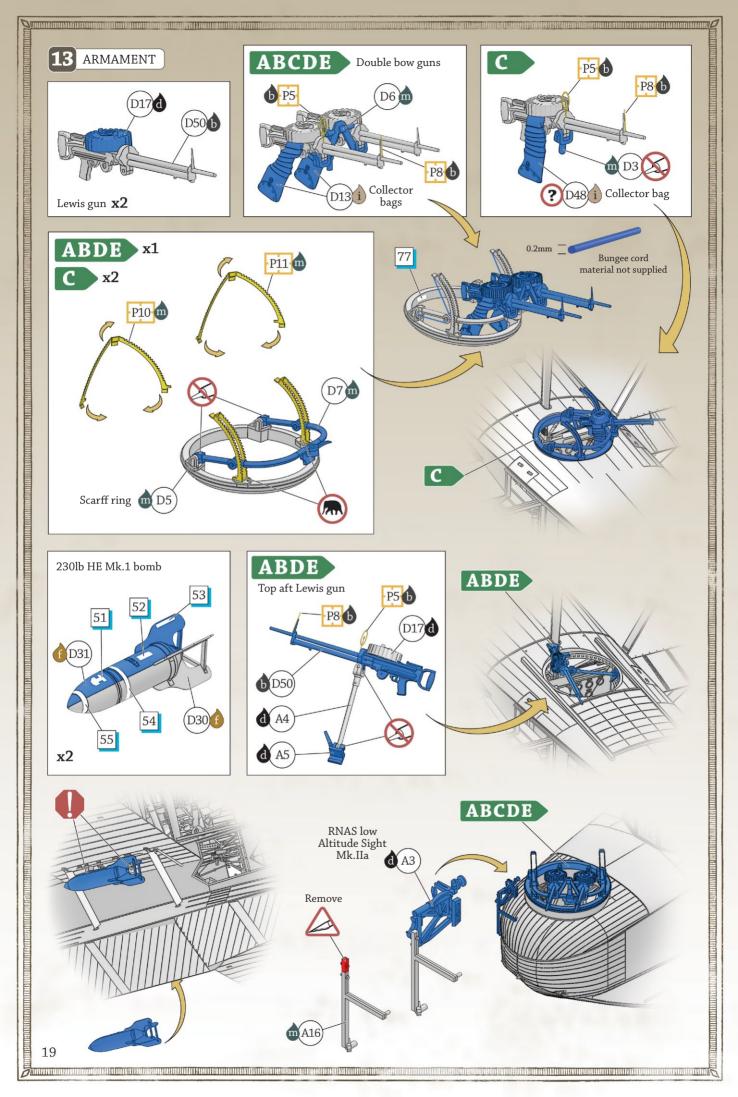


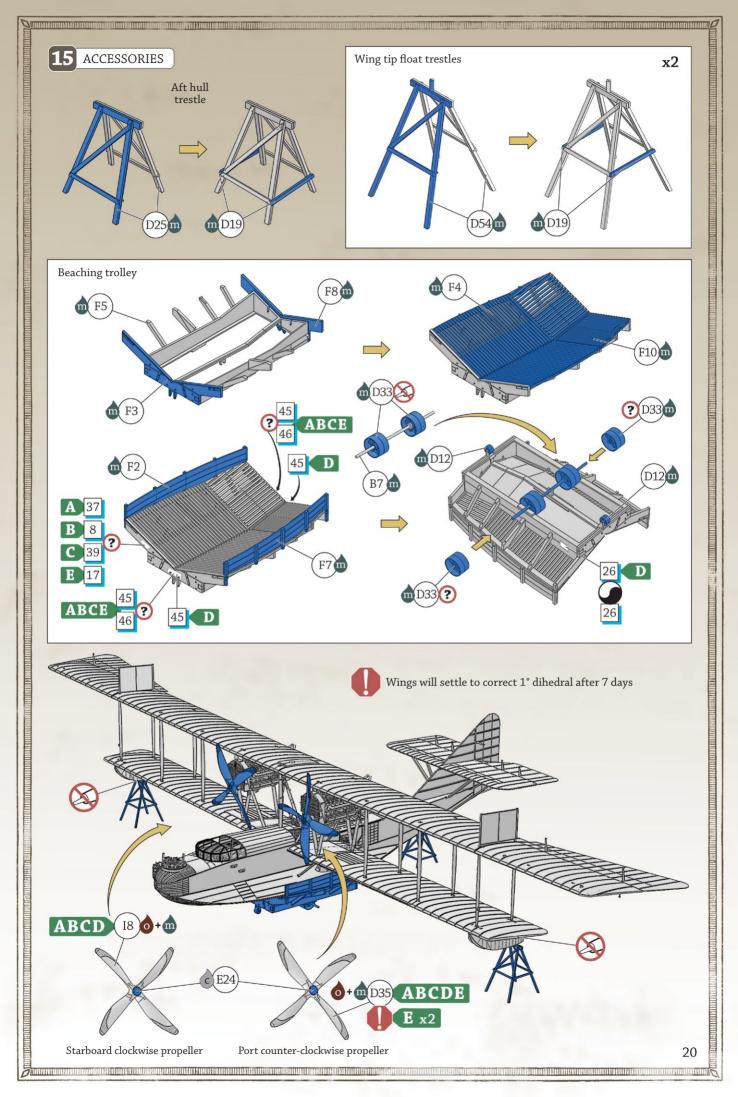


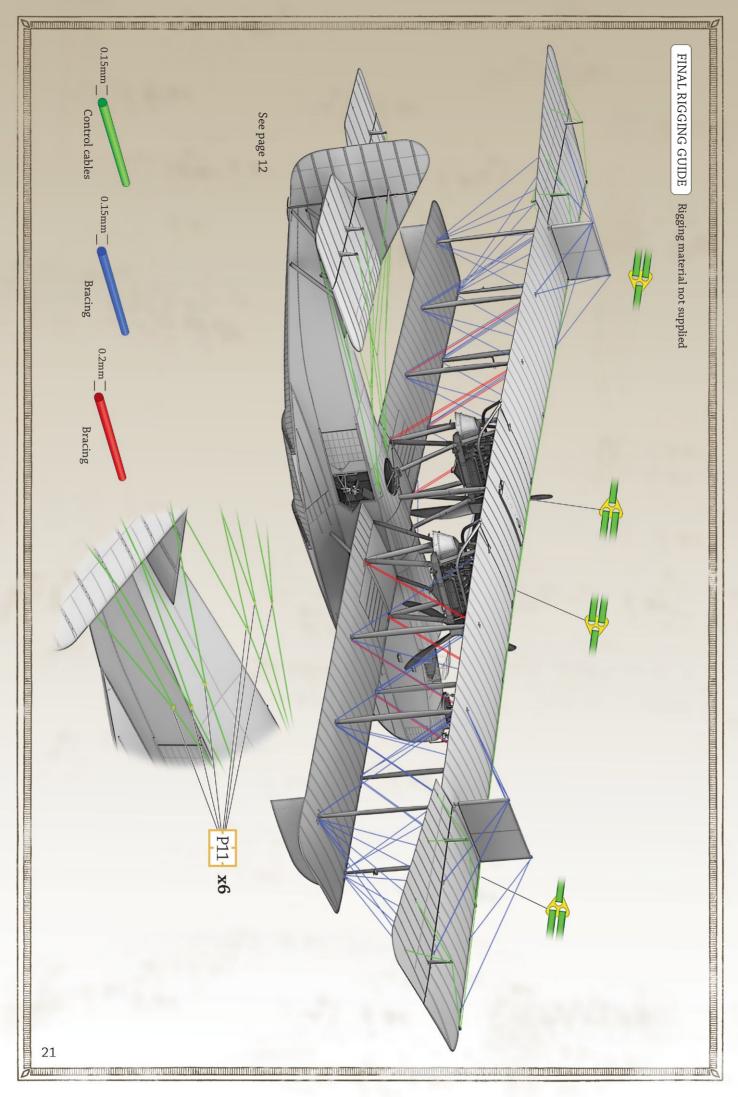


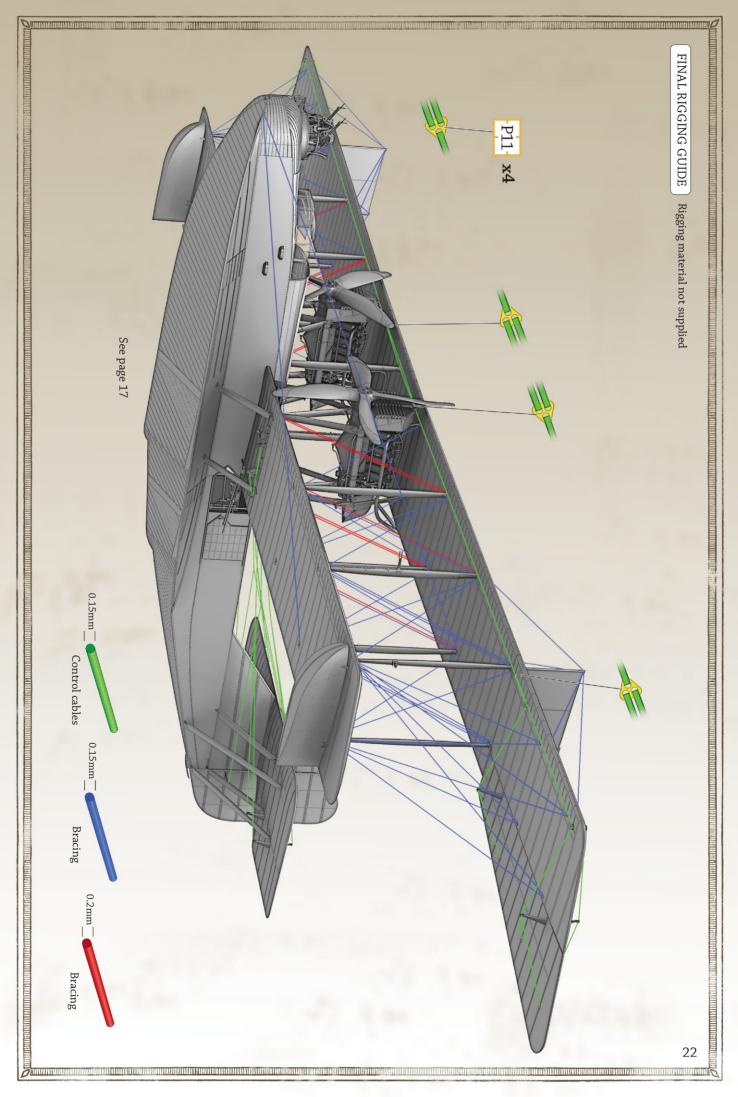




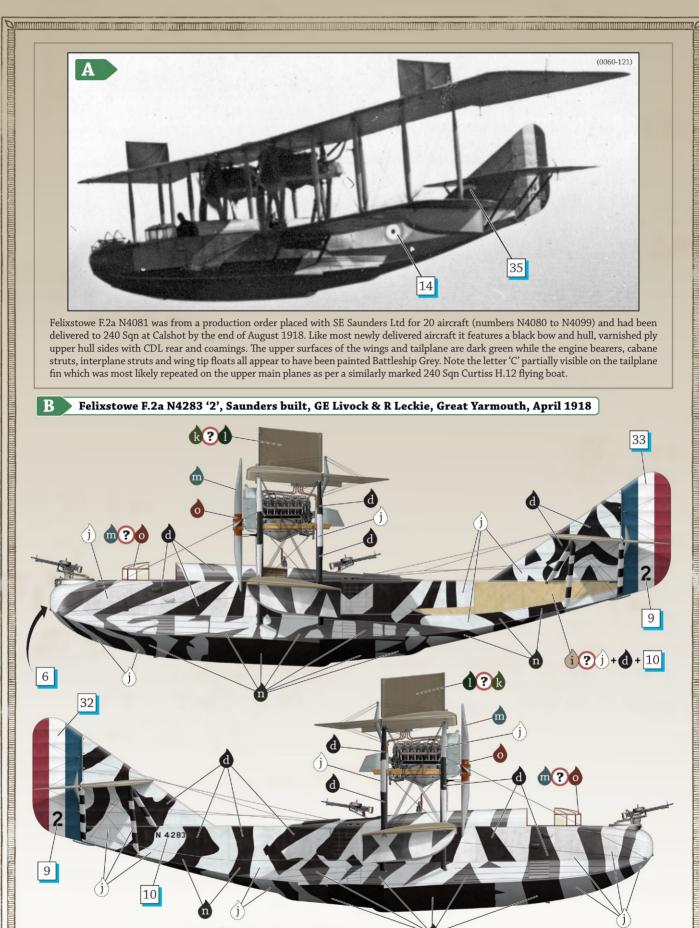






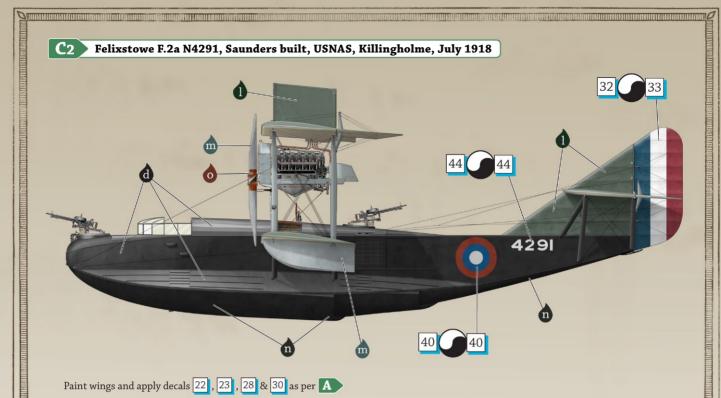






Paint wings and apply decals 22 , 23 , 28 & 30 as per A

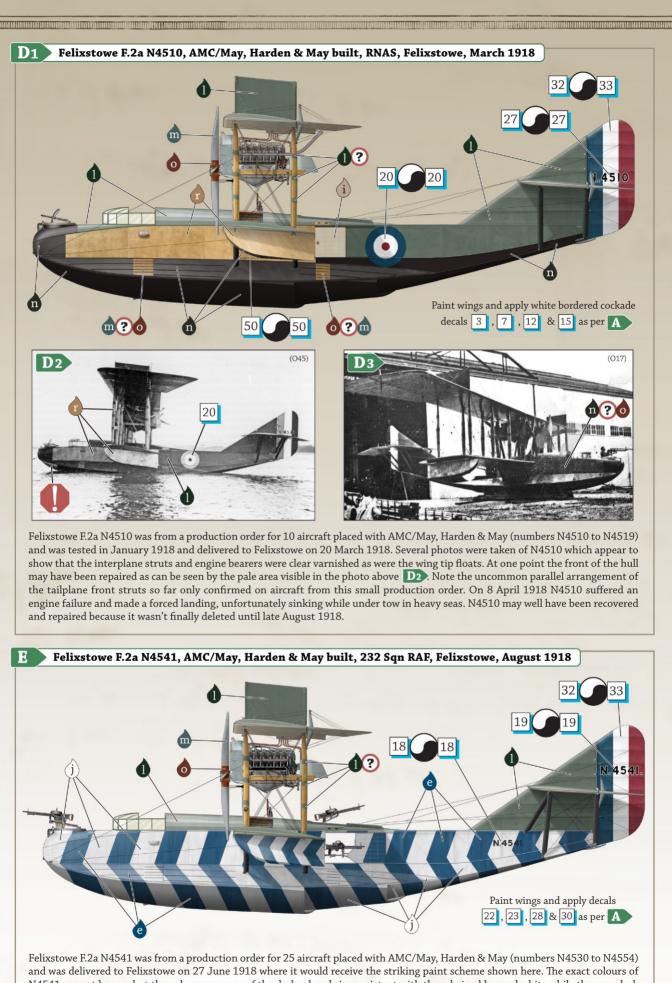
Felixstowe F.2a N4283 was from a production order placed with SE Saunders Ltd for 30 aircraft (numbers N4280 to N4309) and was delivered to Great Yarmouth Air Station on 19 March 1918. The 'dazzle' scheme shown here was reportedly applied by 'Bob' Leckie and 'Jerry' Livock in late March 1918, a full 2 months before such schemes were officially introduced in early June 1918. Although the port side dazzle pattern is based on a relatively clear photo the starboard side is based on a sketch by Leonard Bridgmann, an officer who served at Great Yarmouth, which was included in The Story of a North Sea Air Station by CF Snoden Gamble published by Neville Spearman Ltd in 1967. Unfortunately the sketch includes numerous anomalies indicating it was was probably drawn from memory and should therefore be viewed with some skepticism. On 14 April 1918 Bob and Jerry took the spectacularly painted N4283 on an Anti Zeppelin Patrol and on the 26th of that month Jerry holed the hull on landing. N4283 was being flown by Capt FitzRandolf and Lt Bell when they and N4295 attacked a submarine on 17 May 1918. N4283 was still listed as being on strength at Great Yarmouth in January 1919.



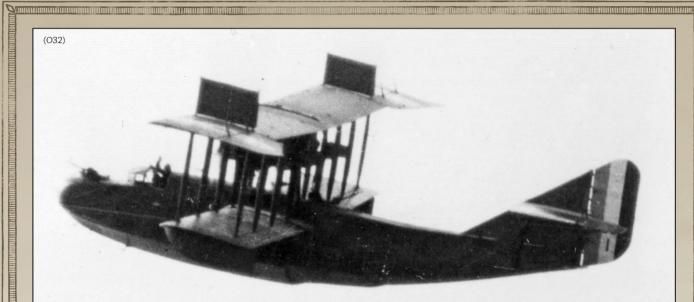
Felixstowe F.2a N4291 is from the same production order as **B** and was delivered to Killingholme on 20 April 1918 looking remarkably like **A**. On 10 May 1918, under the command of TC Patterson and AH Munday, N4291 was credited with shooting down Zeppelin L62 over Heligoland. On 20 July 1918 N4291 was detached to the USNAS after which it was reportedly painted black and a photo in Windsock Datafile 82 confirms it had large white serial numbers (without the 'N') and US cockades on the sides of the hull. The wings and rudder retained their original British markings. It had spot lamps attached to the outermost interplane struts at one time. It would also appear that the fabric sides of the rear hull were replaced with ply and a 2nd Scarff ring was mounted on the top aft hatch by the time it was photographed in USNAS service. N4291 made a forced landing at South Shields during a flight to Dundee on 19 October 1918 and was finally deleted in January 1919.



This photo is thought to show N4291 while still in British service and we have indicated optional colours and decals to use if you wish to depict it this way. Use unmodified fabric rear hull sides and Top Aft Lewis Gun without Scarff Ring to model this version. Note that the tailplane struts are unusually painted a light colour, possibly battleship grey m.



and was delivered to Felixstowe on 27 June 1918 where it would receive the striking paint scheme shown here. The exact colours of N4541 are not known but the pale appearance of the darker bands is consistent with them being blue and white while the very dark upper surfaces would tend to suggest dark green. Dark bands on the struts appear to be green doped fabric but the photos available to us are not clear enough to confirm if the struts themselves are clear varnished or painted. 1st Pilot JS Hughes was slightly injured on 30 October 1918 when he crashed N4541 and although the crash was severe enough for the aircraft to be written off the following month the other crew members were unhurt.



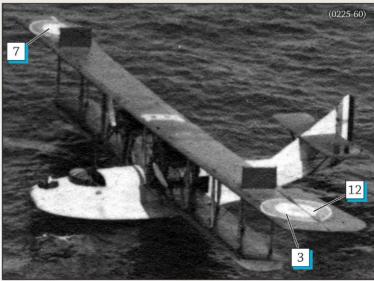
An unidentified early production Felixstowe F.2a in flight. The number 1 on the rudder may indicate that this aircraft was from Great Yarmouth patrol as per N4283 '2' **B**.



This is reportedly a photo of Felixstowe F.2a N4513 from the same production batch as N4510 **D** and at this angle there is nothing to distinguish one from the other. Note the dark (green?) rear hull and top coaming fabric and pale plywood forward hull sides. The bottom of the wing tip floats appear to have been finished in the same gloss black as the bow, fin tops and bottom of the hull.



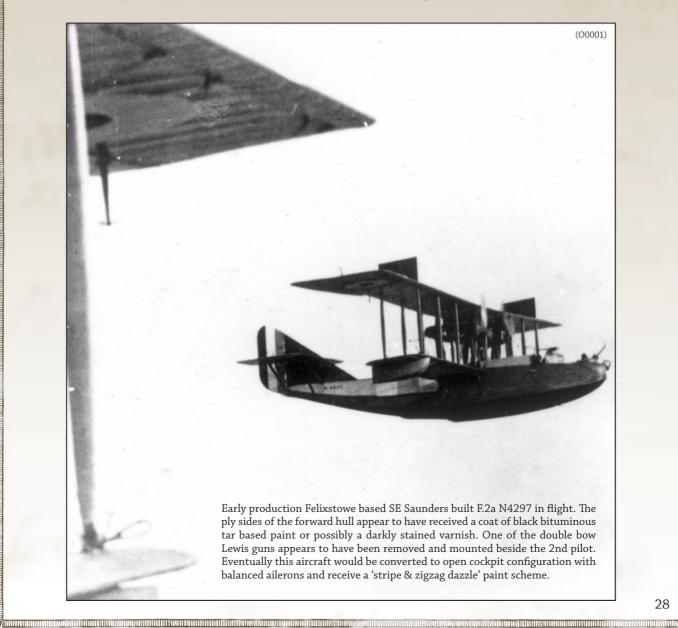
This unidentified white(?) early production Felixstowe F.2a was photographed from an unidentified German seaplane (probably a late production Hansa-Brandenburg W.12) and appears to have been forced down due to engine trouble. Two or three of the crew can be seen in the ocean. The tailplane front struts appear to be parallel indicating that this boat is from the same production order as N4510 **D** . If so this photo might show N4513 on 4 July 1918 when, along with Felixstowe F.2a N4297 and N4540, they were attacked by 4 Hansa-Brandenburg W.29 from 1.C

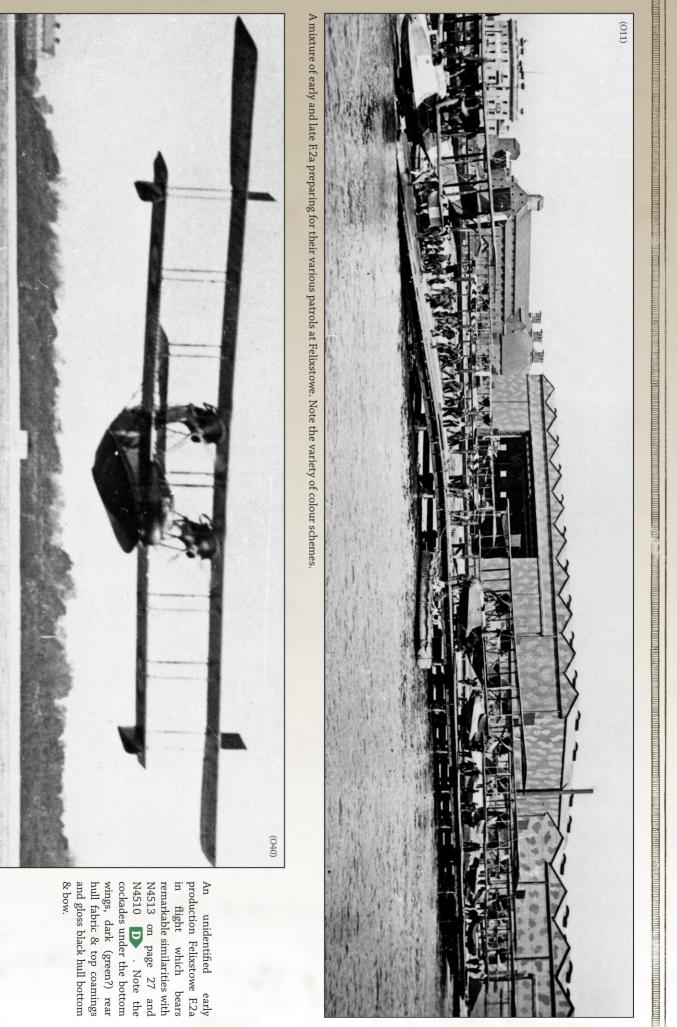


Staffel. N4513 claimed 1 W.29 shot down before it was forced down itself, in the action AC Cokeley was killed and S Anderson, KL Williams and AEV Hilton were wounded. N4513 later sank while being towed back to shore.

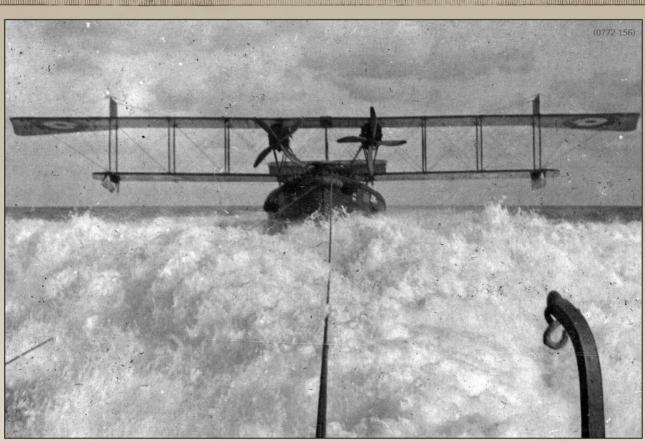


Unidentified early production Felixstowe F.2a flying boats prepare to go on patrol with engines running. Note the extensive weathering on the horizontal tailplane of the nearest aircraft as well as the variations in top wing cockades.





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An unidentified Felixstowe F.2a is towed on a lighter behind the R-class destroyer HMS Torrid. The lighter was another John Porte design and was essentially a mini dry dock intended to massively increase the range of the flying boats by allowing them to be towed well out to sea before taking off. The practice of painting cockades under the top wing appears to have been restricted to boats stationed at Felixstowe from late 1918.



### 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 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.

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

Historic aircraft photos courtesy of the 1914-18 Aviation Heritage Trust and Colin Owers (unless credited otherwise).



32050	1/32 Felixstowe F.2a Early	Qty
0132050A	A parts	1
0132050B	B parts	1
0132050C	C parts	1
0132050D	D parts	2
132E0022	E parts RR Eagle engine	2
0132050F	F parts	1
0132050G	G parts	1
0132050H	H parts	1
0132050I	I parts	1
0132050J	J parts	1
0132050P	Photo-etched metal parts	1
7132050	Instructions	1
9132050	Decals	1

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



32016 - 1/32 Sopwith Pup RNAS



32004 - 1/32 Bristol Fighter



32008 - 1/32 Sopwith Triplane

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