

WINGNUT WINGS



Hansa-Brandenburg W.12 Early

1/32 Scale

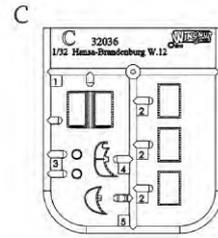
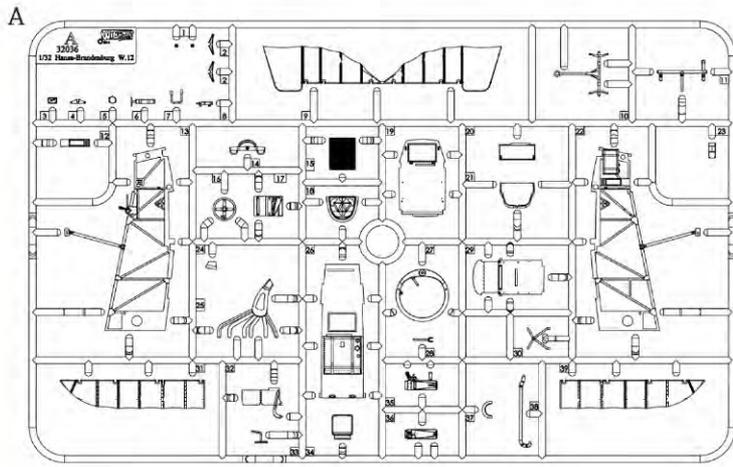
Utilizing design cues and lessons learned from previous aircraft designed for the Austro-Hungarian Army and Navy the Ernst Heinkel designed Hansa-Brandenburg W.12 went on to become one of the most successful sea-plane fighters operated by the German Navy in the First World War. The W.12 was designed to be a long range, highly maneuverable two-seat fighter and the extremely sturdy, triangulated, float strut arrangement ensured great strength while almost doing away with the need for any wing rigging. Three Daimler-Mercedes 160hp D.III powered W.12 prototypes were ordered in October 1916 (numbers 1014 to 1016) and another 3 the following month (numbers 1011 to 1013). The W.12 initially lived up to its promise when prototype 1014 took to the air for the 1st time in late February 1917, which was fortuitous because the Navy had placed a production order for 10 Benz Bz.III 150hp powered W.12 the previous month. Eventually various problems arose which delayed the remaining 5 prototypes and they were not delivered until July 1917, about the same time as the 1st the production aircraft began arriving, and the W.12 was not considered 'fully satisfactory' until the following month. Finally the German Navy had a seaplane capable of intercepting the fast British flying boats.

The first 6 prototype Hansa-Brandenburg W.12 'Kamel' (Camel) featured a rounded nose cowling, 160hp Daimler-Mercedes D.III engine and a radiator mounted in front of the top wing. The first 10 production aircraft ordered in January 1917 (numbers 1178 to 1187) were powered by the 150hp Benz Bz.III engine with a vertical 'car type' radiator in front of the engine. Most early W.12 were built to C2MG specifications (two-seat C type aircraft fitted with 2 Machine Guns) although photographic evidence confirms that a small number, possibly just 2 or 3, had an additional IMG 08 'Spandau' fixed to the port side of the fuselage effectively making them a C3MG. The remaining 20 early production W.12 were ordered in March 1917 (numbers 1395 to 1414). Photographic evidence indicates that some aircraft stationed at Zeebrugge had their top wing cut outs modified for increased visibility. Late production W.12 featured a lengthened fuselage, redesigned cabane struts, ailerons on the bottom wings and a revised tailplane. These aircraft were powered by both the Daimler-Mercedes D.III and Benz Bz.III engines and built to C2MG, C2MGHFT (C2MG with wireless equipment) and C3MG specifications. Although the Hansa-Brandenburg W.29 monoplane introduced in mid 1918 was intended to replace the W.12, the 'Kamel' continued to serve until the Armistice. A version built in The Netherlands post war as the Van Berkel WA remained in service until 1933. Any history of this aircraft here is of necessity very brief, therefore we encourage you to seek out the references listed below for a more thorough understanding of this significant aircraft.

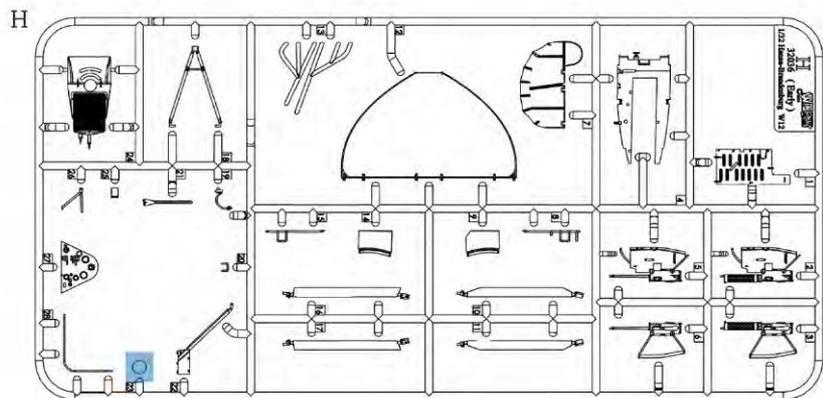
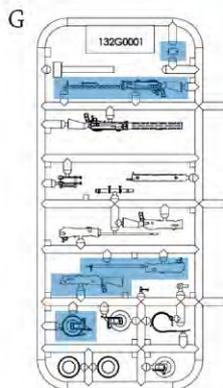
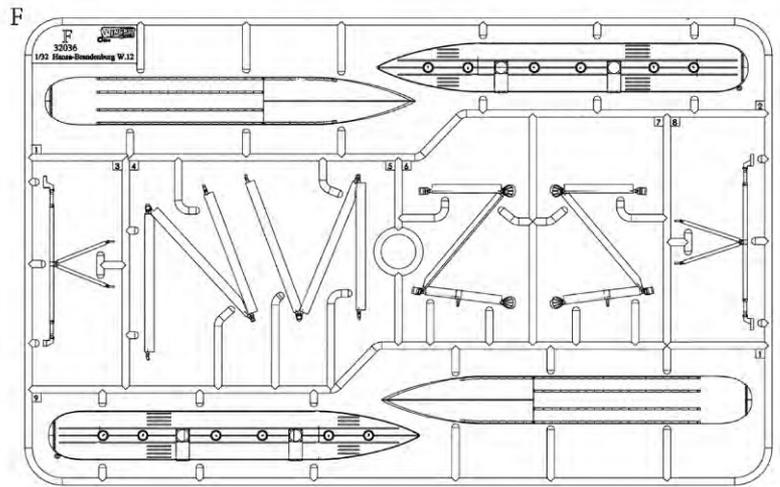
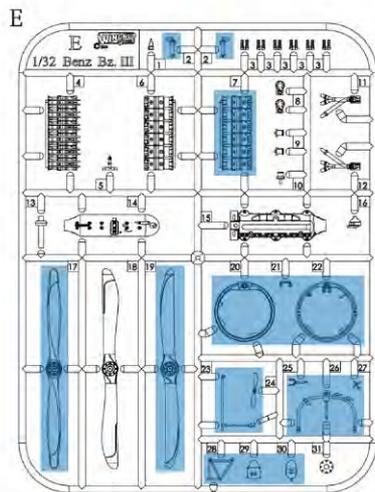
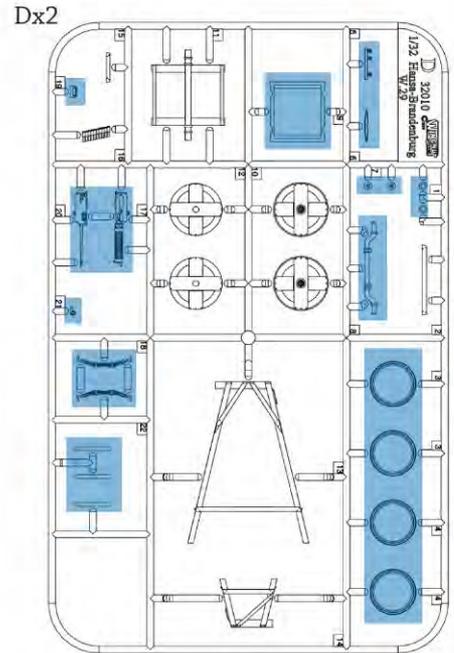
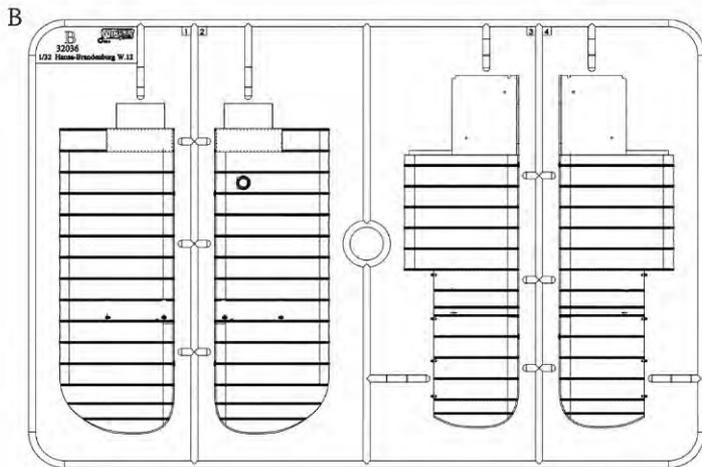
WW1 colour schemes are contentious at the best of times and we have done our best to provide what we consider to be accurate painting information for this model and, while we have been as meticulous as we could be, I'm sure some will not find our choices to their liking. From January 1916 it was directed that all German seaplane surfaces visible from above such as the tops of the wings, fuselage, floats and tailplane be painted in hexagons of 'grey brown', 'grey blue' and 'grey violet'. Camouflage printed fabric does not appear to have been used on the W.12. Contemporary photos confirm that there were different paint mixes used for the hexagon camouflage on the fabric and ply covered areas, with the ply areas usually being considerably darker. Side surfaces of the fuselage, floats and struts were to be painted 'grey blue' with undersides painted light grey except for fabric wings etc which should remain in their original CDL (Clear Doped Linen). Some long serving W.12 had their floats and struts painted with a black bituminous tar based paint for protection from salt water from mid 1918. Generally the hexagon painted surfaces were matt, as were the 'grey blue' plywood fuselage side surfaces while the metal engine cowlings and cockpit coaming were gloss. The CDL undersides retained a relatively high gloss finish.

Richard Alexander 2014

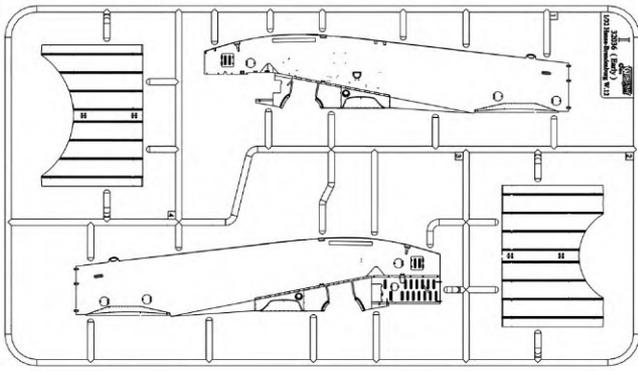
Wingspan:	Length:	Max Weight:	Max Speed:
11.2m (36.75ft)	(Early) 8.69m (28.5ft)	(Early) 1230kg (2712 lb)	156kph (97mph)
No. Manufactured:	Production:	Engine:	Ceiling:
(Early) 36, (Late) 110	Oct.1916 to Early 1918	(Early) 150hp Benz Bz.III	5000m (16400ft)
Armament:			
1 or 2 7.92mm IMG 08 'Spandau' & 1 7.92mm Parabellum LMG 14 machine guns			
References:			
Brandenburg W.12 Windsock Datafile 61, P.M Grosz, 1997 - 1914-18 Aviation Heritage Trust - Colin Owers The Vintage Aviator LTD - Private Collections			



 = Not Used

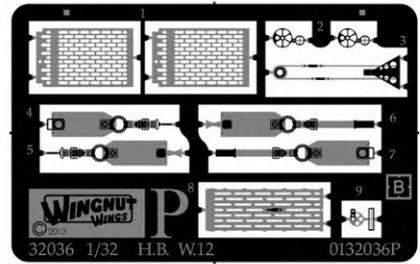


I

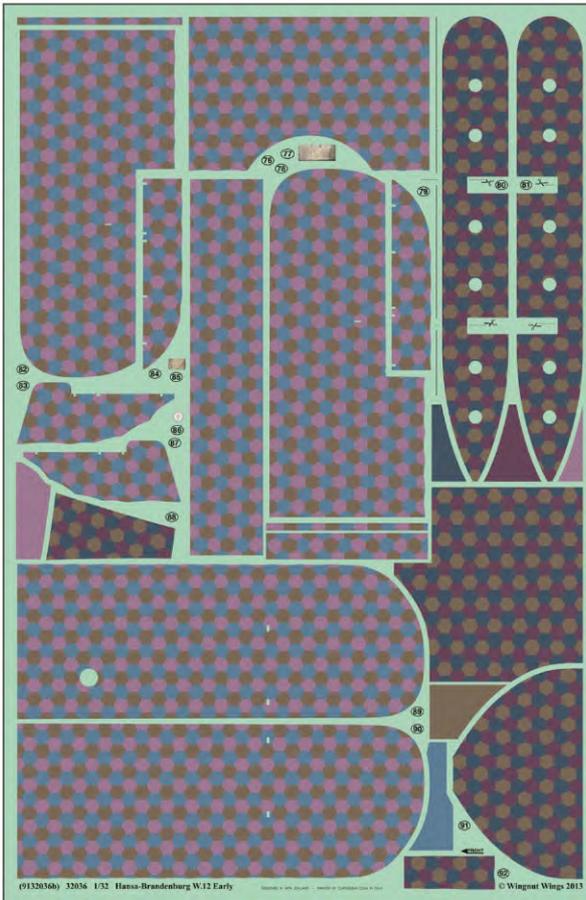


■ = Not Used

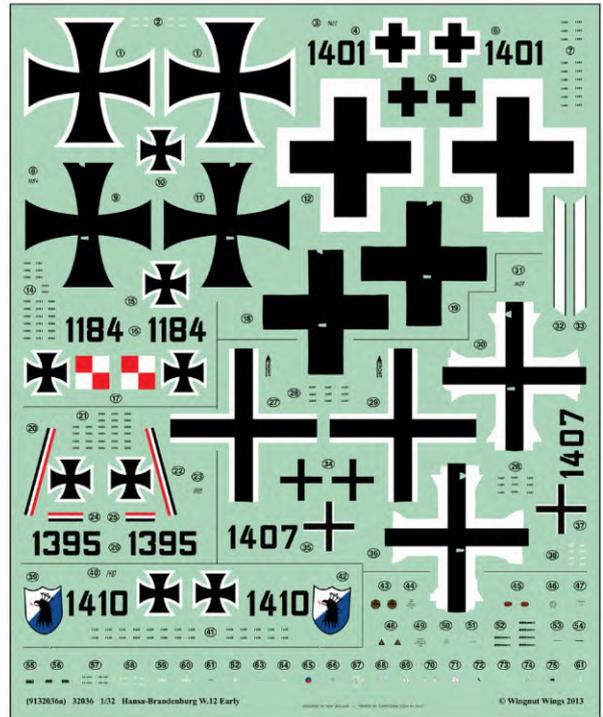
Photo Etch



Decals



Decals



✓ Early production Hansa-Brandenburg W.12 prepare to launch in mid to late 1918, possibly at List, Westerland on the island of Sylt. From the left we can see 1402, unidentified (but possibly 1401 **C3**) and 1186 in the water. Note the post June 1918 converted 'thin arm' balkenkreuz on the (easy to reach) fuselage and rudder while the top wing balkenkreuz remain the interim post April 1918 'fat arm' style. All the floats and float struts appear to be finished with black bituminous tar based paint. See also page 20.

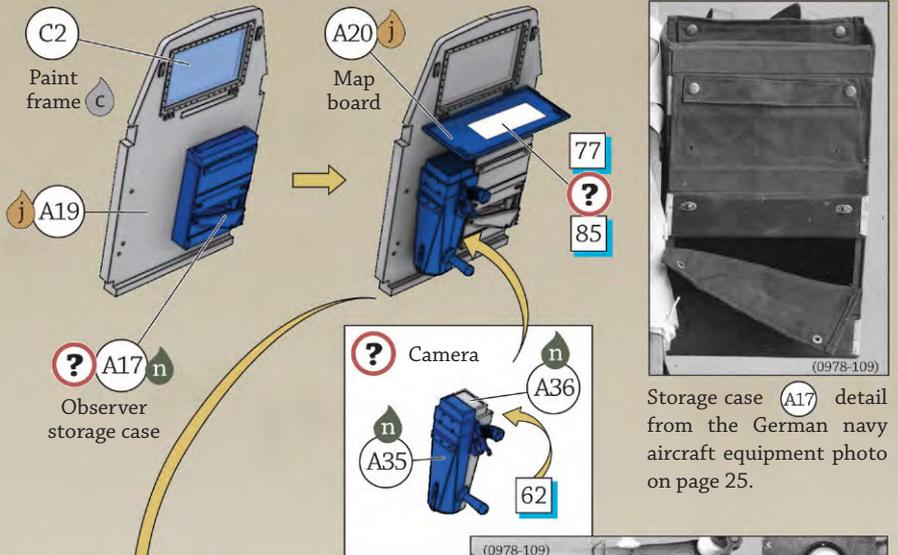
(0001-39)



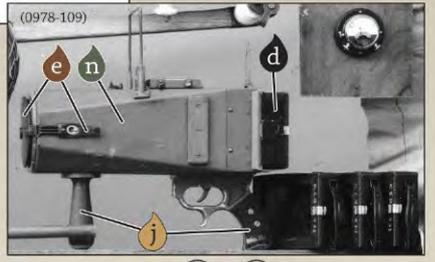
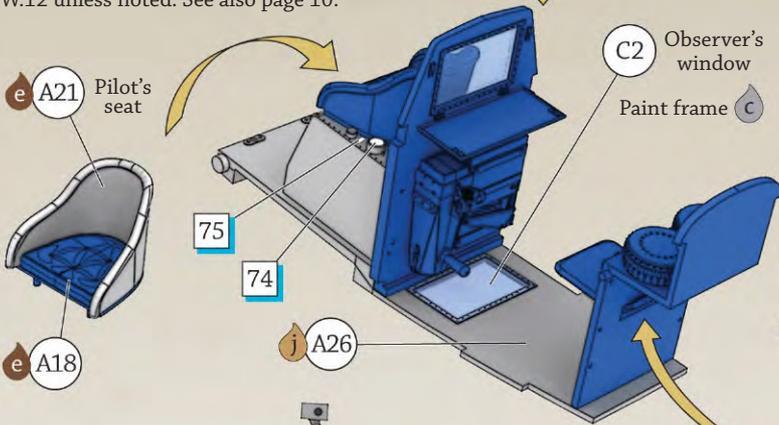
1 INTERIOR



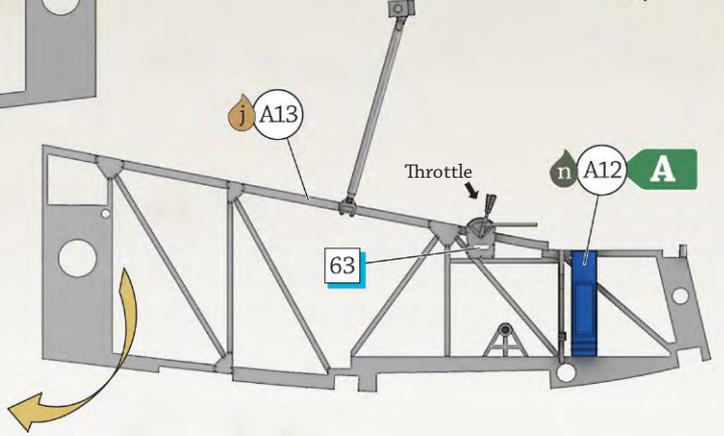
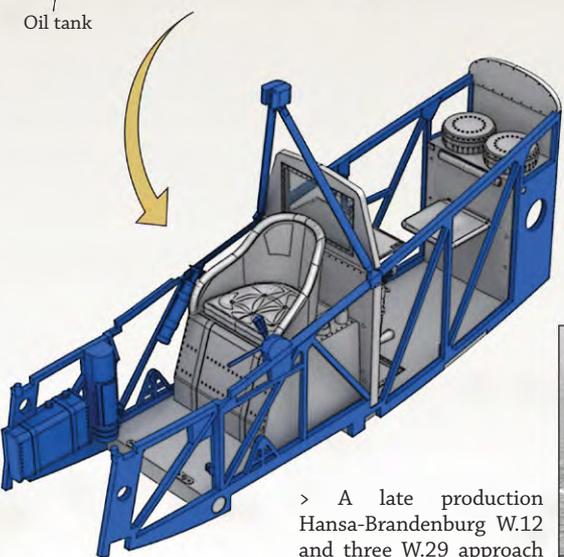
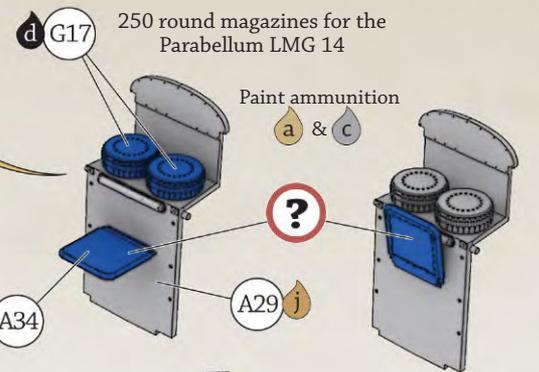
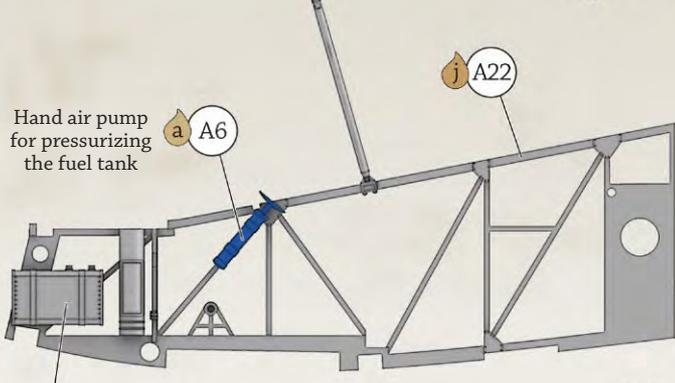
Although this is an unidentified and unarmed late production Hansa-Brandenburg W.12 it is one of the very few images which show the window between the observer and pilot's cockpits. All following photos show early production W.12 unless noted. See also page 10.



Storage case A17 detail from the German navy aircraft equipment photo on page 25.



Hand held camera A35 + A36 detail from the photo on page 25.



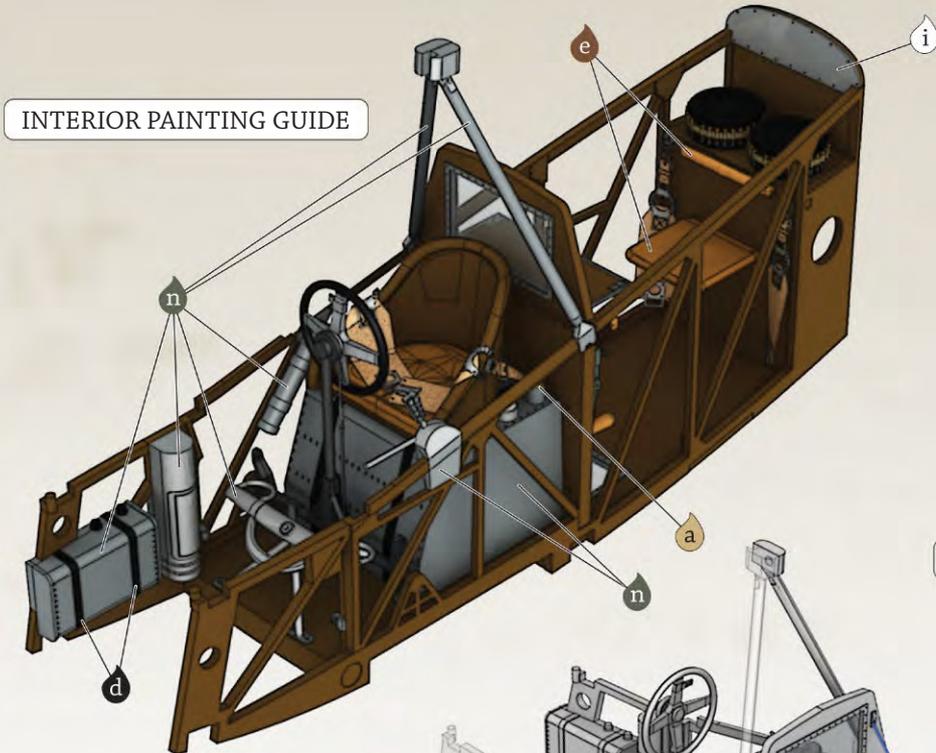
> A late production Hansa-Brandenburg W.12 and three W.29 approach the mole at Zeebrugge in late 1918.

2 INTERIOR continued

Steering wheel **c** A16
 Paint rim **d**

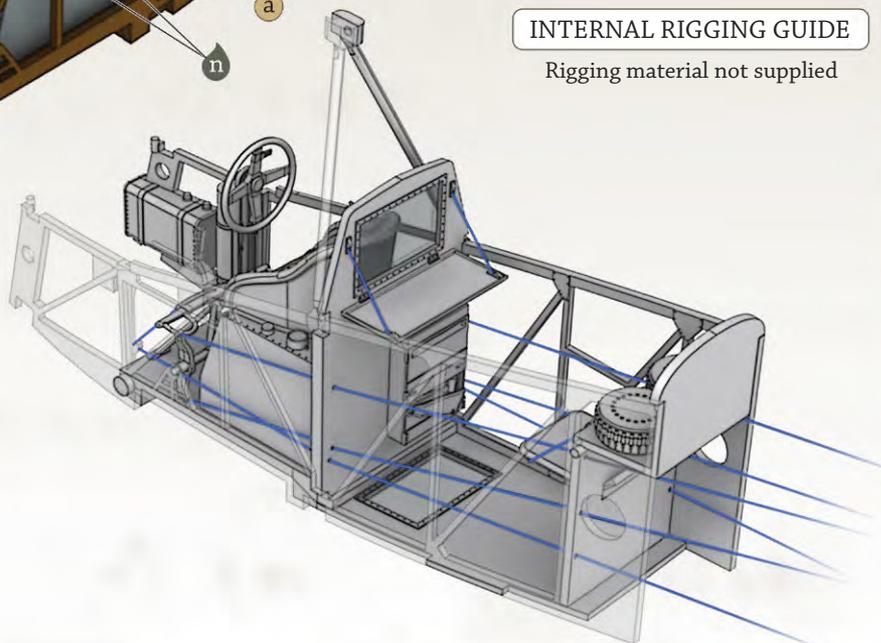
Control column **n** A10
 **P1** **n**

A14 **n**
 Rudder pedals
n A30

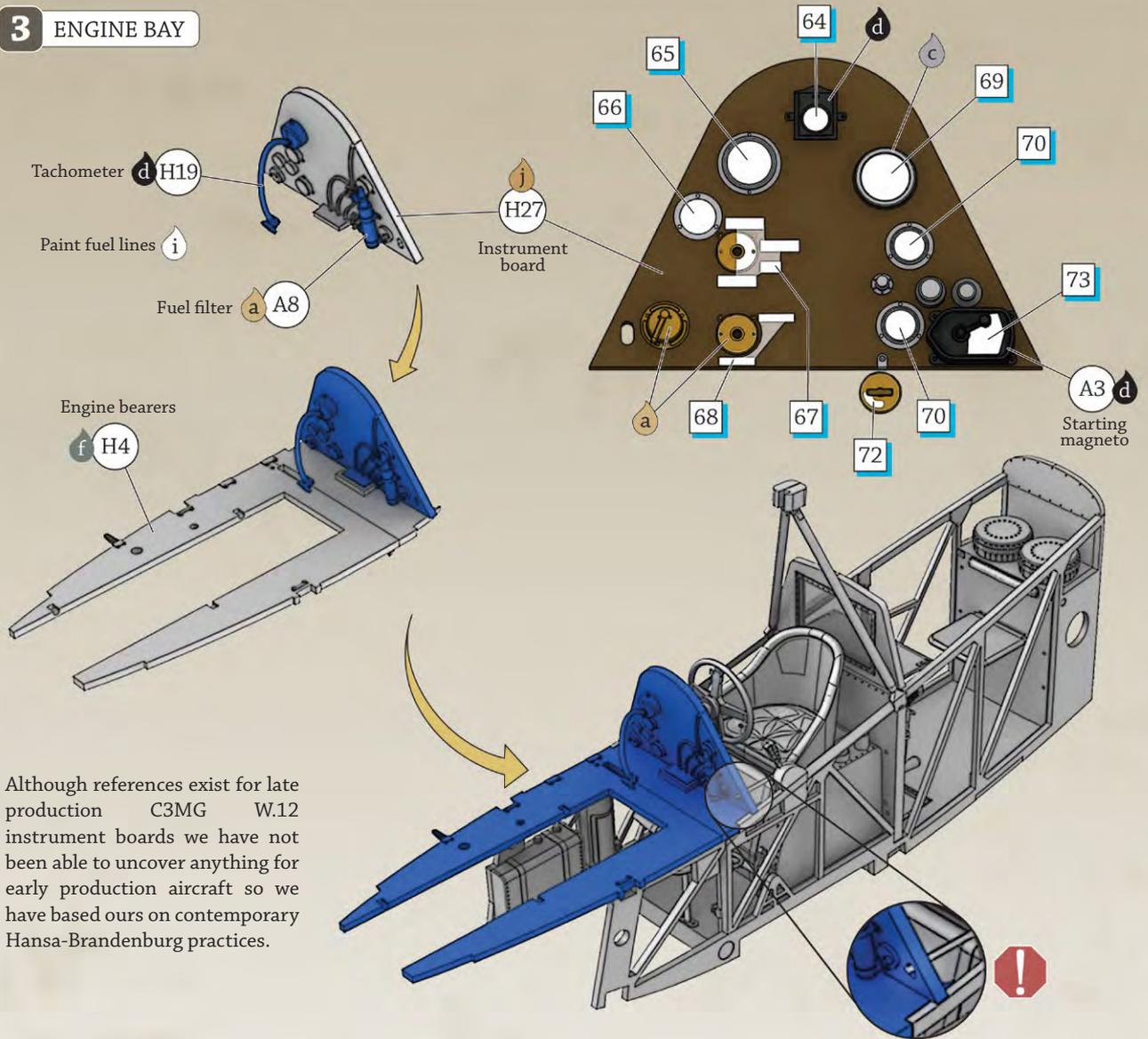


INTERNAL RIGGING GUIDE

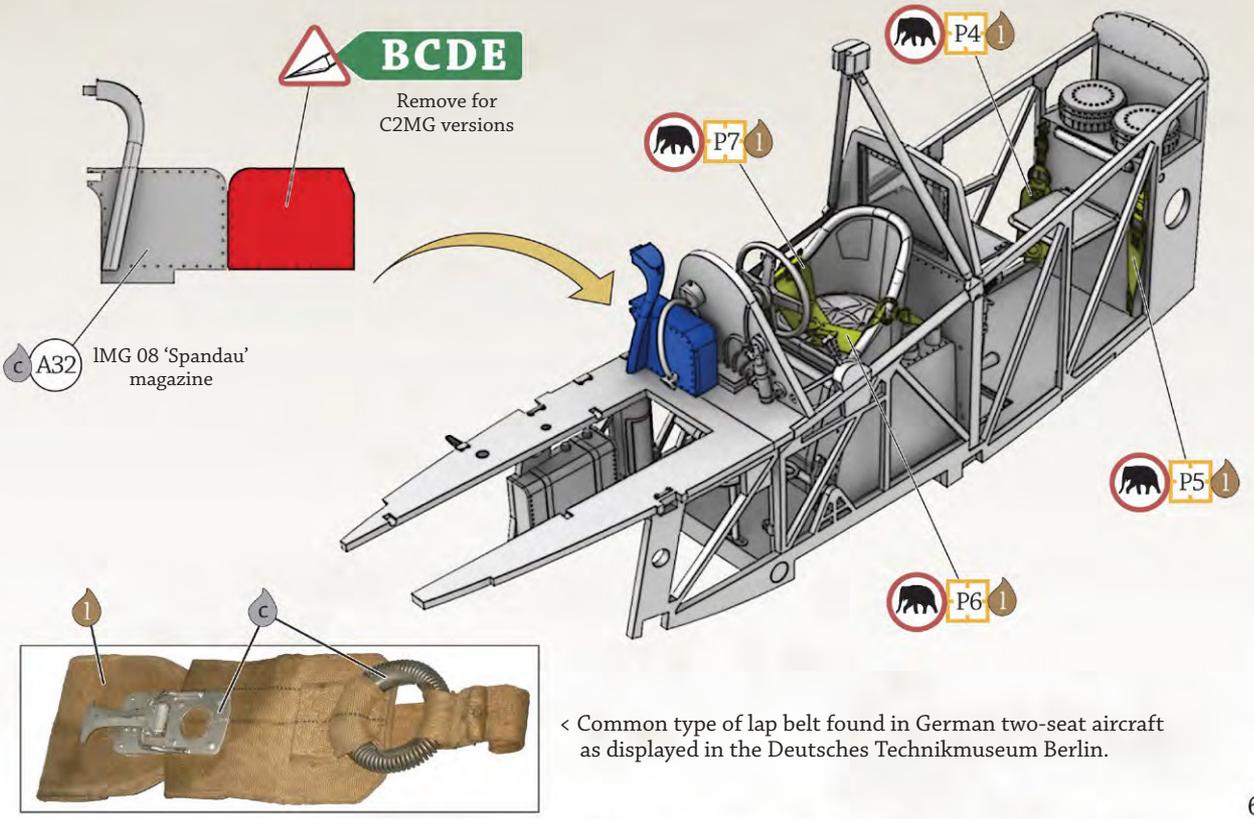
Rigging material not supplied



3 ENGINE BAY

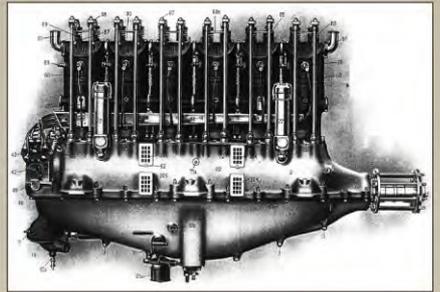
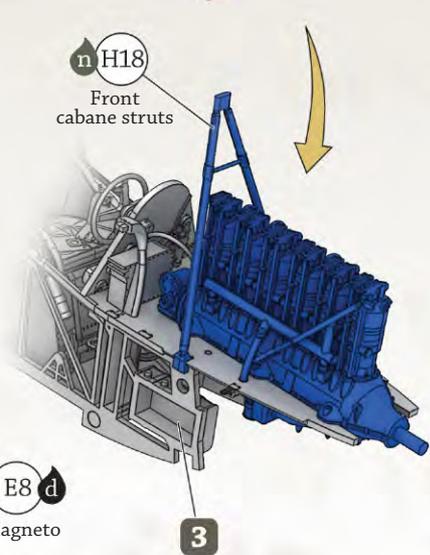
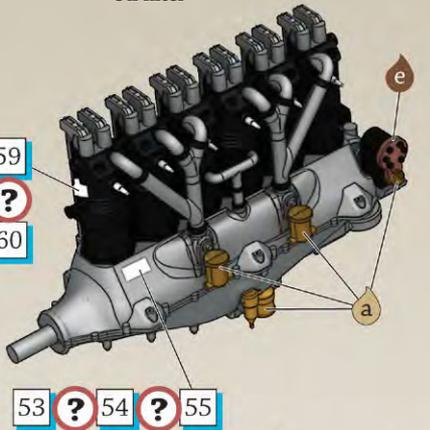
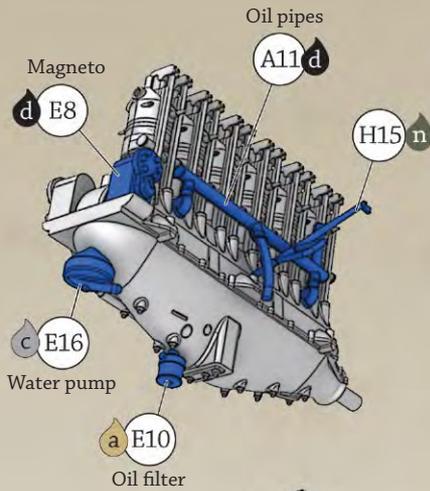
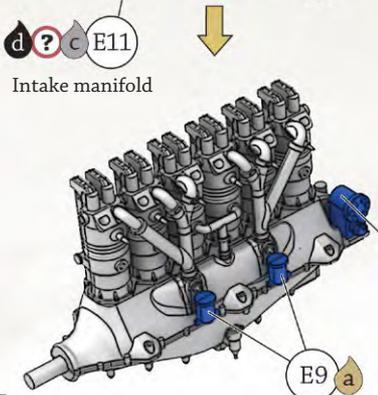
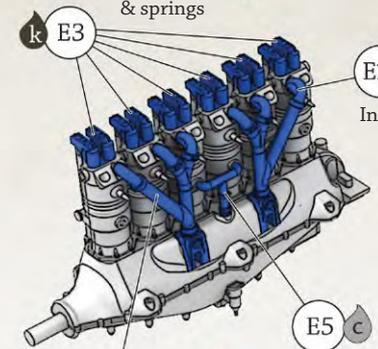
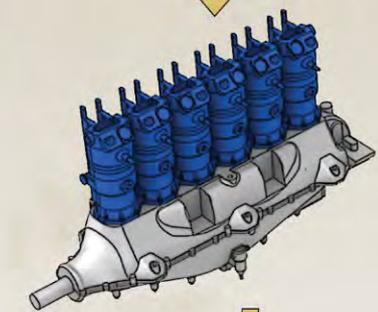
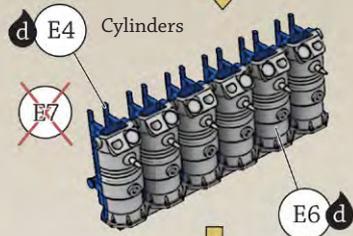
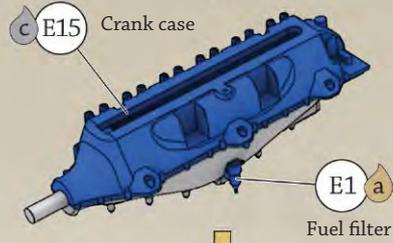
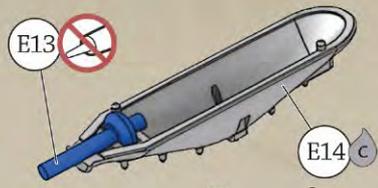


Although references exist for late production C3MG W.12 instrument boards we have not been able to uncover anything for early production aircraft so we have based ours on contemporary Hansa-Brandenburg practices.

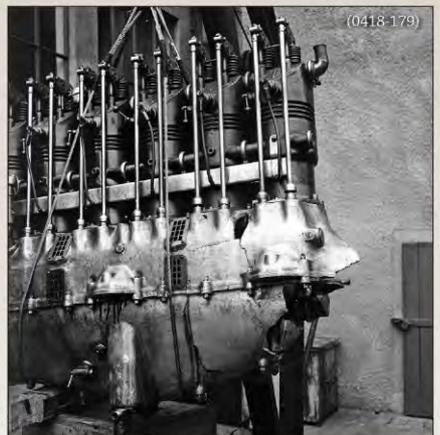
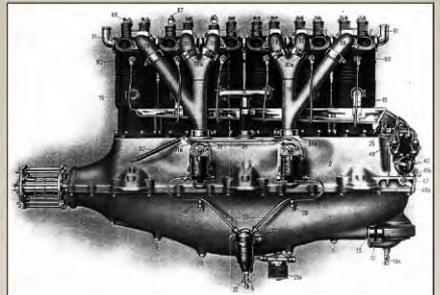


< Common type of lap belt found in German two-seat aircraft as displayed in the Deutsches Technikmuseum Berlin.

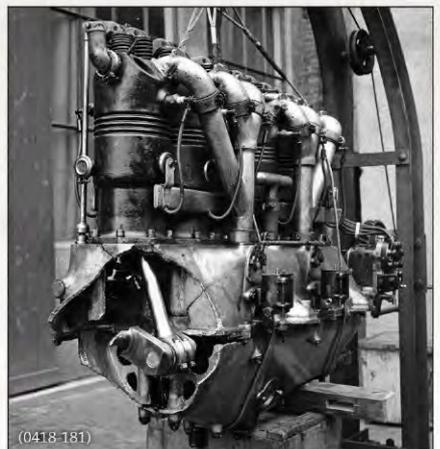
4 150hp Benz Bz.III ENGINE



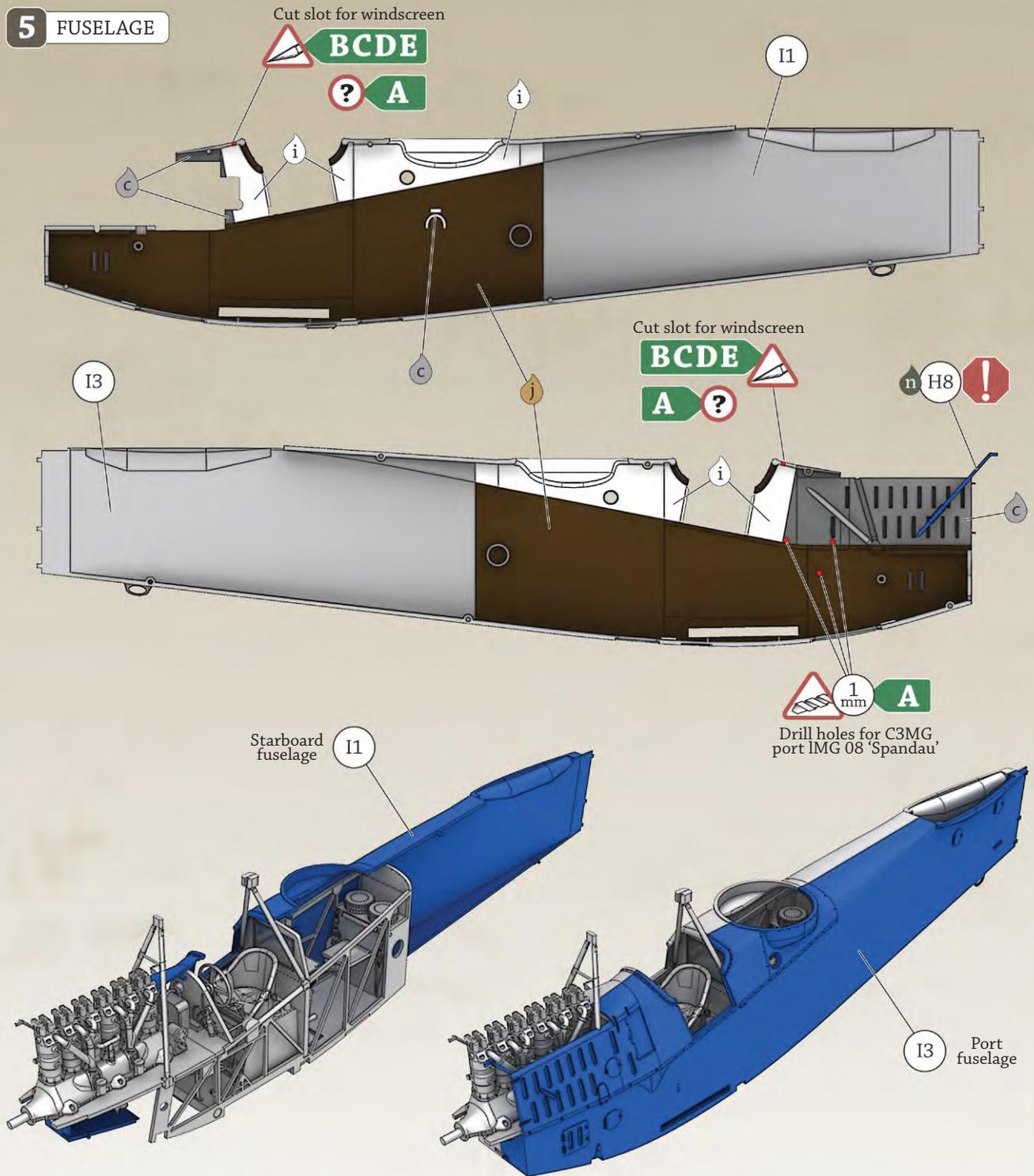
These illustrations from the Benz Bz.III engine manual show many useful details for the modeller.



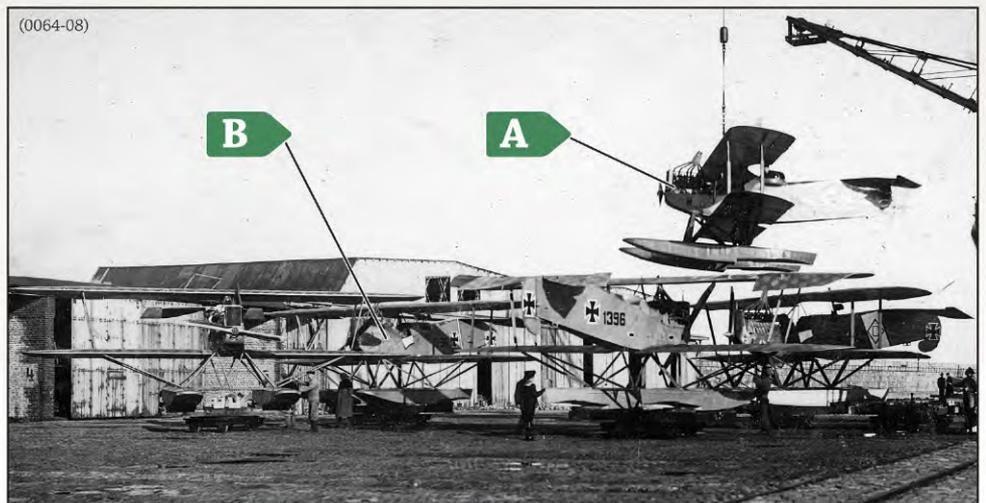
These photographs of a Benz Bz.III engine, taken to document severe damage to the front end, allow us to see many interesting details.



5 FUSELAGE



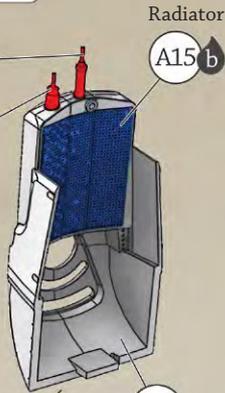
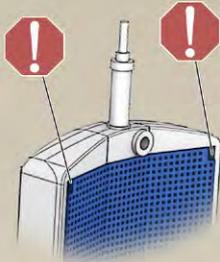
Early production Hansa-Brandenburg W.12 on the Mole at Zeebrugge in late 1917 or early 1918. From left to right we can see unidentified (but possibly 1399), 1395, 1396, 1184 (suspended in the air) and 1183. All aircraft feature their original eisenkreuz markings predating the change to balkenkreuz after March-April 1918. W.12 1183 and 1184 would be amongst the aircraft destroyed in a bombing raid on 10 May 1918.



6 FUSELAGE DETAILS

DE Remove

ABC Remove



Radiator cowling
Paint inside **c**



Radiator detail from an early production W.12, possibly 1399, as seen on page 8.



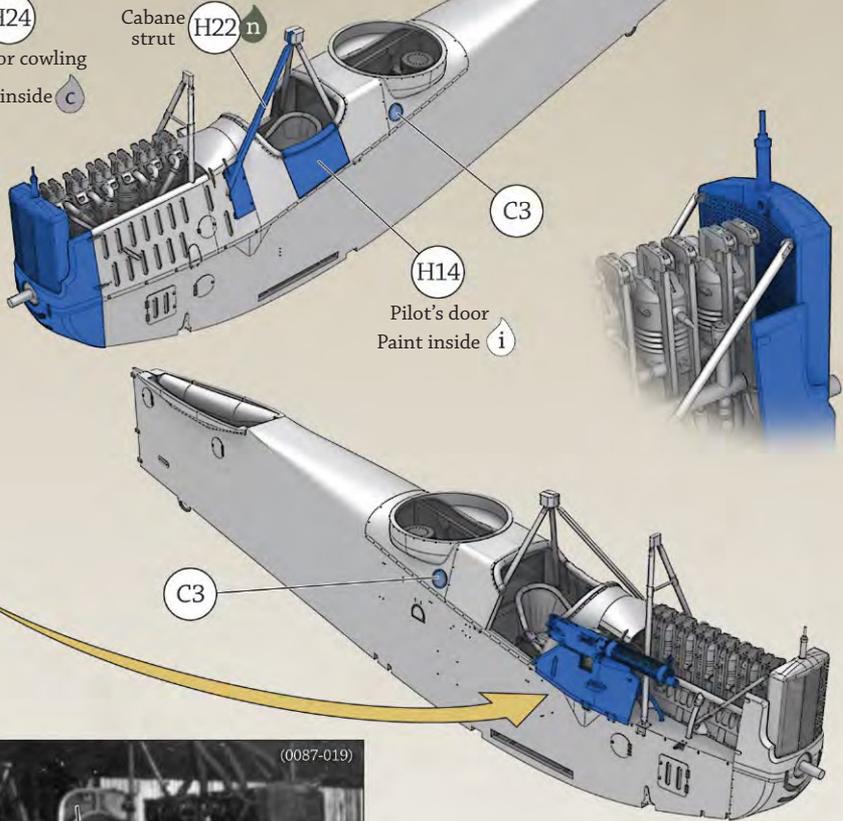
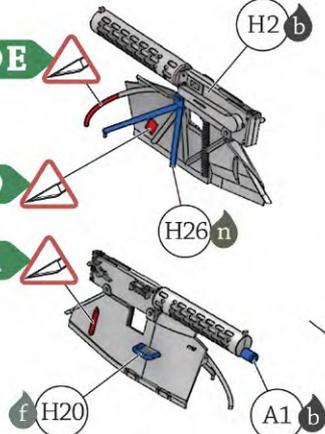
Pilot's door and seat detail from W.12 1395 **B**.

Starboard IMG 08 'Spandau'

DE

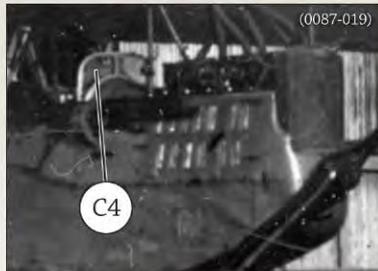
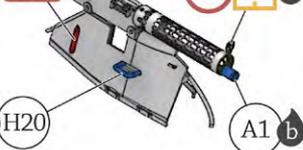
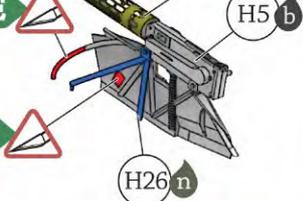
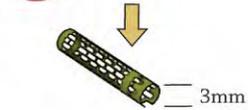
D

A



Pilot's door
Paint inside **i**

High detail



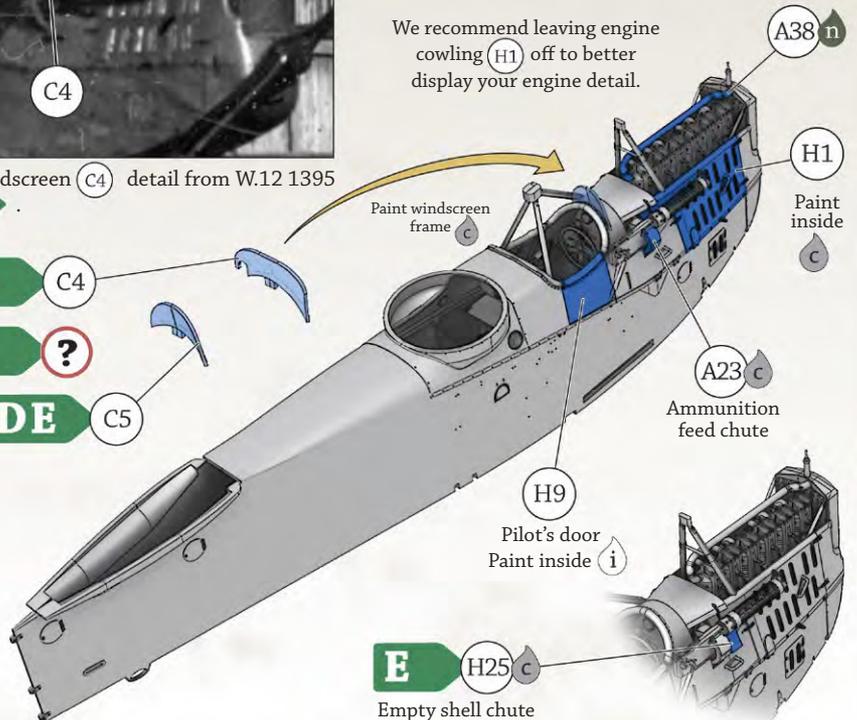
Windscreen **C4** detail from W.12 1395 **B**.

B **C4**

A **?**

CDE **C5**

We recommend leaving engine cowling **H1** off to better display your engine detail.



Paint windscreen frame **c**

Paint inside **c**

Ammunition feed chute

Pilot's door
Paint inside **i**

E **H25** **c**
Empty shell chute

7 FUSELAGE DETAILS continued



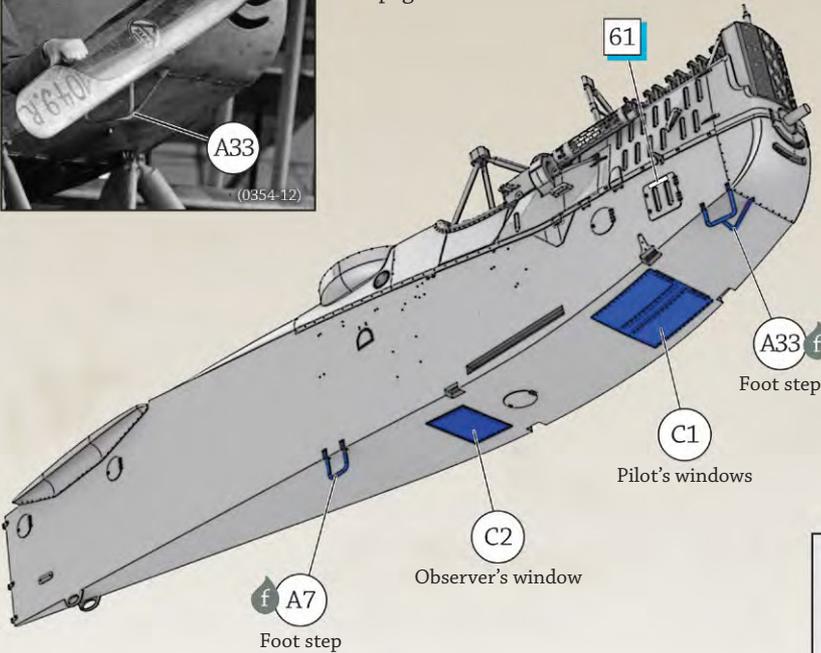
^ C3MG port IMG 08 'Spandau' detail from W.12 1184 **A**. Note that the exterior fairing is not fitted at this time.



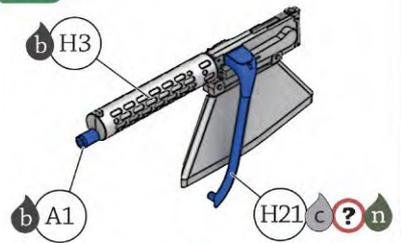
A C3MG port IMG 08 'Spandau'



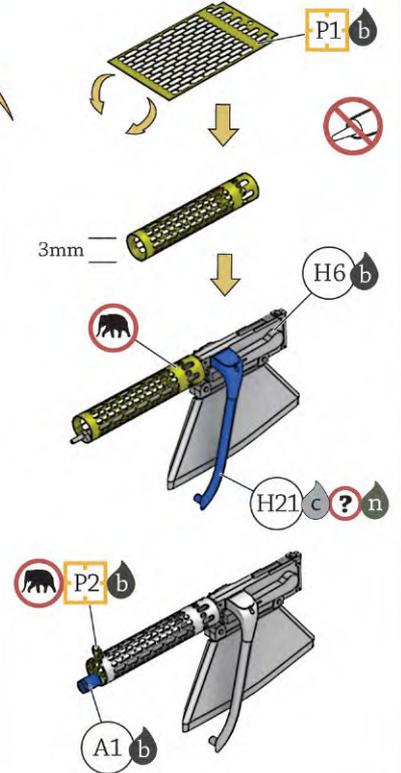
↳ Unidentified late production W.12 (not 1049 as the Axial propeller would have us believe, which appears to have been a Daimler-Mercedes D.III powered Rumpler 6.B1) showing the front foot step **A33** and faintly visible pilot's windows **C1**. See also page 4.



A Port IMG 08 'Spandau'

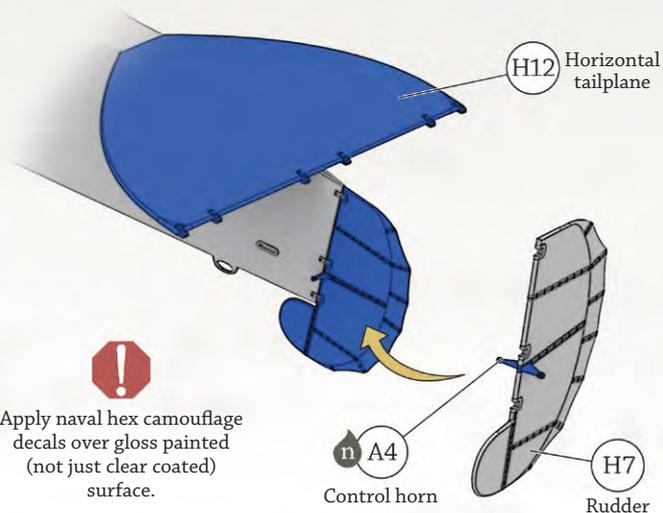
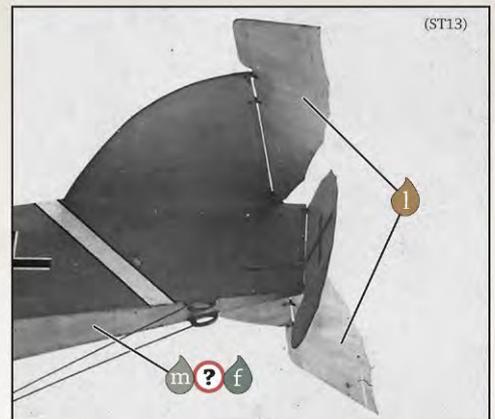


High detail



8 TAILPLANE

> Tailplane detail from crashed W.12 1407 **D2**. Note the fuselage handles and pale (grey?) bottom of the fuselage.

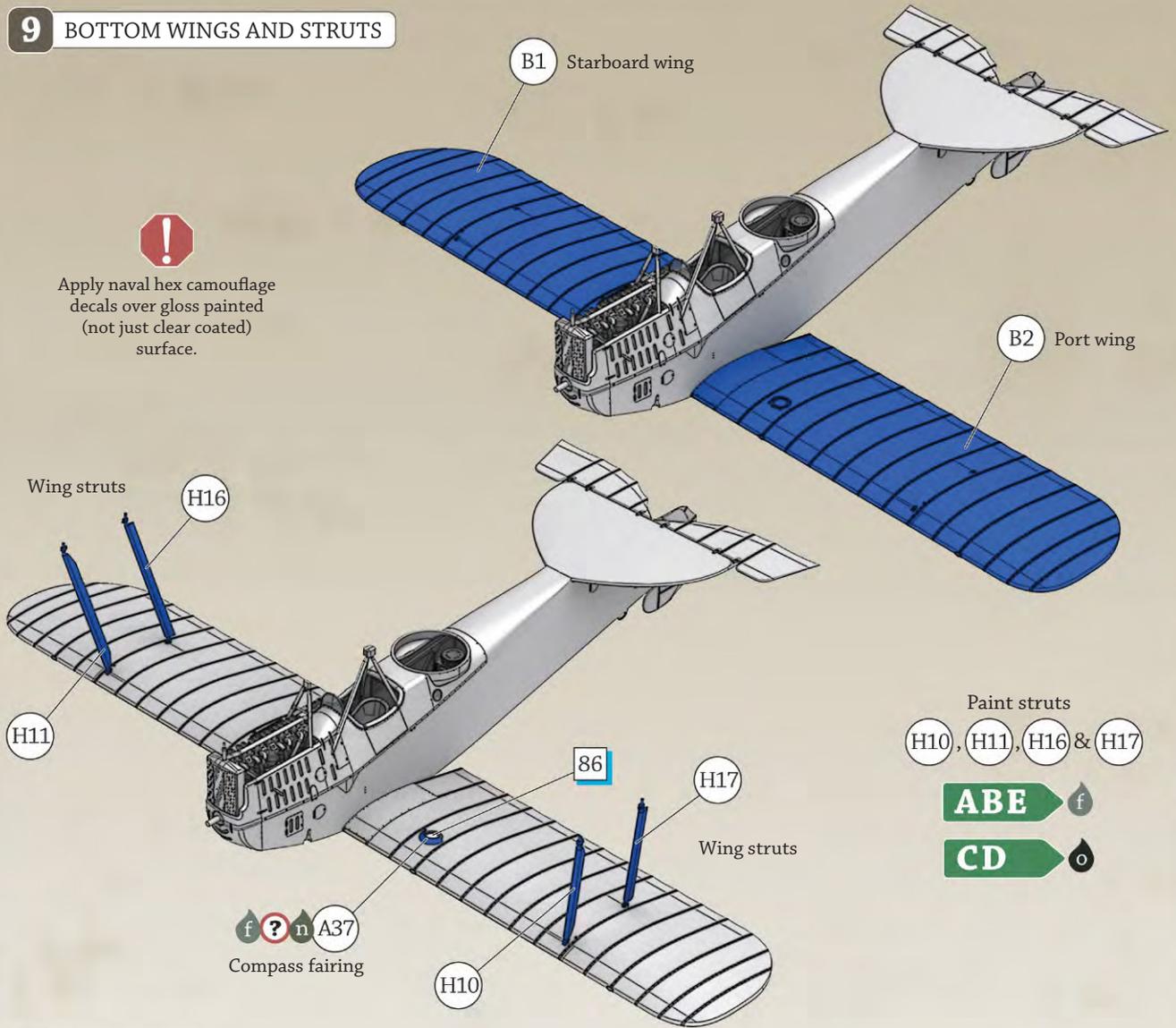


Apply naval hex camouflage decals over gloss painted (not just clear coated) surface.

9 BOTTOM WINGS AND STRUTS



Apply naval hex camouflage decals over gloss painted (not just clear coated) surface.



Paint struts

H10, H11, H16 & H17

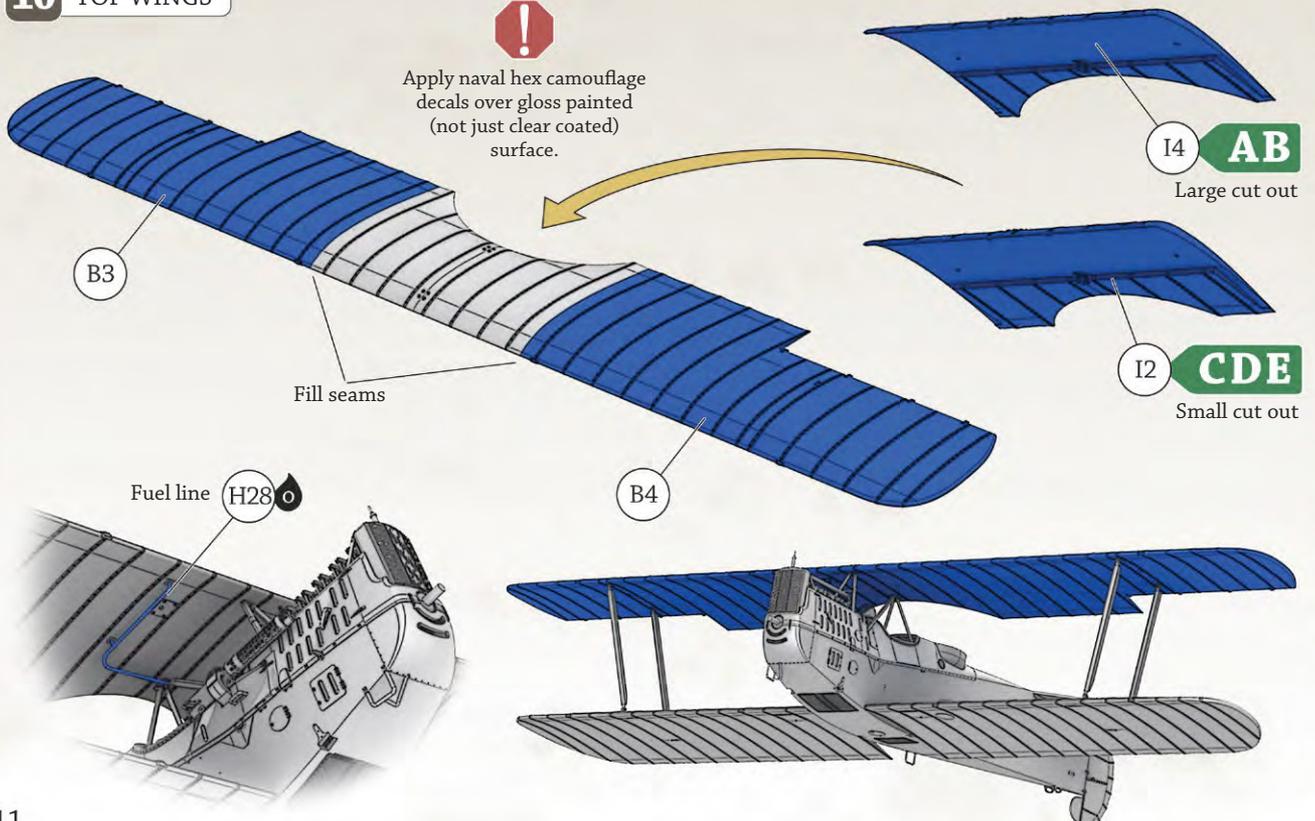
ABE → f

CD → o

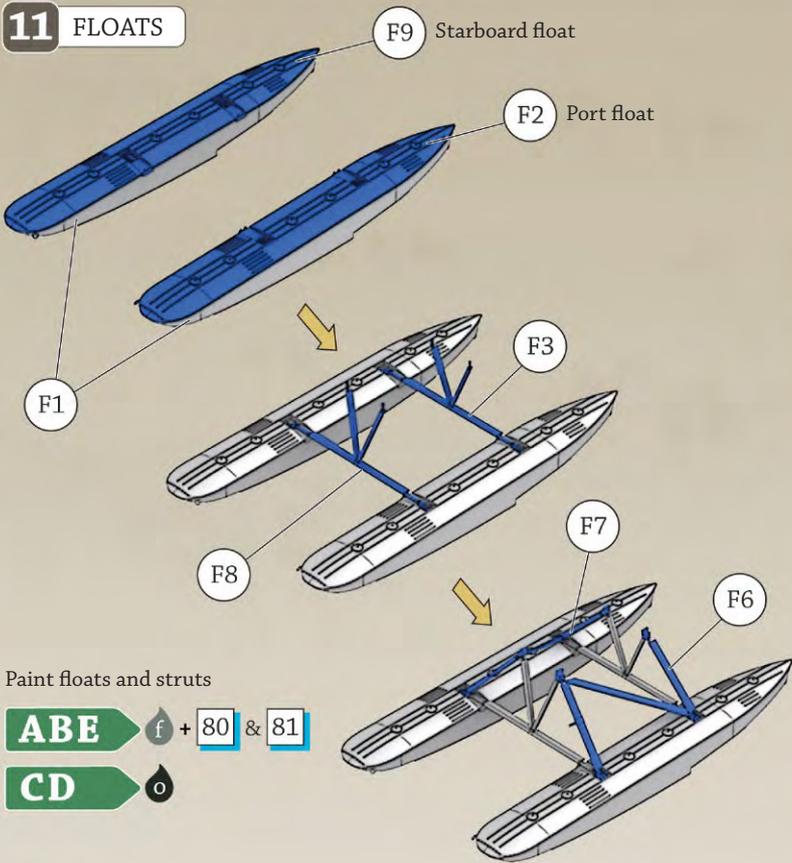
10 TOP WINGS



Apply naval hex camouflage decals over gloss painted (not just clear coated) surface.



11 FLOATS



Paint floats and struts

- ABE** f + 80 & 81
- CD** o



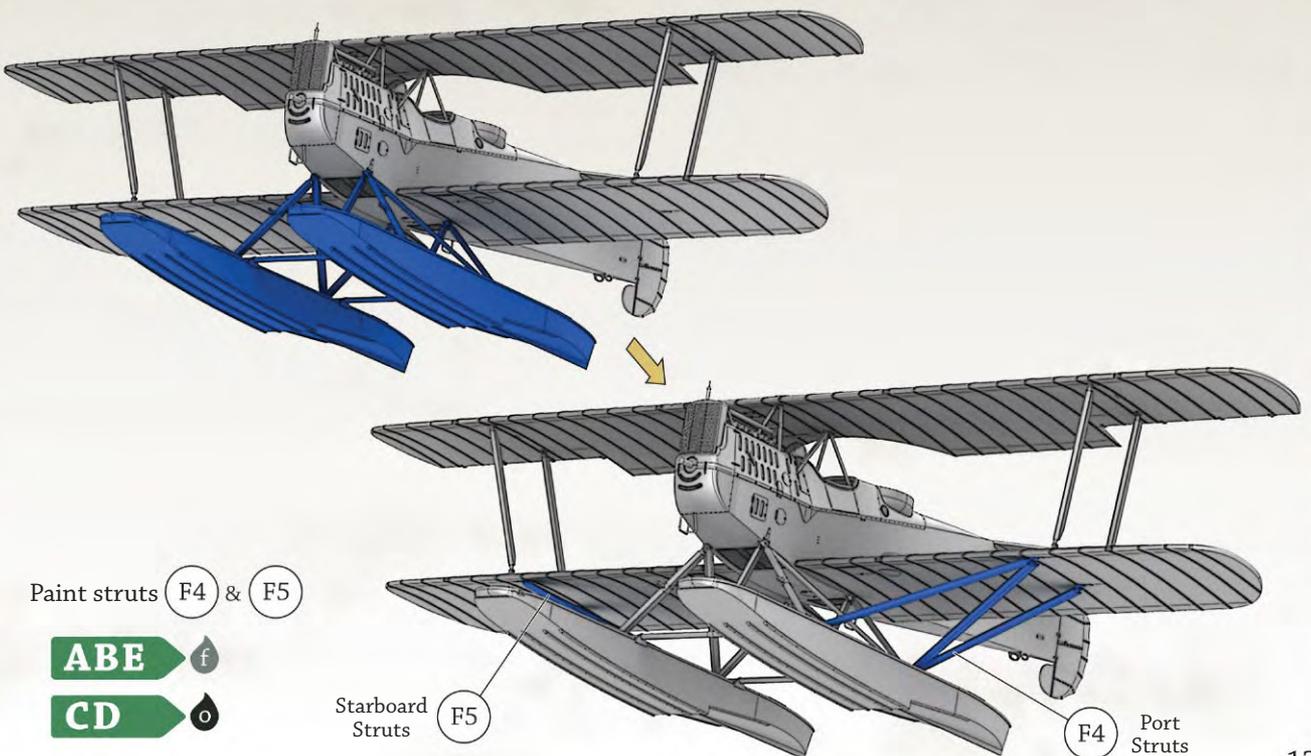
(ST13)

^ Float and strut detail from W.12 1407 **D2** with all over black bituminous tar based paint for protection from salt water.



(0087-019)

< W.12 1395 **B** displays its early 'grey blue' struts and floats with painted hexagon camouflage.



Paint struts (F4) & (F5)

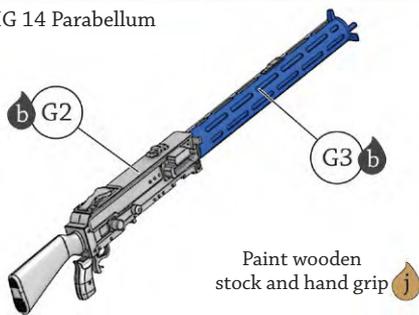
- ABE** f
- CD** o

Starboard Struts (F5)

(F4) Port Struts

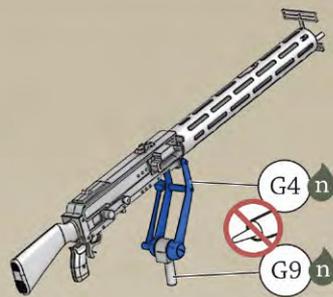
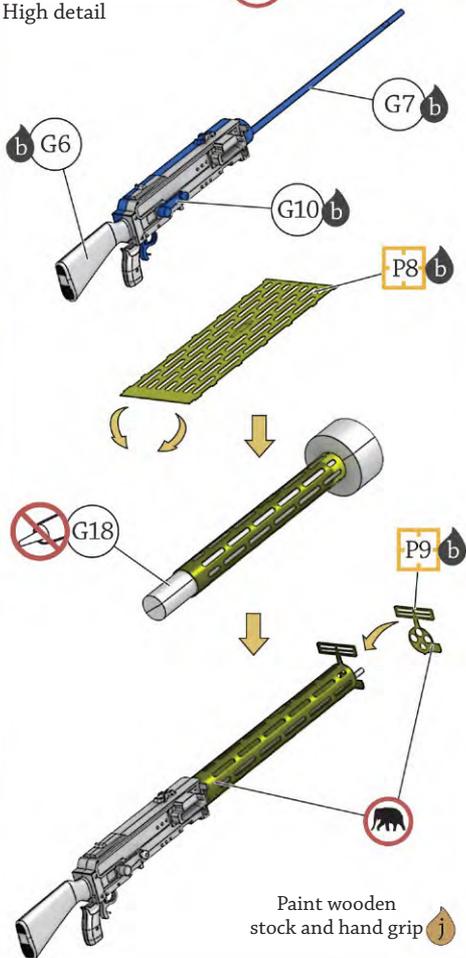
12 OBSERVER'S ARMAMENT

LMG 14 Parabellum



?

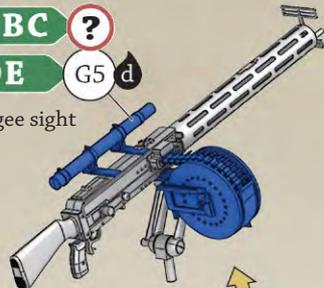
High detail



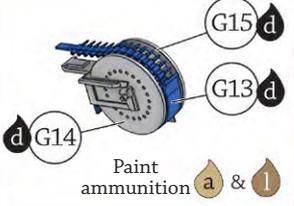
ABC ?

DE G5 d

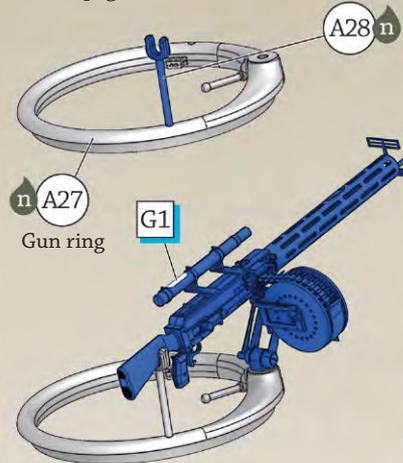
Oigee sight



250 round magazine



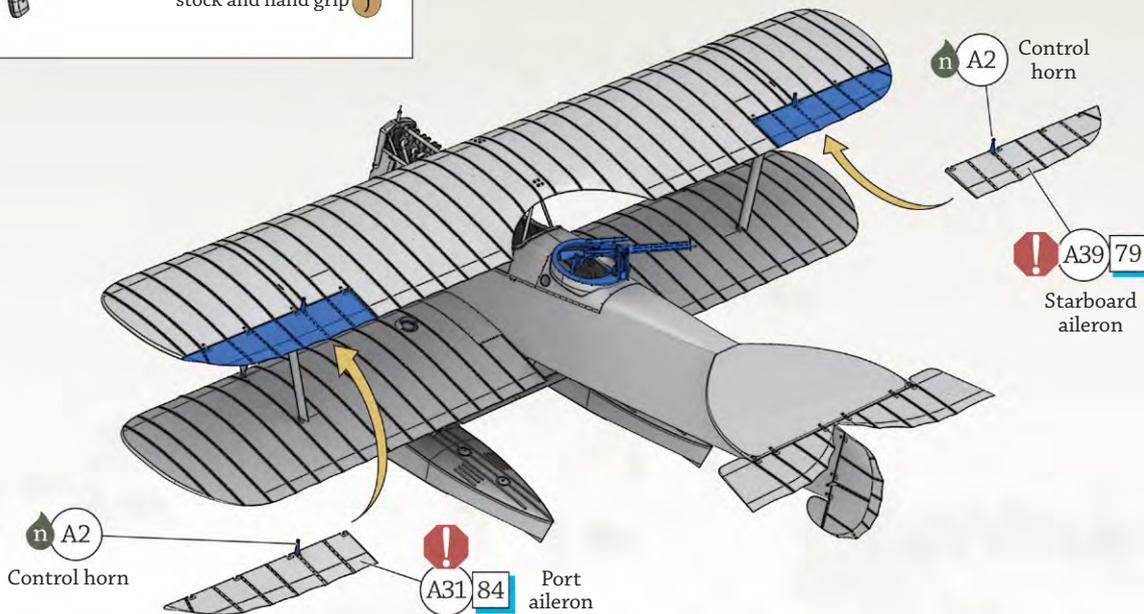
LMG 14 Parabellum with Oigee sight (G5) fitted from W.12 1402 as shown on page 20.



(0272-04)



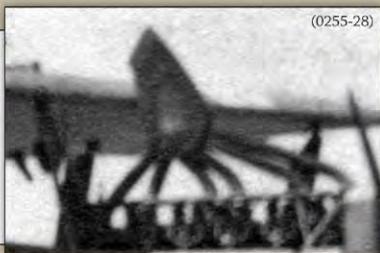
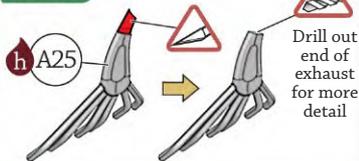
LMG 14 Parabellum as carried used by the observer on the W.12.



13 FINAL ASSEMBLY

ACD

Exhaust



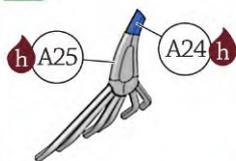
Short exhaust detail from W.12 1407 **D1**

Trestle for rear fuselage



E

Exhaust



B

Exhaust



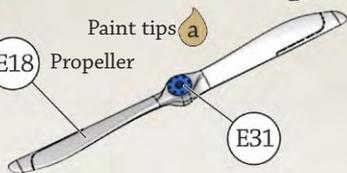
Twin exhaust detail from W.12 1395

B

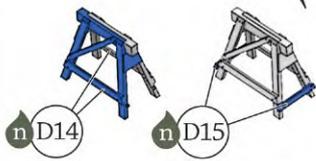
Paint tips **a**

P E18 Propeller

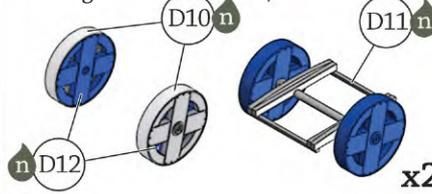
E31



Trestle for float



Beaching dollies

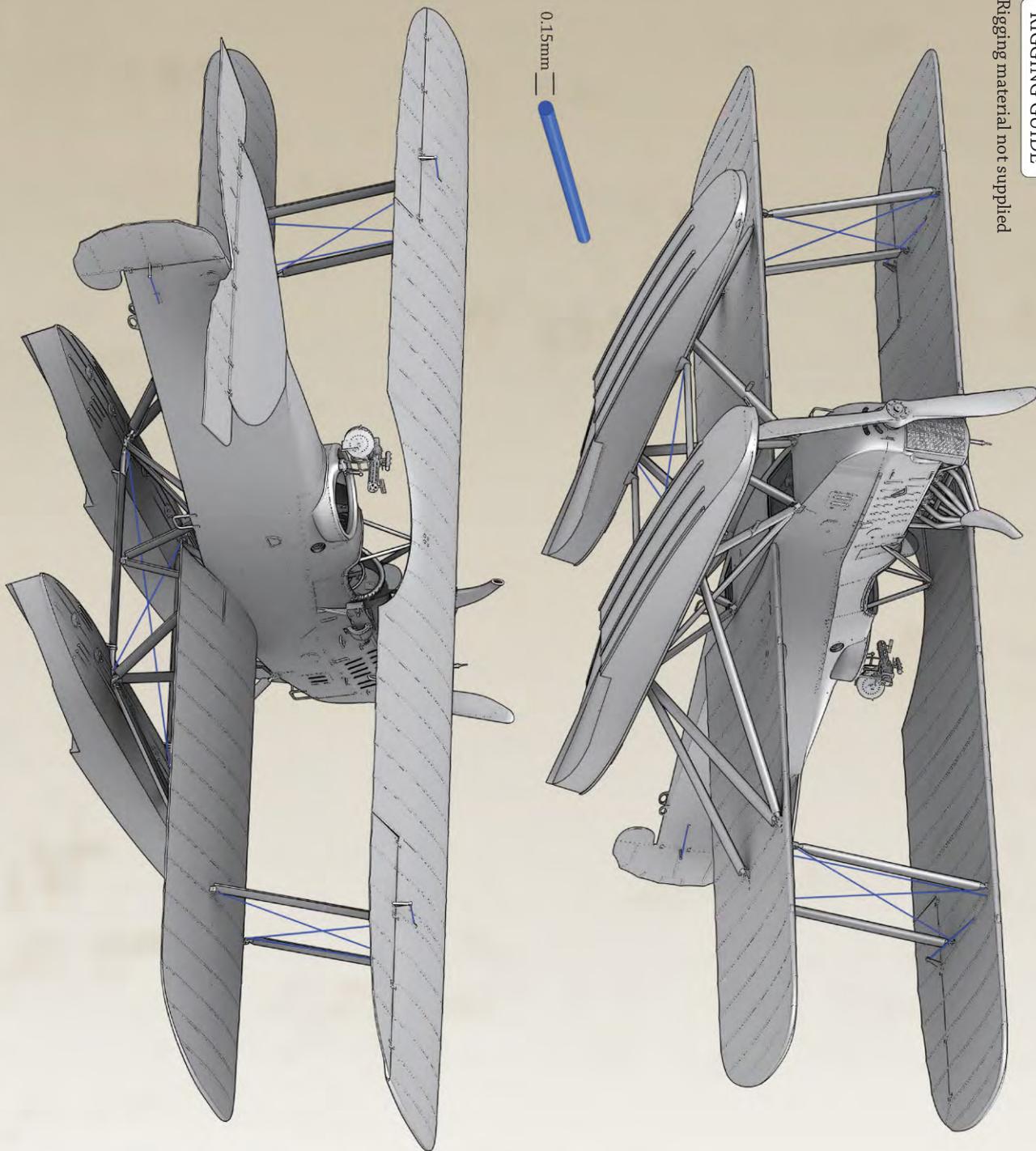


(1170-014)

< Homing pigeons and bombs are loaded on to C3MG W.12 1399 in February 1918. Although no bomb racks have been seen fitted to the W.12, relatively small bombs such as these could be hand dropped by the observer.

RIGGING GUIDE

Rigging material not supplied

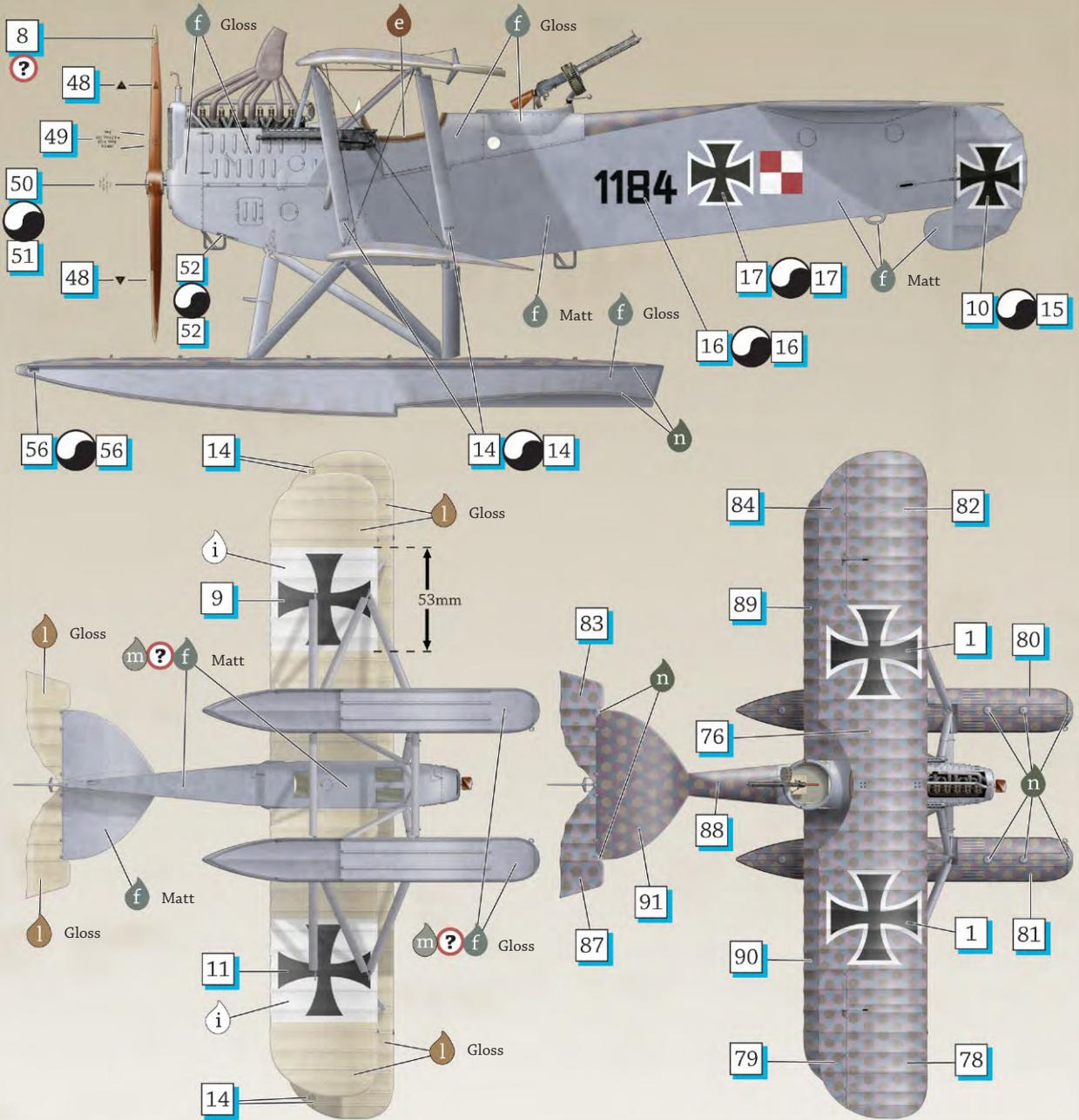


Hansa-Brandenburg W.12 1180 is from the initial production order for 10 aircraft (numbers 1178 to 1187) placed in January 1917 and features several anomalous details. The upper surfaces of the wings do not appear to have received their hexagon camouflage paint yet because they are quite translucent in this photo. The aluminium engine cowlings appear to be unpainted. The fuselage eisernkreuz has a thin white square painted around it and the original application of the serial number appears to have been painted out and reapplied lower down the fuselage. While the rudder eisernkreuz appears to have a square white field the bottom wing crosses do not. Note the central filler tube on the radiator.

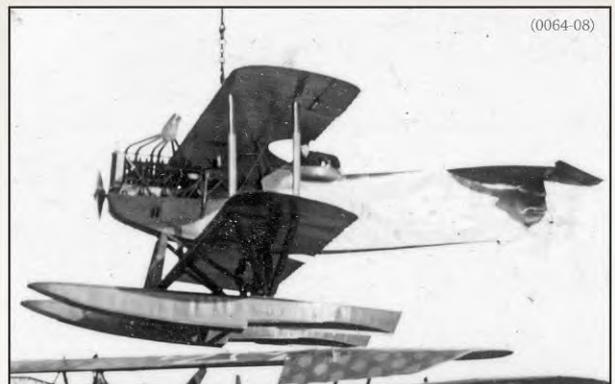


Hansa-Brandenburg W.12 1408 was from a March 1917 production order for 20 aircraft (numbers 1395 to 1414) and is shown here on the Mole at Zeebrugge. Note the original eisernkreuz markings, black floats and float struts and the open pilot's door exposing the white paint of the upper interior cowlings. The W.12 in the background is Lt. Becht's 1414 which would be destroyed in a bombing raid on 10 May 1918.

A Hansa-Brandenburg W.12 1184 C3MG, Fl.Mt.Urban, Lt.Ehrhardt, C-Staffel, Zeebrugge, December 1917

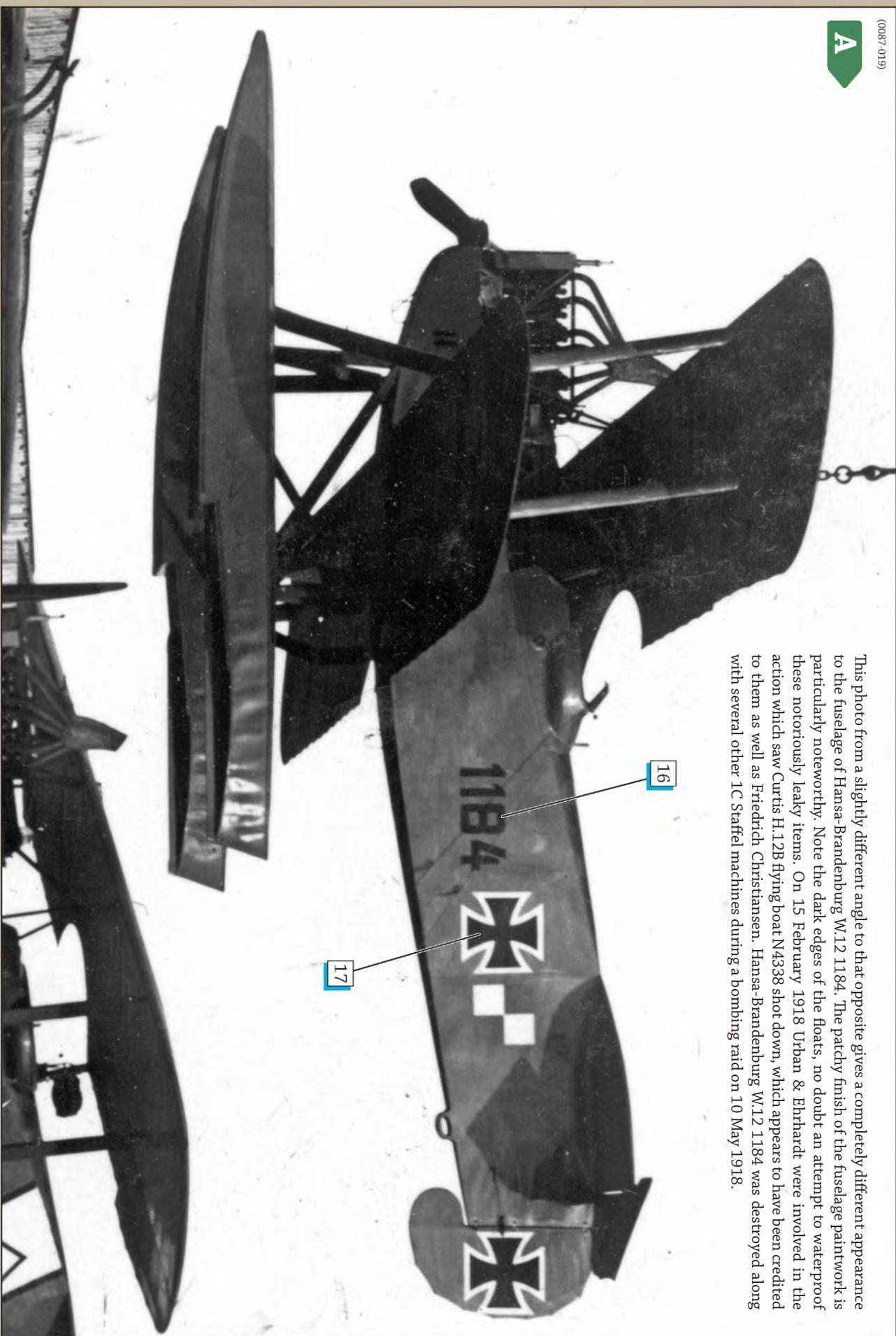


C3MG Hansa-Brandenburg W.12 1184 being lifted onto the Mole at Zeebrugge. Compare the appearance of the fuselage here with that opposite. W.12 1184 was from the 1st production order placed in January 1917 for 10 Benz Bz.III powered aircraft (numbers 1178 to 1187). Note the port IMG 08 'Spandau' and empty belt chute. On 11 December 1917 Urban & Ehrhardt in W.12 1184 were part of a 3 aircraft patrol with W.12 1396 and led by Friedrich Christiansen & Bernhard Wladicka in W.12 1183 when they attacked and destroyed the Royal Navy airship C27, the crew of JF Dixon, H Fail, JC Collett, JE Martin and ER White were killed. Ehrhardt took the photos below showing the destruction of C27. W.12 1184 was destroyed in a bombing raid on Zebrugge on 10 May 1918.

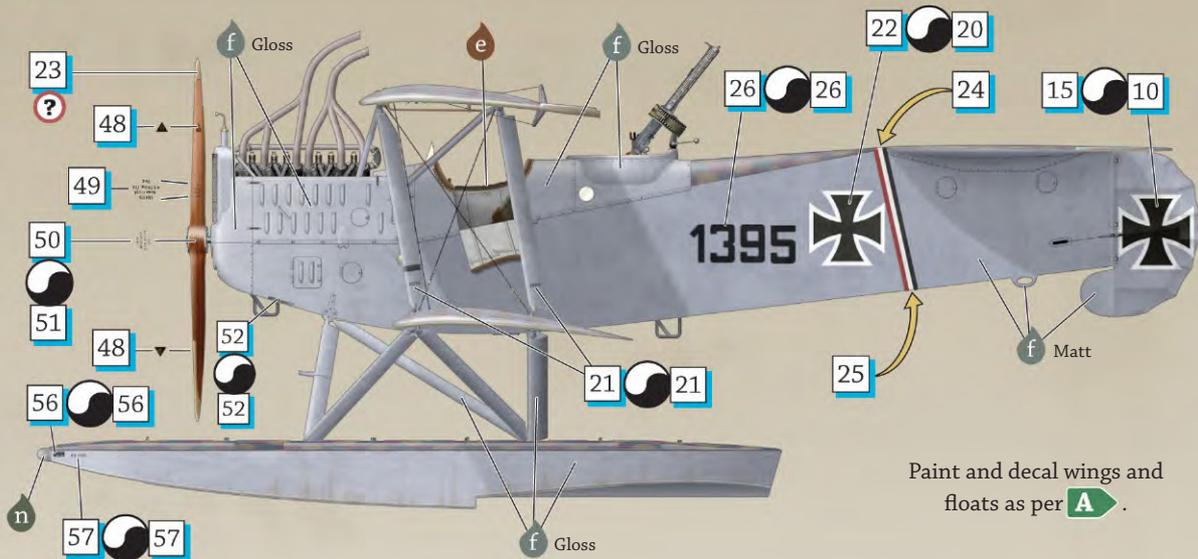




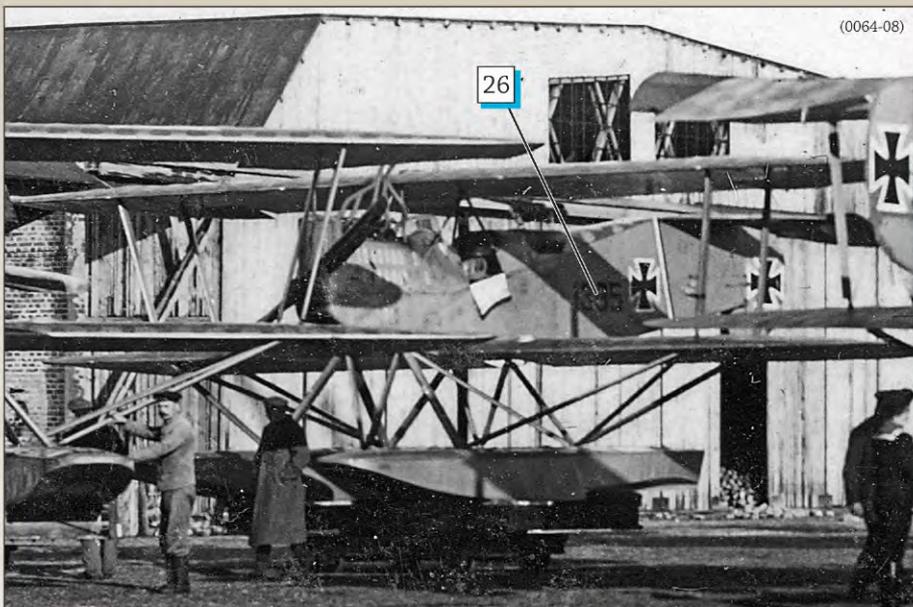
This photo from a slightly different angle to that opposite gives a completely different appearance to the fuselage of Hansa-Brandenburg W.12 1184. The patchy finish of the fuselage paintwork is particularly noteworthy. Note the dark edges of the floats, no doubt an attempt to waterproof these notoriously leaky items. On 15 February 1918 Urban & Ehhardt were involved in the action which saw Curtis H.12B flying boat N4338 shot down, which appears to have been credited to them as well as Friedrich Christiansen. Hansa-Brandenburg W.12 1184 was destroyed along with several other 1C Staffel machines during a bombing raid on 10 May 1918.



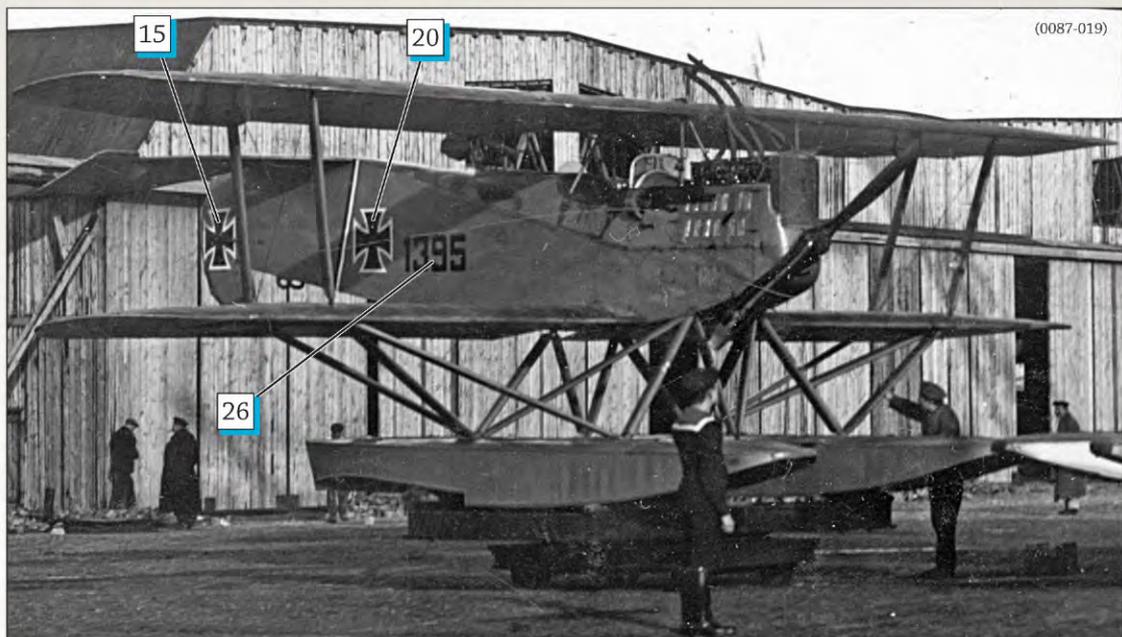
B Hansa-Brandenburg W.12 1395 C2MG, C-Staffel, Zeebrugge, Late 1917 to Early 1918



Paint and decal wings and floats as per **A**.



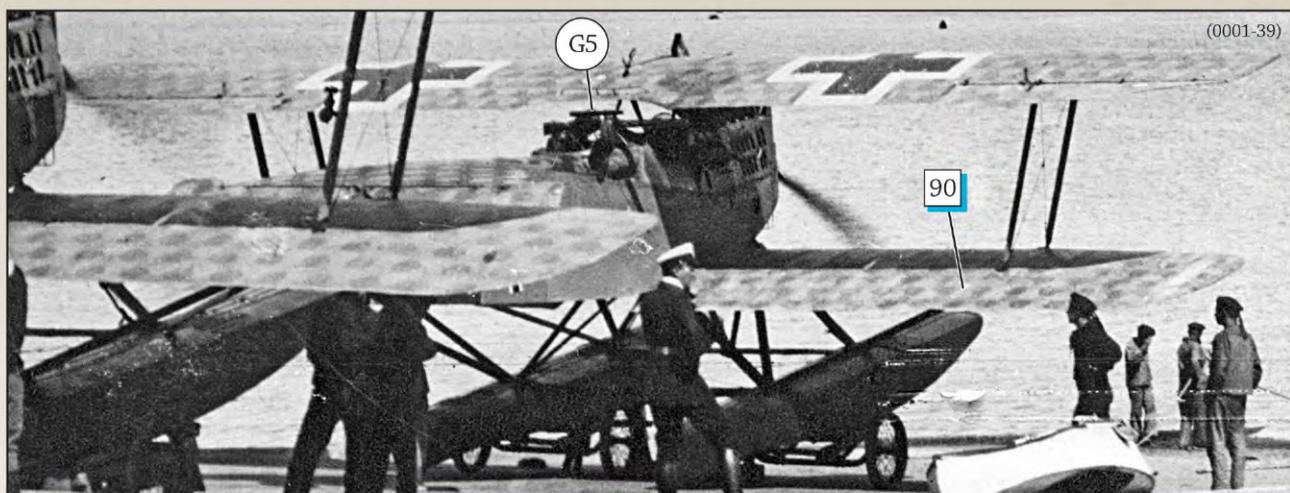
Hansa-Brandenburg W.12 1395 was from a production order for 20 Benz Bz.IIIa powered W.12 placed in March 1917 (numbers 1395 to 1414) and is shown here on the Mole at Seeflugstation Zeebrugge. See also page 8. Note the open pilot's door and thin red, white and black fuselage stripes in front of the tailplane.



Another view of W.12 1395 on the Mole at Zeebrugge. Note the distinctive windscreen (C4), twin exhausts (H13) and how the change in lighting makes the fuselage and floats appear much darker than shown in the photo above.



Hansa-Brandenburg W.12 1402, from the 2nd production batch, features converted post June 1918 'thin arm' balkenkreuz on the fuselage (tidied up with light grey paint) and rudder (now painted white) while the top wing crosses remain the interim post April 1918 'fat arm' style. The cables visible on the top wing were for lifting the aircraft with a crane. Note the darker repainted area on the side of the fuselage below the observer's cockpit.

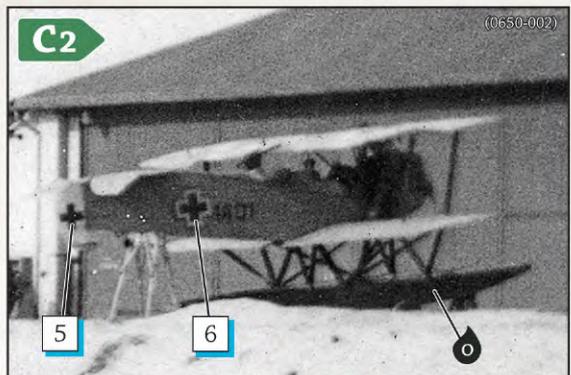
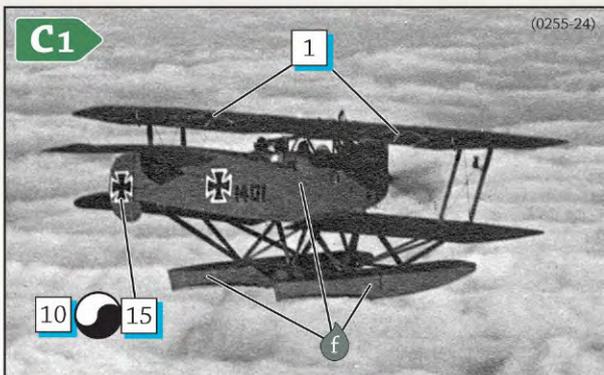
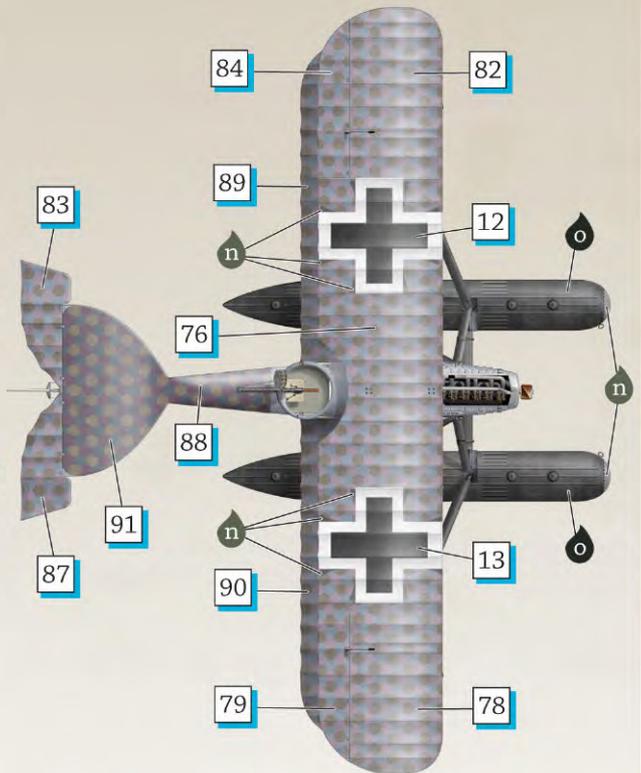
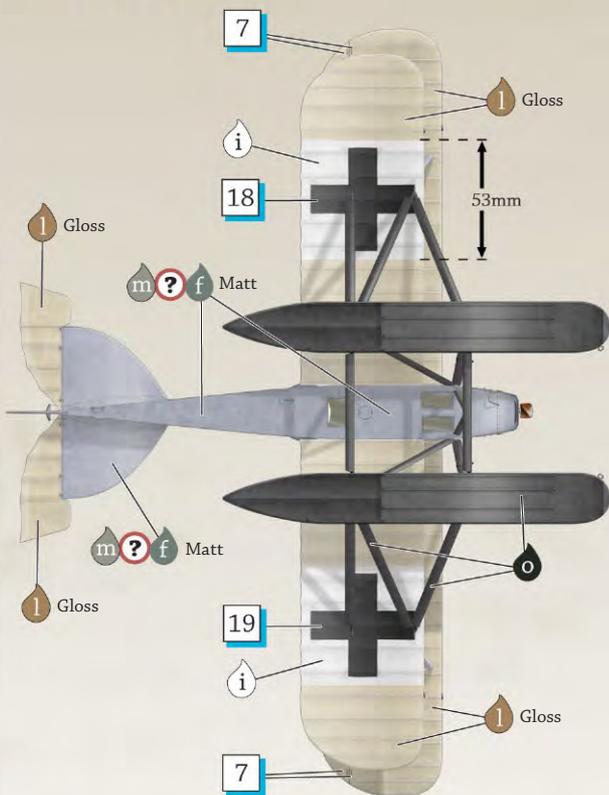
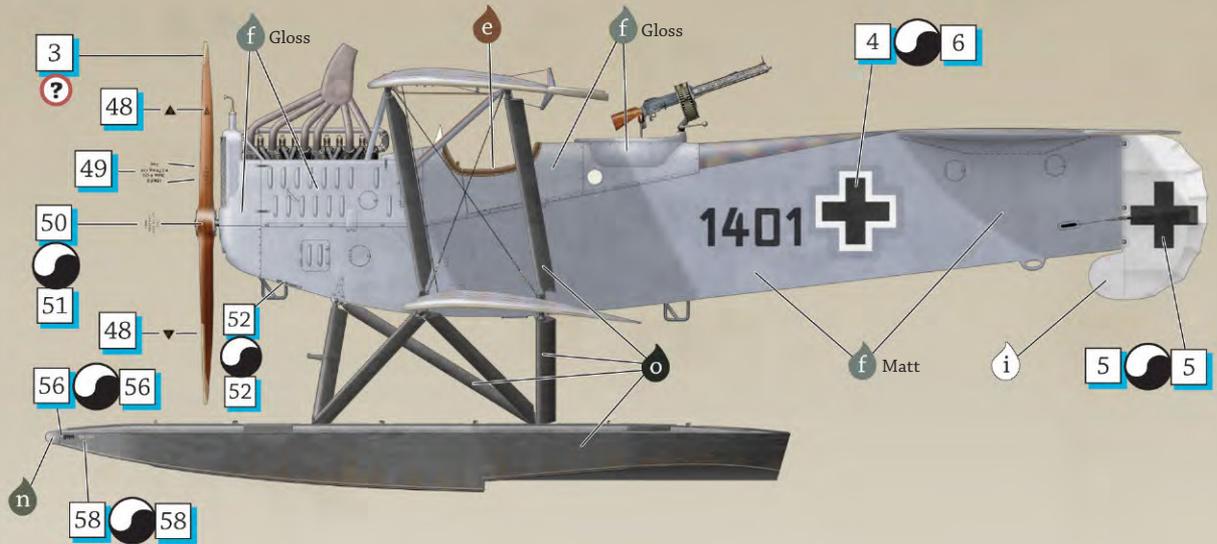


This unidentified Hansa-Brandenburg W.12, possibly 1401 **C3**, appears almost identical to 1402 except that a darker paint has been used to tidy up the post June 'thin arm' fuselage balkenkreuz. Note the black floats, Oigee sight **G5** fixed to the observer's Parabellum LMG 14 machine gun and small bar fitted to the rear of the top wing cut out.



Hansa-Brandenburg W.12 1186, from the 1st production batch, is set adrift ready for a patrol. Note how the painted hexagon camouflage appears darker on the wings and elevators of 1186 compared with the 2 aircraft above.

C2 Hansa-Brandenburg W.12 1401 C2MG, Sylt, Mid 1918

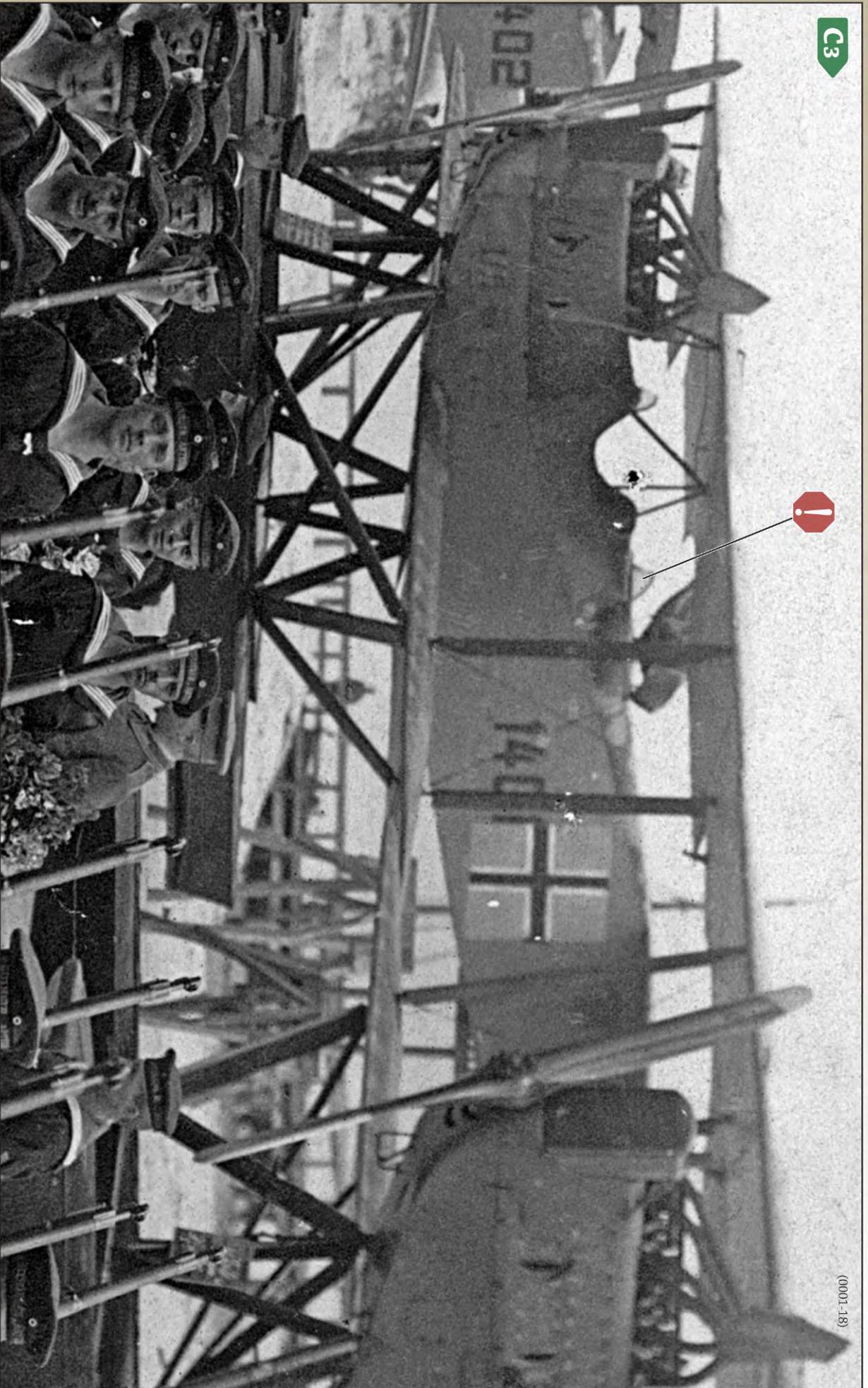


Hansa-Brandenburg W.12 1401 **C1** in flight with original eisernkreuz markings and grey blue floats.

Hansa-Brandenburg W.12 1401 **C2** now with post April 1918 converted balkenkreuz and dark floats.

Note how the change in lighting conditions between these 2 photos has completely changed the appearance of the hexagon camouflage.

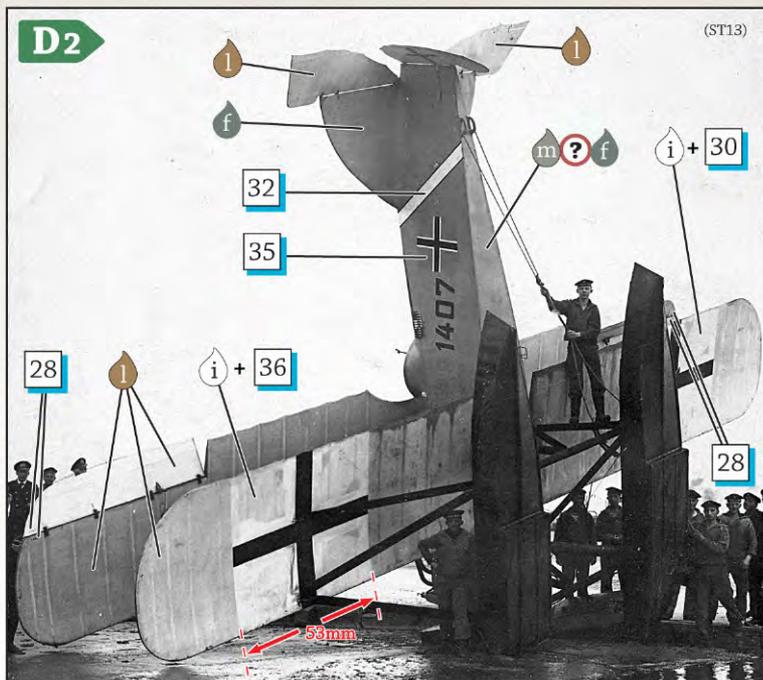
C3



(0001-18)

Hansa-Brandenburg W.12 1401 **C3** photographed in mid July 1918 at Seeflugstation List, Westerland on the island of Sylt, the northern most region of Germany. Note the post June 1918 'thin arm' balkenkreuz and a small windscreen fitted for the observer.

D2 Hansa-Brandenburg W.12 1407 C2MG, Norderney, July 1918



The unfortunate accident of Hansa-Brandenburg W.12 1407 **D2** at Seeflugstation Norderney on 5 July 1918 allows us to see the post June 1918 converted balkenkreuz and bituminous tar based paint covered floats and struts. Note the small flare rack to the rear of the observer's cockpit.

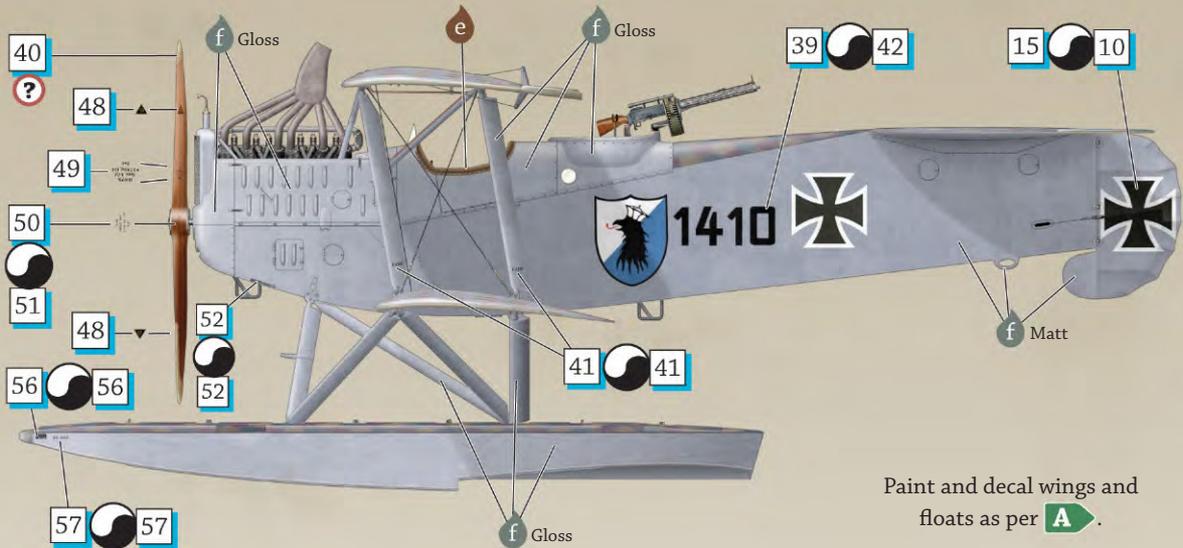
D1



(0255-28)

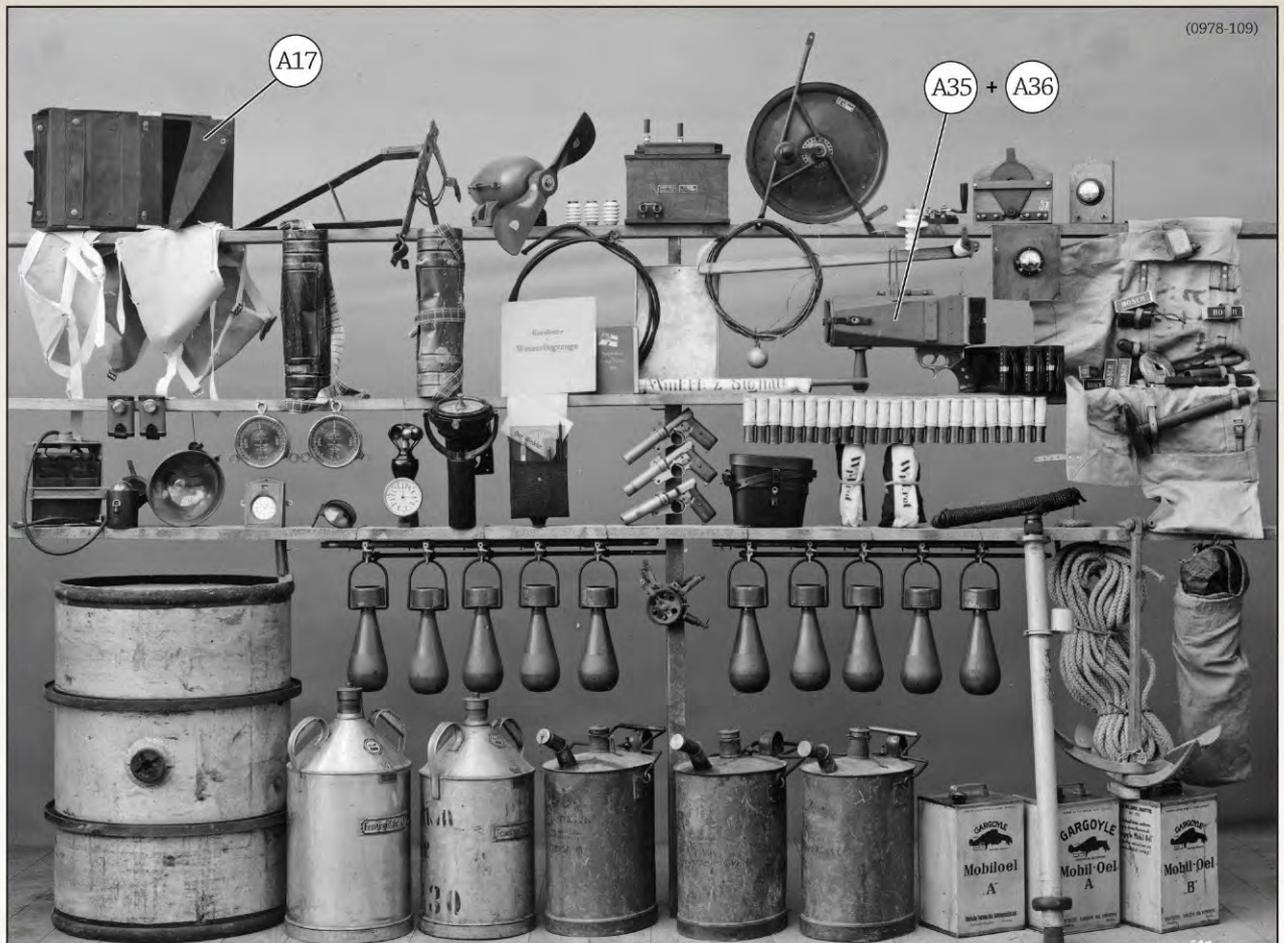
Hansa-Brandenburg W.12 1407 **D1** with post April 1918 converted balkenkreuz and dark floats & struts. Note the open pilot's cockpit doors, short exhaust and unidentified crewman standing on the starboard float.

E Hansa-Brandenburg W.12 1410 C2MG, Zeebrugge, February 1918

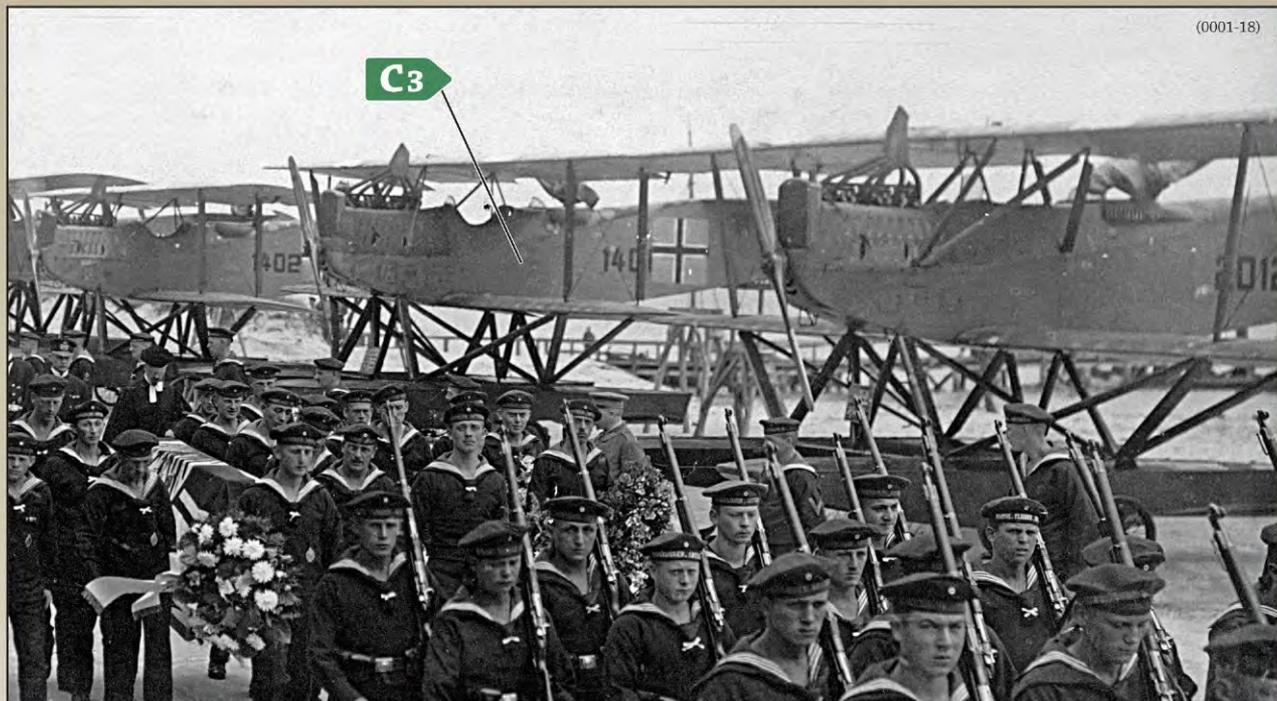


Paint and decal wings and floats as per **A**.

Hansa-Brandenburg W.12 1410 was ordered in March 1917, delivered in November 1917, photographed in these markings in February 1918 and written off in April 1918. Two photos of W.12 1410 are featured in Windsock Datafile 61, one of which confirms the unusual empty shell chute (H25). Although the identity of the crew of W.12 1410 is unknown to us they are almost certainly the same as for Hansa-Brandenburg W.29 2530 stationed at Zeebrugge (see Wingnut Wings model 32010).



Some of the equipment that could be carried on German Navy aircraft in the Great War, only some of which are applicable to the Hansa-Brandenburg W.12. Note the fuel & oil cans, small bombs, flare pistols, tools, compass and binoculars etc.



Early production W.12 1402 and 1401 **C3** line up with late production W.12 2012 for the funeral of Seeflugstation Putzig commander Karl von Gorrissen at List, Westerland, on the island of Sylt northern Germany in mid July 1918. Note converted post June 1918 'thin arm' balkenkreuz visible on the fuselage of 1401 and its dark wing struts.



3-D Modelling by Darren Mildenhall

Born and raised in Wellington, New Zealand, Darren harnessed his creativity by attending the School of Design, graduating with a major in Industrial design. During the degree he developed a passion for form and the aesthetic

appeal of a product and how to utilise CAD software to realise and develop a concept. Joining Wingnut Wings as a 3D modeller has furthered his skill in these areas through the creation and manipulation of complex 3D forms.

When not designing WW1 model aircraft, Darren enjoys graphic based art and t-shirt design, a lot of which is influenced by his interest in pop culture, typography and the retro 1950s. Outside all that, Darren is a self confessed movie buff and sports fan.



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.

Visit Ronny's website at: www.ronnybarprofiles.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 do have comments, requests or suggestions, Richard is contactable at richard@wingnutwings.com



32036	1/32 Hansa-Brandenburg W.12 Early	Qty
0132036A	A parts	1
0132036B	B parts	1
0132036C	C parts	1
0132010D	D parts	2
132E0009	E parts Benz Bz.III engine	1
0132036F	F parts	1
132G0001	G parts Parabellum LMG 14	1
0132036H	H parts	1
0132036I	I parts	1
0132036P	Photo-etched metal parts	1
7132036	Instructions	1
9132036a	Decals	1
9132036b	Naval camouflage decals	1

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



32016 - 1/32 Sopwith Pup RNAS



32015 - 1/32 Albatros D.Va



32020 - 1/32 Sopwith Snipe Early

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