

THE FLYING CANNON



FINDING DEFANT N3333



COVER STORY - PETER JACKSON'S 1/32 DAMBUSTER EXCLUSIVE!



WINGLEADER

MAGAZINE

FREE SAMPLE

The exciting new historic aviation magazine launching December 2018. More details at wingleadermagazine.co.uk

DAMBUSTER LANCASTER

THE MOST COMPREHENSIVE STUDY OF THE AVRO LANCASTER TYPE 464 (PROVISIONING) EVER PUBLISHED

Red Kite are proud to present their stunning new book on the aircraft that made history. Now for the first time, readers can explore every aspect of the Type 464 'Dambuster' Lancaster both inside and out using a specially commissioned 3D model that has taken over 10 years to complete.

The model is the work of Polish artist Piotr Forkasiewicz who worked with historians, veterans and archives from around the world to construct the most accurate reproduction of a Type 464 ever seen. Fellow artist and Dambuster historian Mark Postlethwaite agreed to write the text and to delve into the individual histories of all 23 Type 464s, with both artists then working on the overall design of the book. The result is quite breathtaking. 128 pages full of close up views of the aircraft both in natural metal and camouflage, detailed studies inside the cockpit area, a full exploration of Upkeep and the fusing systems and finally detailed histories of all 23 Type 464s using every known photograph to illustrate each airframe.



DAMBUSTER LANCASTER
The definitive illustrated guide to the Avro Lancaster BIII Type 464 (Provisioning)
PIOTR FORKASIEWICZ & MARK POSTLETHWAITE

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WELCOME TO WINGLEADER MAGAZINE!

A BRAND NEW HISTORIC AVIATION PUBLICATION FOR THOSE WHO STILL RUN TO THE WINDOW WHEN SOMETHING FLIES OVER...

Welcome to an introductory sample of the forthcoming Wingleader Magazine which will be published in late November 2018. We decided to produce this FREE 36 page sample to show the kind of articles we'll be carrying and to explain more about the concept behind the publication.

In an age where aviation magazines are becoming more and more limited in their range of content in an attempt to stick to subjects that sell, Wingleader Magazine will cover the broadest range of interests, such as aviation modelling, archaeology, art, books and of course history.

HOW DOES IT WORK?

Simple, Wingleader Magazine will be FREE.

Funded by advertising and sponsorship, Wingleader Magazine will be a FREE monthly digital download available worldwide to anyone with a device that can read a PDF.

Being over 50 myself, I know the words 'digital download' will have just put off a large percentage of my generation who at best have a love-hate relationship with this sort of technology and who much prefer the smell and feel of printed paper. Don't worry. For my fellow 'traditionalists' we will be printing a quarterly compendium of the most recent three issues which will be available to buy individually or as a yearly subscription.

These compendia will be printed to the highest standards, (as with all Red Kite/Wing Leader books), and will only contain

the magazine articles, so all advertising and editorial pages will be removed.

LANDSCAPE FORMAT

The biggest visual difference is of course our choice of landscape instead of portrait format. We chose this for two reasons, firstly all monitor screens are landscape format so a single page will be easily readable without needing enlargement. Secondly, as we are mainly a photo based magazine, it allows us to reproduce images to a print width of up to 300mm instead of the usual 210mm, so 50% larger, providing much greater detail and clarity.

COMMUNITY

Although the editorial team can call upon top historians from around the world for articles, Wingleader Magazine will also provide opportunities for amateur researchers and

enthusiasts to publish their work. Every enthusiast has his or her own special interest, be it a particular squadron, pilot, airfield, aircraft type etc. Most of this dedicated research is never published as opportunities are limited in the conventional market. Here at Wingleader, we have a library of over 25,000 military aviation photos and a team of highly experienced writers and publishers who can transform any basic research into a readable and memorable feature article.

So there you go, a new aviation magazine with a broad range of articles, predominantly based around WWII military aviation but with a freedom to delve into WWI, Gulf War, Classic Airliners and even the Reid and Sigrist Snargasher if the story is interesting enough!

Mark Postlethwaite November 2018

In this 36 page FREE sample you'll find three abridged articles that will appear in full in the Launch Issue, due out in late November.

Page 5 Peter Jackson's Secret Dambuster

The inside story behind Wingnut Wings' incredible 1/32 Avro Lancaster model kit.

Page 15 The Flying Cannon

The story of the 30mm cannon armed Messerschmitt 110 C-6 by expert John Vasco.

Page 27 Finding Defiant N3333

Part One of the full story of the televised recovery of Boulton Paul Defiant N3333.

We hope you enjoy these sample articles!

WINGLEADER MAGAZINE

THE STORY SO FAR

In the summer of 1986, 22 year old aviation artist Mark Postlethwaite was asked to paint a few cover paintings for Aircraft Modelworld magazine based in Surrey. On the staff of Aircraft Modelworld at the time was 28 year old Simon Parry who had recently set up his own publishing company 'Air Research' and was looking for cover art for some of his first books. The pair duly worked on several projects together and established a firm friendship forged by their common interest in WWII aviation history.

In 1990 Mark and Simon set up Red Kite as a joint venture to publish aviation books with a particular emphasis on a large photo content and high quality reproduction. These books proved to be an immediate success with several titles selling out within a year or so. Throughout the next two decades, both continued with their specific fields of interest, Simon in aviation archaeology and research and Mark by this time as a professional aviation artist.

In 2010 Mark and Simon formed Wing Leader Ltd to be an online retailer for all books published under their imprints. They brought Mark's old friend Wesley Cornell in to design the website and to keep the technology at the cutting edge as online retailing developed.

The concept of Wing Leader Ltd was always to include more than just books, as between them Mark and Simon had amassed a huge WWII photo library of over 25,000 images in the form of online library ww2images.com.

In 2014 Wesley Cornell launched a new magazine for accountants using the Xero software called XU Magazine. Using crowd funding to get it off the ground, the magazine quickly grew to become the market leader due to its innovative approach and cutting edge technology. This success triggered discussions between the three as to whether the same principles could be applied to an aviation magazine. With Wes's experience in the magazine sector and Mark and Simon's vast amount of aviation material and contacts, it seemed to be an obvious move and Wingleader Magazine was born.

Now, twelve months after the initial discussions, the magazine is ready for launch. As with XU Magazine, the founders have elected to run a crowd funding campaign to help support the first 12 months of issues. Being unique in its concept and approach, the founders hope that the aviation community welcome and support this new venture which will open up so many stories that may never have seen the light of day in conventional books and magazines.

Right: Mark Postlethwaite and Simon Parry in a cold, wet French field in October 2007 whilst filming the TV documentary 'Last of the Dambusters'. Below their feet lay the remains of Dambuster Lancaster ED825, the aircraft flown by Joe McCarthy on the Dams Raid.



Peter Jackson's SECRET DAMBUSTER



Sir Peter Jackson's model kit company Wingnut Wings recently stunned the modelling world with the announcement of a huge 1/32 Avro Lancaster kit, their first non WWI aircraft. Wingleader Magazine managed to secure an exclusive interview with the Wingnut Wings head Richard Alexander to learn more details about this amazing project which had been kept under wraps for over eight years!





WL *Wingnut Wings is a pretty unique company in every sense of the word, for those non-modellers out there can you tell us a bit about its history?*

RA Peter Jackson has had a lifelong interest in scale modelling and, after seeing the movie *The Blue Max* as a young boy, First World War aviation. The success of *The Lord of the Rings* films allowed Peter the opportunity to combine these two interests by creating Wingnut Wings, which began forming in the immediate aftermath of Peter's *King Kong* film from 2005. Initial 3D modelling tests were carried out by various talented movie CGI artists here in Wellington New Zealand who had just recently finished work on the film although very few had any real scale modelling experience.

Initially the 3D modelling was created with the same "wire frame" CGI software familiar to these artists but very soon after our Tooling Coordinator Taffy Figliola came on board in early 2006 the switch was made to software that was actually suitable for manufacturing tooling for injection moulding production. This inevitably led to a gradual change in 3D modelling staff with the talented movie artists gradually being supplanted by those with more relevant Product Design experience.

Interestingly various different scales were trialled before settling on our now familiar 1/32 scale. Early on an attempt was even made to create the tooling here as well, but all tests proved fruitless and the decision



was made to engage the skills of high quality tooling companies in China (and Korea).

Unfortunately supervising all this was beginning to take up far too much of Peter's staggeringly rare time so in July 2006 I was brought on board to coordinate everything for him. From the beginning the vision has been for large scale, high quality and very accurate models that are also very easy to build, or as easy to build as the frequently complicated designs of the original aircraft would allow.

WL *So Richard, 66 WWI models under the belt then bang! A one metre wingspan WWII Avro Lancaster suddenly appears. Where did this one come from?*

RA Yes, it did suddenly appear didn't it... but only after we'd been working on it for more than 8 years! In the middle of September 2009 Peter asked me if I thought Wingnut Wings would be capable of producing a 1/32 Avro Lancaster B.Mk.III "Dambusters" model

Above: Richard Alexander, General Manager of Wingnut Wings surrounded by some of the 1/32 scale WWI aircraft models for which his company has become renowned worldwide.



Above: Sir Peter Jackson in the cockpit of Canadian Lancaster FM213. His lifelong passion for WWI aviation has seen him create not just Wingnut Wings but also The Vintage Aviator Ltd, also based in New Zealand, that restores, manufactures and flies full sized WWI aircraft!

(plus the regular B.Mk.I/III) and if we should “give it a go?” and, despite us having only released 4 models up to that time, for some reason I said we could and that I’d love to have a crack at it.

WL *A 1/32 Lancaster is a huge undertaking, can you tell us how long the research process has taken and talk about some of the processes involved.*

RA It’s certainly the biggest, most complicated project we’ve taken on to date. I assigned the mammoth task to Bryan Wall, our most experienced and senior 3D Modeller/Product Designer we had, and brought in an extra new person, Jake Hocking, to assist him. Jake worked on this project from December 2009 until he left in August 2013 after finishing his portion (mainly the fuselage/interior parts) in August 2013. We were able to piggy back

some of the reference material accumulated for Peter’s Dambusters film project which mostly consisted of many hundreds of photos of existing airframes. As always it turned out that our most valuable references were original factory plans and contemporary photos taken during WWII, nearly two and a half thousand in this case (which makes quite a comparison to the –mere 90 or so WW1 photos we had available when modelling our recently released 32065 Junkers D.1 all metal single-seat fighter model).

Right from the beginning we decided to replicate authentic overlapping panels and raised rivets (where applicable) as well as the subtle buckled skin effect so characteristic of the Lancaster (frequently even while still in the factory!) despite calculating that it would take about 50% longer and severely overtax the abilities of our software. To this end, in July 2010 we included a surface test panel complete with overlapping panel, raised rivet and buckled skin details inside the fuselage of 32018 Fokker E.II/III (Early) to confirm if the tooling company were capable of replicating what we had modelled. Promisingly this test proved to be successful so this area was removed/filled in on the tooling well before the model’s eventual release in October 2012.

It turned out that our estimate of taking 50% longer was wildly optimistic because it wasn’t until late 2014 that I was happy enough with our model to send it away for tooling. Our research continued right up until this date and beyond. If we find something that is definitely not right with our model we will do our best to correct the tooling before it is eventually released. We owe it to our customers to give it our best shot and, perhaps even more importantly, to the young men called on to go to war in the amazing Avro Lancaster.

WL *Wingnut is notoriously secretive about its projects, how on earth did you manage to gather the material needed without giving the game away over the past nine years?*

RA We've learned a few things over the years about how to keep secrets and one of those things is to only work with people that you trust completely. Plus, who in their right mind would really think anyone would make a 1/32 scale injection moulded Lancaster model kit (but as we now know, the world will soon have 1/32 Lancaster models from two different companies to choose from) so we always had semblance of plausible deniability on our side.

WL *It's fair to say that no two Lancasters were the same, with hundreds of mods during its service life, how did you go about checking your reference material?*

RA We approached this with the same philosophy as for all our models, to make it as accurate and detailed as we could while trying to keep it as simple to assemble as possible. Right from the beginning we decided to model the Dambusting Lancasters of 617 Squadron from Operation Chastise in 1943 which restricted us to Merlin engine powered airframes manufactured with fuselage windows. One of the most challenging aspects of our research was determining what details from existing Lancaster airframes were applicable to the vintage of B.Mk.I & B.Mk.III we were trying to represent. Nailing down the correct details for the European theatre radiators (and the shape of their associated nacelle intakes) as well as the fabric covered elevators proved to be a lot more difficult than I would have imagined for such a well photographed aircraft.



Cross referencing the many thousands of modern and WWII photos showed that a remarkable amount of the details we see on existing airframes were not appropriate for aircraft from 1943 (or even WWII on some occasions). Additionally updated avionics, countermeasures and armament etc were constantly being retrofitted to aircraft in service which helped confuse matters even more. Original WWII pilot, aircrew and

maintenance manuals proved invaluable for sorting out much of this. We were also very fortunate to have the generous support of aviation historians like Mark Postlethwaite who could help us out with some of the more complicated aspects. Although we still had to make a few judgement calls of our own, ultimately I think we did a pretty good job of sorting it all out and hopefully modellers and Lancaster enthusiasts alike will agree.

Wingnut Wings Avro Lancaster lead Product Designer/3D Modeller Bryan Wall negotiates the wing spar area while carrying out some initial research in January 2010. Bryan's cousin once removed served as a navigator on Lancasters.



Above: Photos of the first test sprues for the 1/32 Lancaster kit showing the incredibly subtle but effective 'oil canning' applied to the fuselage skin. This feature was very time consuming and on occasion completely overwhelmed the capabilities of Wingnut's computer software.

Right: A computer generated render showing the assembled nose section complete with rippled skin.

WL *Being 1940s technology and made of metal instead of canvas and wood, how easily did your team adapt to modelling the Lancaster?*

RA The approach was the same as before but with some very significant differences. It was larger and much more complicated than anything we had modelled up to that time, by a long way. Also the surface detailing was staggeringly time consuming and on occasion completely overwhelmed the capabilities of our computer software. Additionally there were many compound curves to try and get "just right" and these proved to be especially time consuming, usually requiring multiple attempts before I could finally approve the design of the parts.

WL *The Type 464 Dambuster version must have presented an even greater challenge as historians still argue about details to this day, how did you nail the detail on this one?*

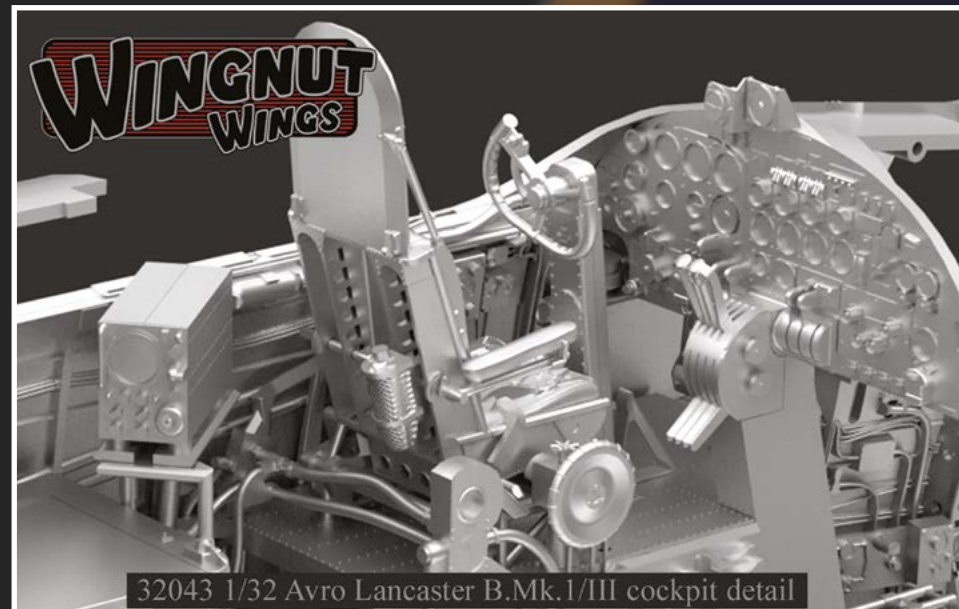
RA In complete contrast with the thousands of regular WWII Lancaster photos we had available to us, for the Type 464 (Provisioning) Lancasters we found ourselves back in familiar territory with barely 3 dozen photos to work from (many of which were simply stills taken from film footage) and a handful of drawings, mostly of dubious provenance. Most commonly available drawings showing the Type 464 (Provisioning) modifications didn't stand up very well when compared to the clearest available photos. Luckily the Upkeep mine etc drawings prepared by the Germans from salvaged wreckage proved quite valuable. Ultimately it was long drawn out process involving much discussion between myself and the Product Designers along with numerous tests to challenge various hypotheses before we

settled on the details that we currently have. I feel they are about as accurate as we could make them from the available information but if new/better research comes to light in time to be incorporated into our model before release we'll do our best to do so.

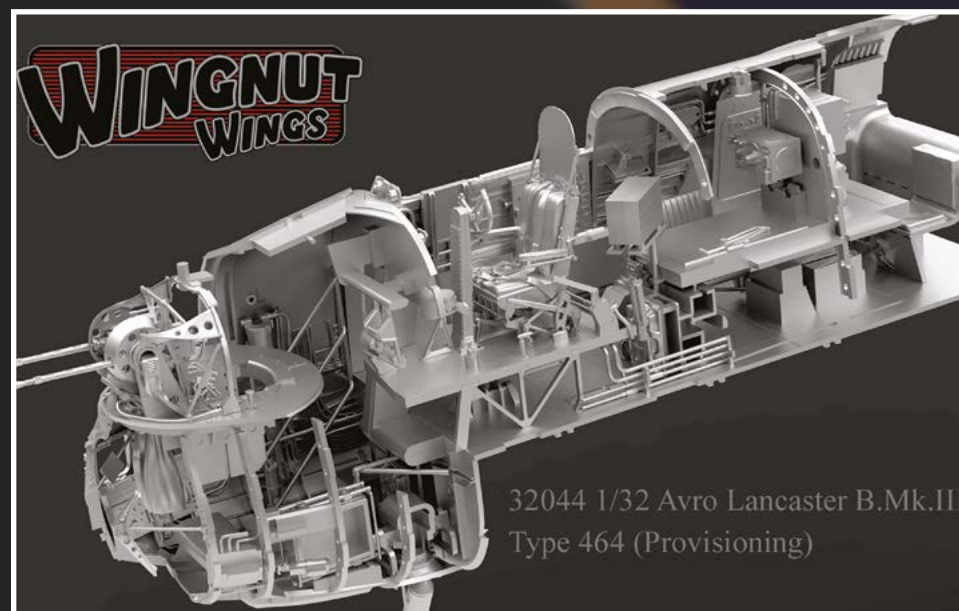
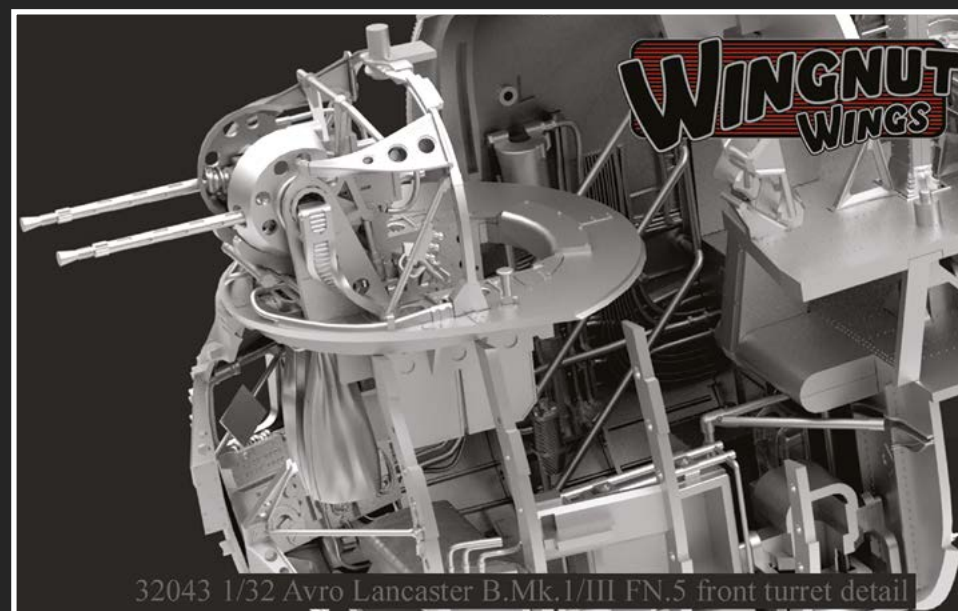
WL *The model itself will be huge with a wingspan of nearly a metre. Have you designed anything into the model that might make it more accessible and possibly save a few marriages?!*

RA Right from the beginning we designed it so that the outer wings could be removable to make display in the average home a little more appealing. Also the nose section and tailplanes could be made removable if the modeller really wants. To that end, we also plan to eventually release the nose section on its own for those modellers with very limited space and/or budgets. It should also be noted that building this model will keep someone safely busy at home for quite a few nights, instead of perhaps being down the pub and/or at the racecourse! It's also going to be cheaper than buying a reasonably good quality golf club.





A selection of production close-ups of the detail that modellers will find inside their 1/32 Wingnut Wings Avro Lancaster model kit. The result of 8 years' hard work and research, the model should be released in late 2019.





A selection of computer graphic views of the Type 464 (Provisioning) 'Dambuster' version in its assembled form. Every available source was consulted to ensure that the Type 464 modifications were reproduced faithfully in this 1 metre wingspan model.



Below and opposite page: Avro Lancaster lead Product Designer/3D Modeller Bryan Wall with various samples built from the first test shots received in July 2017. Note the removable outer wing panels, internal canopy framing and separate nose section.

WL *What versions are you planning?*

RA Right now it's just the 32043 1/32 Avro Lancaster B.Mk.I/III (Early) and 32044 1/32 Avro Lancaster B.Mk.III "Dambusters" models we're planning on releasing. Eventually there will be the "nose only" release that would also allow for multiple "nose art" models to be built (and easily displayed)

without much consideration being required of the production mark or engine type of the original airframe. And, one day in the reasonably distant future, there will also be special edition releases packed with resin crew figures and hundreds of photo-etch metal detail parts intended for experienced modellers.





WL *Do you include figures with your models, any prospect of a certain dog...!?*

RA We've always planned to include figures in our future special edition releases mentioned above, but we don't usually include them with our standard releases such as 32043 & 32044. So Gibson's dog Nigger could well eventually make an appearance in a future Wingnut Wings release. But somehow I suspect there are already teams of highly

talented figure sculptors around the world already working on various Lancaster crew members as well as their numerous mascots and pets.

WL *Any idea of the price and on sale date yet?*

RA This has been our longest and most expensive project so far but we're trying to do all we can to keep the retail price as low

as possible. We will only know for sure once it's finally completed and we've been able to consolidate all our costs, but we hope it will be only slightly higher than 32801 Felixstowe F.2a & Hansa-Brandenburg W.29 "The Duellists". All going well we expect to have it available for sale in late 2019.

WL *Will it be available in shops or only directly from Wingnut?*

RA When it is finally released it will be available from specialist Wingnut Wings retailers worldwide as well as direct from our website www.wingnutwings.com. Traditional WWII aircraft modellers who are going to find it difficult to wait that long for our Lancaster could whet their appetite for Wingnut Wings by building our 32065 1/32 Junkers D.1 all metal monoplane fighter from WW1, which has even less rigging than the Lancaster!

WL Now that you've crossed over into the dark side, is there any prospect of further WWII models from Wingnut?

RA Oh boy, there are certainly some other aircraft from WWII that I'd love to have a crack at, but we don't currently have any plans to do so and I think it might simply be better for all of us if we leave them up to the experts.

WL Finally, the question that everyone will be expecting us to ask, any news on the Dambuster film?

RA The intricacies of movie making are not really the sort of thing I'm very familiar with but I understand that it is not uncommon for film projects to take decades before they finally reach the silver screen. To that end I can say that I am advised that Peter Jackson's Dambusters movie still "remains in development" at this time.



Above: An early visual of the box art for the Type 464 (Provisioning) 'Dambuster' version. The painting is by Mark Postlethwaite and depicts John Hopgood's badly damaged Lancaster releasing its Upkeep over the Möhne Dam during Operation Chastise.

Left: A render of the rear turret detail that will be found in the forthcoming model kit.



Wingnut Wings Model kits can be purchased from selected retailers around the world, or directly from Wingnut themselves. For more information visit their website

wingnutwings.com

MESSERSCHMITT BF 110 C-6

The Flying Cannon

Historian John Vasco explores the brief career of the 30mm cannon armed Bf110 C-6 which most famously saw service in the Battle of Britain with EprGr 210. Only 12 examples of this rare type were ever built but it paved the way for other aircraft types such as the Me262 to be armed with this formidable weapon.





The 30 mm *Kanone* used in the Bf 110 C-6 was a development of the *Solothurn S-18-1000* 20 mm anti-tank rifle. *Rheinmetall* scaled up that weapon, with modifications, for installation in an aircraft. As a result, the Bf 110 C-6 showed a substantial change to the forward outline of the Bf 110. Trials were conducted in Bf 110 B-1, D-AAPY, W. Nr. 928, with the 30 mm

Kanone fitted under the central fuselage in place of the standard two 20 mm *Kanone*. Recent photographic evidence that has come to light shows that Bf 110 C-1, BK+AN, was also used in the testing of the 30 mm *Kanone*. Tests were considered successful, and the decision was made to initiate production of a 'C' variant that would carry the 30 mm weapon into action.

The change from the two 20 mm MG-FF in the lower fuselage of the Bf 110 to the 30 mm *Kanone* was not something that could be done 'in the field' by active units, since the omission of the two 20 mm MG-FF and the insertion of the single 30 mm MG 101 required substantial re-working of the lower central and forward fuselage. *Gothaer Waggonfabrik* built the C-6 variant using existing C-5 reconnaissance

This is something of a mystery photograph. It shows a Bf 110 C-1 as a test-bed for the 30 mm MG 101 *Kanone*. All previously published references to the test-bed Bf 110 give it as Bf 110 B-1, D-AAPY, W. Nr. 928, yet this photograph clearly shows a C-1 sub-variant fitted with the 30 mm *Kanone*. It carries the factory applied fuselage code of BK+AN.





version airframes, since those airframes were also constructed around the lack of two 20 mm *Kanone* – the space allocated for the RB 50/30 camera in the cockpit in the C-5 now being taken up by the rear of the 30 mm *Kanone* in the C-6. In total, only 12 were ever built.

The first C-6s to reach an operational unit were delivered to 1. Staffel, Zerstörergeschwader 1 (1./ZG 1) during the western campaign in the spring of 1940, and it is known that two examples were flown by *Staffelkapitän* Oberleutnant Martin Lutz and *Oberleutnant* Victor Mölders prior to the closure of that campaign.

Above and right: 2N+NH which served with both 1./ZG 1 and 1./Erpr. Gr. 210. The letter 'N' of the fuselage code is blue outlined with white. Note that the Bordfunker's central rear canopy panel has been removed completely. No individual aircraft letter is carried on the top surface of the wing. (Profile by Fernando Estanislau)





Flying the Bf 110 C-6 by Victor Mölders

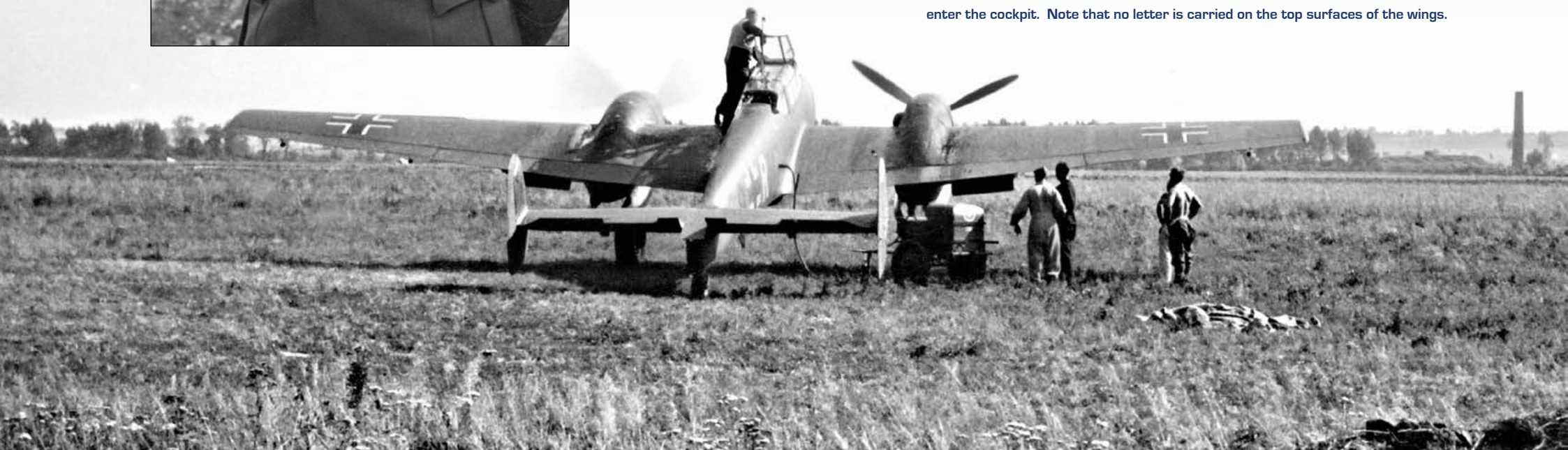
"Oberleutnant Lutz and I received the commissioned machines and weapons to test on the direct orders of Göring. We were then considered to be among the most experienced pilots on the Me 110. Our orders were to test the effectiveness of 'tank-busting' operations, particularly in low-level attacks. However the machines were not to fall into enemy hands under any circumstances. After our usual escort missions with the *Staffel*, Lutz and I would climb into our new machines, and were free to choose our targets.

"One mission of this special type was as follows: German troops were advancing on Paris. Not only the French, but also particularly the English, filled the roads and highways in the direction of Le Havre laden with equipment. I made an attack on locomotive engines, and established that they were harder to hit side-on than head-on, but were easier to destroy in that manner. I received a few hits from the accompanying Flak, but I fired as best I could.

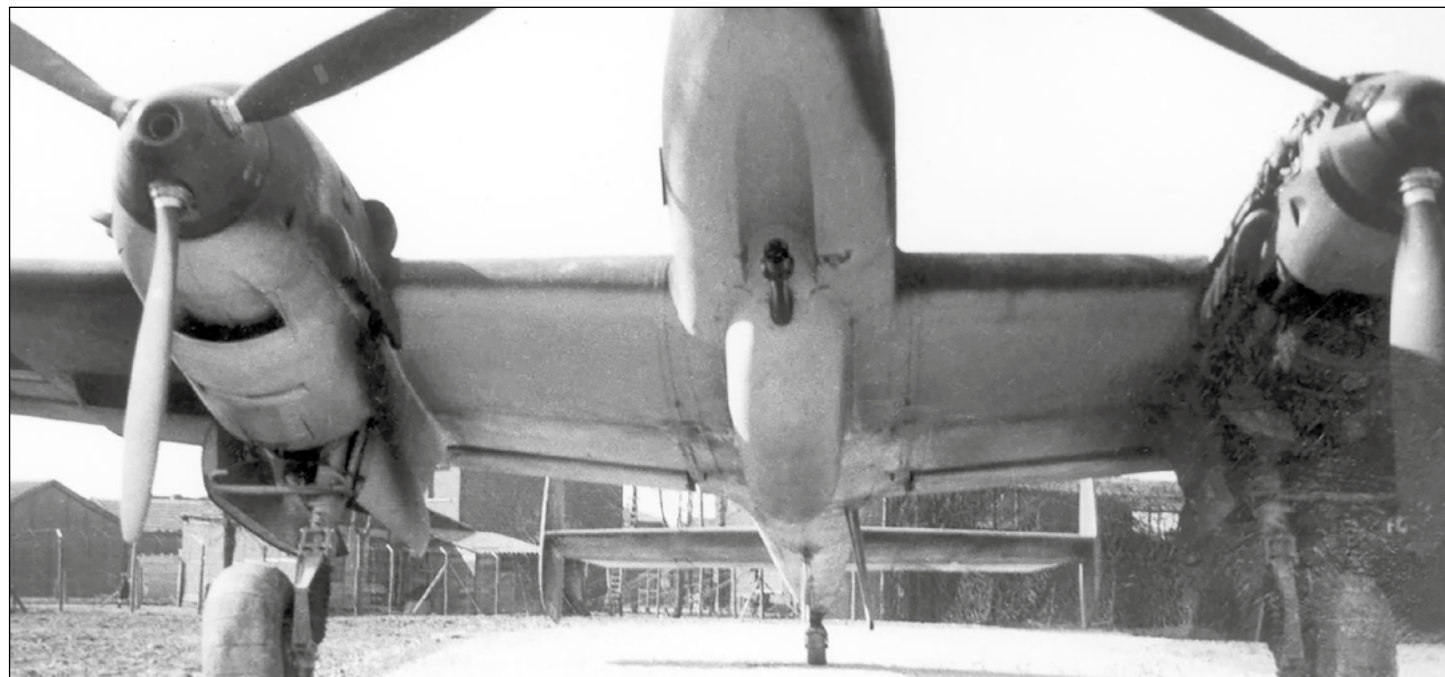
"I saw a goods train with military equipment – tanks and transport vehicles. After I had brought the train to a halt, I destroyed many tanks and vehicles until I ran out of *Kanone* ammunition. The ground fire was quite considerable, resulting in my machine receiving small arms and cannon strikes. I then set off on the return flight to Norrent-Fontes, from where I had taken off. I pulled my damaged machine into the clouds, in order to avoid any further combat with the enemy.

"My faithful radio operator passed me the bearings to follow to regain our base. Suddenly he cried out "Fighter behind us!" I pulled up higher but my machine was hit once again. There were several Me 109s behind me, who had mistaken my aircraft for an enemy machine. Fortunately I was able to make it to the clouds. Exhausted and relieved, I then landed smoothly on the airfield, although one tyre was shot through."

Bf 110 C-6, S9+RH, of 1./Erpr. Gr. 210. With the port engine running, the airman on the port wing is either the Bordfunker assisting his pilot, or is the pilot about to enter the cockpit. Note that no letter is carried on the top surfaces of the wings.



When 1./ZG 1 formed the 1. *Staffel* of *Erprobungsgruppe 210* (1./Erpr. Gr. 210), the Bf 110 C-6s issued to the *Staffel* were taken with them and flown operationally by 1./Erpr. Gr. 210 during July 1940 in concert with the Bf 110 D fighter-bombers of the *Gruppenstab* and 2. *Staffel* of the unit against convoys around the south-east coast of England. On occasions they would operate in what was termed the 'armed reconnaissance' role, seeking out shipping and reporting the position back, and it was on one such mission that the first Bf 110 C-6 was lost on 30th July 1940 when intercepted by Hamilton and Allard of 85 Squadron off the coast of Harwich. Two more C-6s were lost in action on 11th August 1940 during an attack on a convoy in the Thames Estuary. By then, 1. *Staffel* had received fighter-bomber Bf 110 D-0/Bs and that type became the standard aircraft used by the *Staffel*. The last confirmed use of a Bf 110 C-6 in combat during the Battle of Britain was on the Croydon raid in the early



Top right: Head-on view of a Bf 110 C-6 with the fairing in place. Note the modification to the lower forward fuselage to accommodate the 30 mm. Kanone.

Right: Bf 110 C-6 of 1./Erpr. Gr. 210 showing an oval access panel on the port side of the fairing.

In front of the C-6 the Gruppenkommandeur of Erpr. Gr. 210, Hptm. Walter Rubensdörffer (far right) can be seen talking to Generalfeldmarschall Albert Kesselring (3rd from right) during the latter's visit to the unit on 30th July 1940.



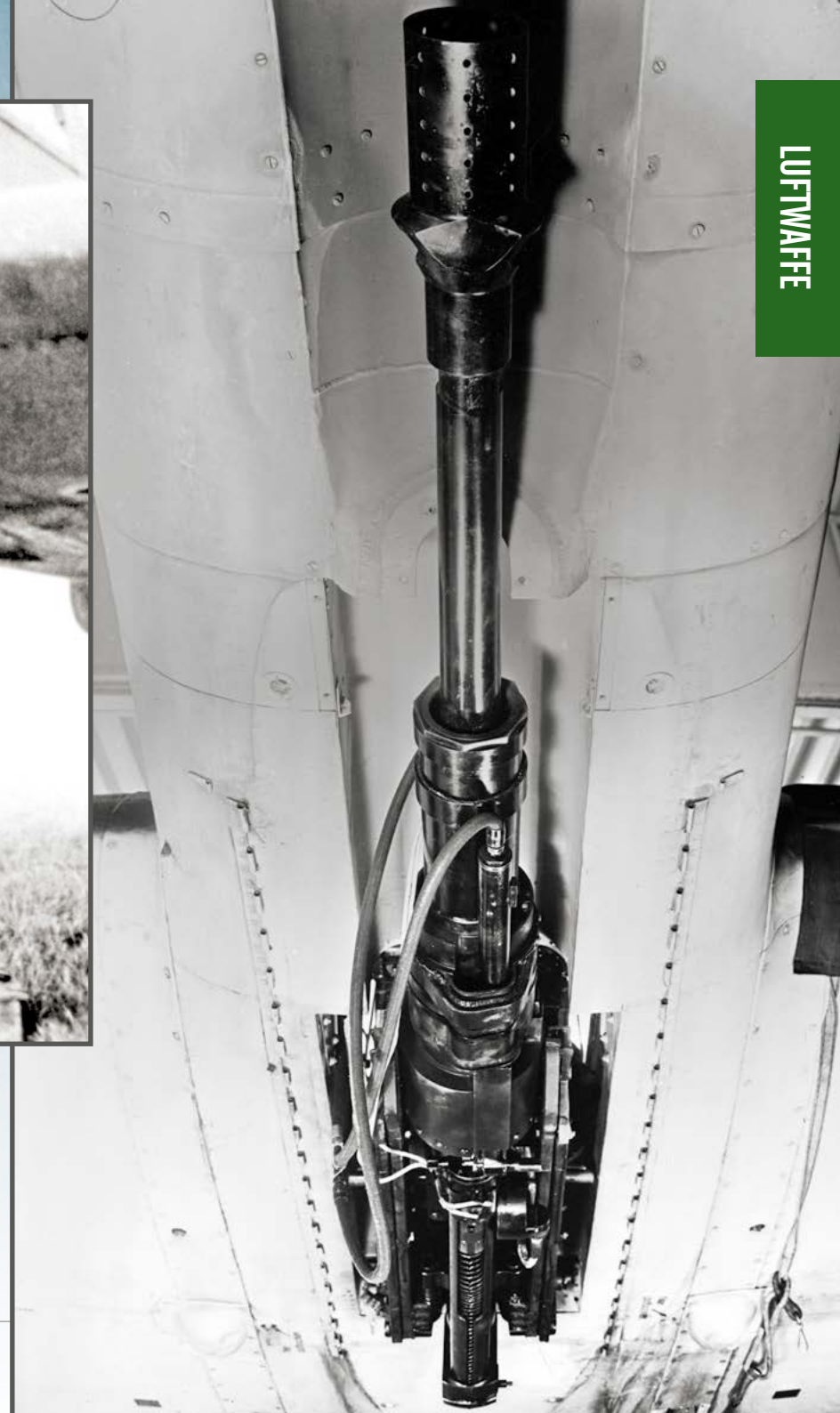


A superbly detailed view of the 30 mm Kanone in place in the fuselage of a Bf 110.



Above: Port side view of the Kanone. Of interest is the fairing for the Kanone lying on the ground, showing the greater part of its internal construction.

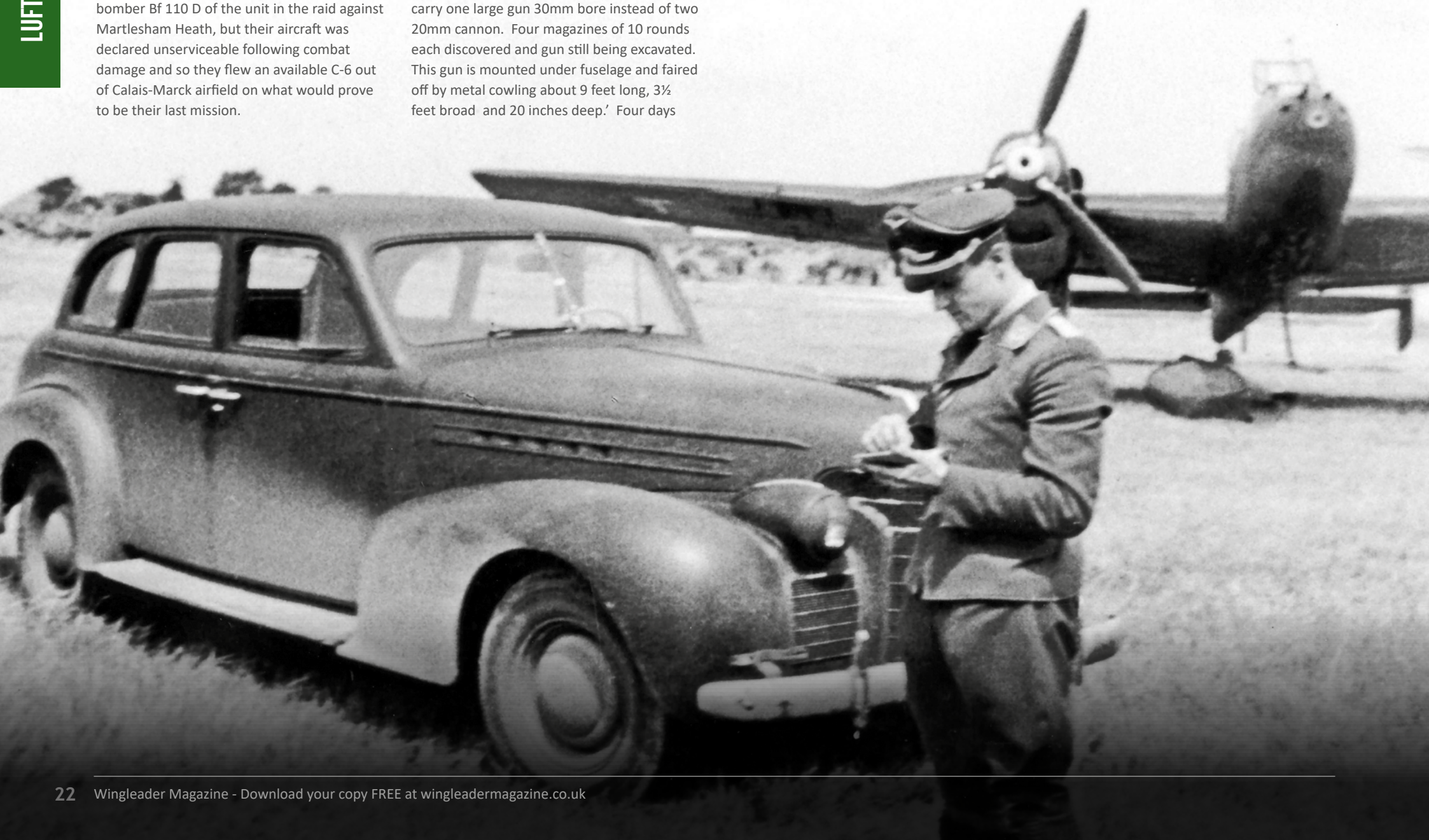
Right: A view of the 30 mm Kanone in place in the fuselage of a Bf 110. The installation of the Kanone necessitated the removal of the two 20 mm Kanonen in the lower fuselage.



evening of 15th August 1940, when S9+TH was shot down following the raid with the loss of both crewmen, *Lt. Eric Beudel*, pilot, and *Ogefr. Otto Jordan*, Bordfunker. Beudel and Jordan had earlier that day flown a fighter-bomber Bf 110 D of the unit in the raid against Martlesham Heath, but their aircraft was declared unserviceable following combat damage and so they flew an available C-6 out of Calais-Marck airfield on what would prove to be their last mission.

RAF Intelligence issued two short communiques regarding the 30 mm *Kanone* found in the wreckage of S9+TH. On 16th August the following was issued: 'Me110 crashed 15/8 near Crawley Kent found to carry one large gun 30mm bore instead of two 20mm cannon. Four magazines of 10 rounds each discovered and gun still being excavated. This gun is mounted under fuselage and faired off by metal cowling about 9 feet long, 3½ feet broad and 20 inches deep.' Four days

Leutnant Horst Marx of 3./Erpr. Gr. 210 stands in front of Bf 110 C-6, S9+TH, which was shot down following the raid on Croydon airfield in the early evening of 15th August 1940. Marx was also shot down on this raid, parachuting into captivity.



later a further message was issued: 'Me 110. Crashed 15.8.40 at Copthorne, Sussex, Nr East Grinstead. The 30mm shell gun referred to was type MG101 made by Rheinmetall Works, and was fitted under the fuselage in a large fairing approximately 9' long, 43" wide, 24" deep. Eight magazines each containing 10 rounds were found, a complete shell being 11½" in length. Two types of shell found, one projectile painted yellow marked with black band and white band above driving band, and the second painted black with yellow band and white band above driving band. The yellow shell is high explosive tracer. The black shell is high explosive armour-piercing tracer. This ammunition is being investigated and a further report will follow shortly.'



Top Right: The wreckage of Bf 110 C-6, S9+TH, shot down on 15th August 1940 over England, the only recorded loss of a Bf 110 C-6 on the UK mainland. This view shows the badly smashed cockpit area, and the fact that the starboard engine has been wrenched from its mountings in the crash.

Right: This further view of parts of the wreckage of Bf 110 C-6, S9+TH, shows that it carried the early style solid camouflage. On the right of the photograph just below halfway, the individual aircraft letter of 'T' (blue outlined with white) can be seen.





This close-up view of a Bf 110 C-6 shows that the fairing hinged downwards on its starboard side for mechanics to access the Kanone. Note the different panel riveted to the fuselage immediately above where the front of the fairing finishes, a modification that was part of the fitting of the trough shown in the previous photograph. Note also what appear to be oil streaks on the front of the fairing. Posing for the photograph is Uffz. Balthasar Aretz of 2./Erpr. Gr. 210.

Reference to 'MG 101' (*Maschine Gewehr*) undoubtedly came from the manufacturer's plate on the *Kanone*, but even in 1940, the designation had changed to MK (*Maschine Kanone*), as the following report indicates.

On 6th August 1940 *Erprobungsgruppe 210* forwarded a report to Luftwaffe Headquarters regarding the Bf 110 C-6:

Fp.No. 25082
06.08.1940

In the attachment the Gruppe sends a new report from the 1. Staffel concerning the 3 cm cannon.

According to the Gruppe, the MK 101 at the current level of Luftwaffe development is a particularly specialist weapon against particular land targets. (Tanks, possibly ships). All other targets, as well as air targets can be tackled presently with the MG-FF.

The use is only conditionally possible if either strong fighter protection for low level attacks is provided or a bad weather situation (3-400 m cloud base) can be exploited.

Strong defending fighter forces have so far prevented the opportunity of undertaking long range attacks. Because of the limited opportunity to deploy this weapon, it is proposed to use this weapon sparingly, all the more so because the fitting of bombs to the *Zerstörer* can have a greater effect against land and sea targets.

A further development of the weapon is nevertheless requested, since the time will come when, with the advancement of defending forces, the MG FF and the MG 151 will no longer be effective.

signed Rubensdörffer
Hptm. and Gruppenkommandeur



Above: Starboard view of a Bf 110 C-6 showing the fairing that enclosed the 30 mm Kanone.



Erprobungsgruppe 210's Bf 110 C-6s remained on charge with them, and when the unit was redesignated *Schnellkampfgeschwader 210 (SKG 210)* in April 1941, the C-6s were taken with them to the Russian Front, where a further three were lost. Three more C-6s have been identified as operating with *III. Gruppe, Zerstörergeschwader 26 (III./ZG 26)* in the Mediterranean Theatre, another with the night fighter unit, *1. Staffel, Nachtjagdgeschwader 1 (1./NJG 1)*, and another with *Erg. Zer. Gr.* These latter five were probably damaged machines repaired and reissued to different operational units.

Further development of the 30 mm concept resulted in German fighters later in the war being equipped with weapons of such calibre, most notably the first operational jet fighter in the world, the Messerschmitt Me 262. The operational trials of *Erprobungsgruppe 210* certainly bore fruit, since the 30 mm cannon in jet fighter-bombers became a standard feature for decades to come.

FIND OUT MORE



Extracted and expanded from John Vasco's new book *Messerschmitt Bf 110 Units in the Battle of Britain - Part One*.
Published in November 2018
by Red Kite.

ISBN 9781906592530

For more information please visit
wingleader.co.uk

Bf 110 C-6 2N+RH of 1./Erpr. Gr. 210 showing the fairing from the rear and the quite sharp angle of the rear fairing. This photograph also shows to good effect the lack of the Bordfunker's central rear canopy panel, and the 'trough' for parking the rear firing MG 15 when not in use.
(Profile by Fernando Estanislau)





FINDING DEFIANT N3333



P/O 'Sandy' Ballantine in the cockpit of his Defiant at Kirton in Lindsey, spring 1941.

In June 2018 a team of aircraft recovery experts assembled in a remote field south of Lincoln to try to find the remains of a Boulton Paul Defiant that crashed there some 77 years previously. The entire dig was filmed for the new series of WWII Treasure Hunters and will be shown on 19 November in the UK. Here is the behind the scenes story of Boulton Paul Defiant N3333 and its recent recovery.

In the early hours of 4 May 1941 P/O Arthur Alexander 'Sandy' Ballantine and his gunner Sgt Chris Madsen were on patrol in Defiant N3333 YD-B of 255 Squadron when suddenly their aircraft was hit in the engine by an unseen enemy aircraft. With the engine in flames and losing power, both men baled out of the aircraft, leaving it to dive into the ground at Nocton Fen south of Lincoln.

Over the next few days, the RAF recovery crew cleared the area of surface wreckage but elected to leave most of the remainder in the hole and just fill it in, as there was little point in salvaging the mangled remains, especially as there were no bodies to recover.

And there the wreckage stayed for 77 years until recovery expert Gareth Jones pinpointed the crash site using his years of experience and contemporary maps showing old field boundaries. With a large radar return showing under the earth, a dig was organised and the WWII Treasure Hunters team headed by Suggs from 80s pop group Madness, was invited to film the events. To add a poignancy to the occasion, the pilot's daughter Christine flew in from Canada to see her father's aircraft reappear again after so many years.

THE BOULTON PAUL DEFIANT

In the 1930s, strategists of air combat had predicted that vast armadas of bombers would be used in any future war without any fighter protection. In this prediction they were to be proved wrong, but in 1935 an RAF specification was issued to aircraft manufacturers to design a 'turret fighter' that would fly below the unescorted bombers and shoot them down.

In reality the Luftwaffe bombers of 1940 rarely flew operations during the day without a fighter escort, but the RAF had its 'turret

fighter' and they would use it! Squadron Leader Philip Hunter, the Commanding Officer of the first Defiant squadron, No.264, firmly believed that if properly handled the Defiant could hold its own, even against Me109s. As we know now, this proved not to be the case and by 28th August 1940 roughly half of all the Defiants delivered had been shot down. The two Defiant squadrons, 264 and 141, were moved away from the heat of the Battle of Britain and the 'turret fighter' experiment seemed to have been a dismal failure.



Two squadrons bore the brunt of the daylight fighting in the Defiant during the Battle of Britain, 141 Squadron above and 264 Squadron below. Both suffered heavy casualties despite the best efforts of their crews.



HERO OF THE NIGHT SKIES

Although a role as night fighter had originally been envisaged, little attention had been paid to it. 141 Squadron had made the first night patrols as early as July 1940, but it was not until the night of 17th-18th September that the first confirmed Defiant night victory was made. A Ju88 of 3/KG54 was shot down over Maidstone by Sgt Laurence and his gunner Sgt Chard in Defiant N6988 of 141 Squadron flying from Biggin Hill.

As the Luftwaffe turned its attention to the night 'Blitz' the need for an effective night fighter became urgent. The Spitfire had been tried, but night-flying accidents were frequent and it was generally unsuitable. The Hurricane, a more forgiving aircraft with sturdier undercarriage for bumpy landings, was better

as a stop-gap measure and had considerable success. The Defiant seemed far better than both, having the pilot to concentrate on flying and the gunner to keep a good all-round lookout. Once spotted, the pilot could creep up on the unsuspecting bomber from below and the gunner blast it with his four machine guns. Far from being consigned to the scrap heap, seven squadrons were equipped with Defiants at the height of the night Blitz and it formed a vital part of Britain's night defence.

An analysis of 'victory claims' at the peak of the Blitz shows how well it performed (see table):

The F Mk.I Defiants needed little modification for the NF Mk.IA night fighter role; the only external difference being the change to 'flame damper' exhausts. 'Radar'

RAF FIGHTER NIGHT VICTORY CLAIMS SPRING 1941

	Blenheim	Beaufighter	Defiant	Hurricane	Spitfire
March 41	4	21	8	5	2
April 41	1	40	19	15	2
May 41	0	56	49	32	9

was not fitted to operational Mk. IAs until November 1941, by which time the Blitz was long over. This put them at a distinct disadvantage to the Radar-equipped, 20mm cannon armed, Beaufighters that would gradually replace the Defiants. The first Defiant NF Mk.IIs with AI Mk.IV and Merlin XX engines did not go into service until January 1942.

Below: A 256 Squadron Defiant completely painted in 'Lamp Black' matt paint for night operations.



DEFIANT N3333 YD-B

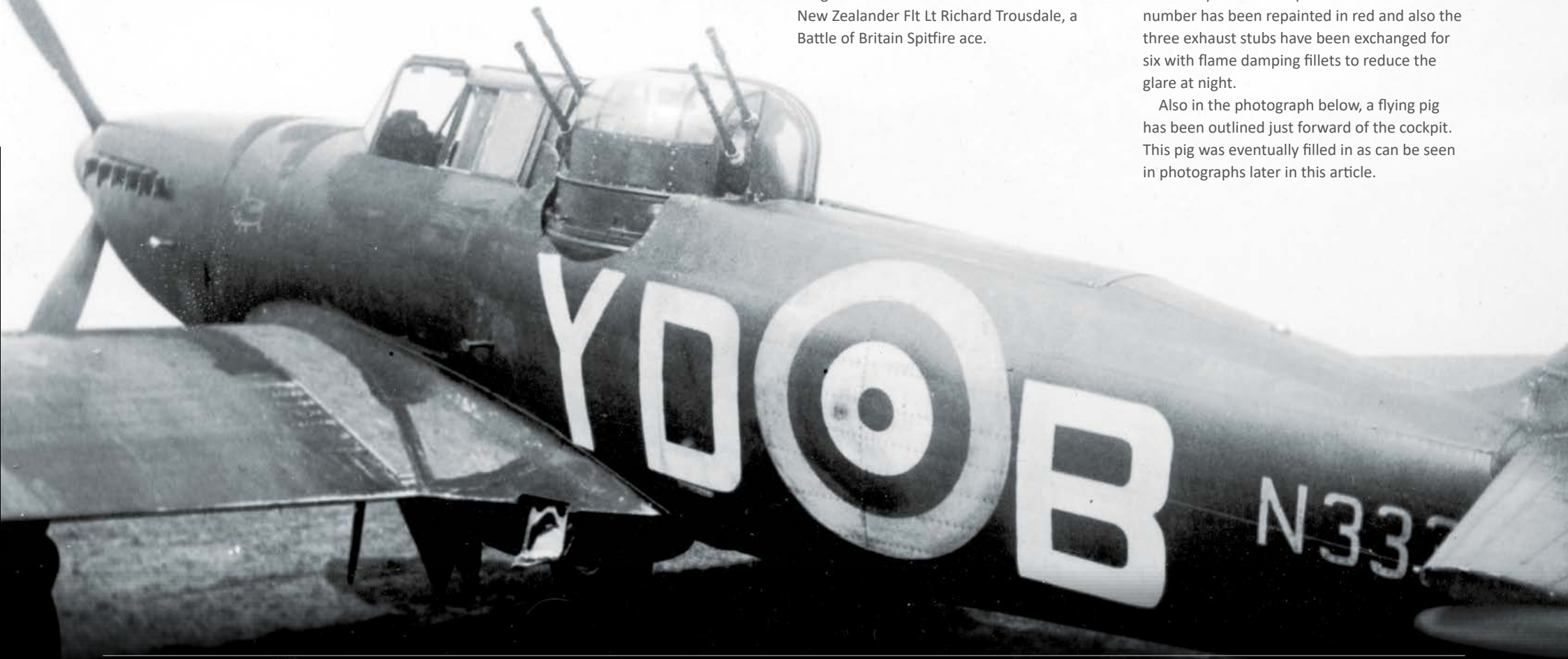


In early December 1940, Boulton Paul Defiant N3333 was delivered to the newly reformed 255 Squadron at Kirton in Lindsey as it re-equipped as a night fighter squadron, tasked with the defence of local cities such as Hull and Lincoln. She was originally delivered in the day fighter scheme of dark green and dark earth uppersurfaces with sky undersides, as can be seen in the photo to the left where she was captured on film at Duxford attending a Fighter Tactics Conference in the hands of New Zealander Flt Lt Richard Trousdale, a Battle of Britain Spitfire ace.

It is in these colours that N3333 became famous as the subject of an Airfix 1/72 scale model kit although she probably only looked like this for a few weeks before being totally repainted all over using non-reflective 'Matt Black' or 'Lamp Black' officially designated RDM 2A. This exceptionally dull 'sooty' paint did not weather well and the aircraft soon took on a very battered appearance as can be seen below.

Keen eyes will also spot that the serial number has been repainted in red and also the three exhaust stubs have been exchanged for six with flame damping fillets to reduce the glare at night.

Also in the photograph below, a flying pig has been outlined just forward of the cockpit. This pig was eventually filled in as can be seen in photographs later in this article.



DEFIANT N3333 YD-B

This selection of photos of N3333 show the development of her paintwork during the early spring of 1941. Top and middle right show the Defiant before the outline pig was filled in, bottom right shows the 'coloured in' flying pig and paint scuffing under the nose.

Below you can see the letter B has been painted on both wing leading edges, a detail not present when the middle right photo was taken. The presence of the rare YD coded Hurricane in the background dates this picture to no earlier than March 1941 when the squadron received five Hurricanes to supplement the Defiants.

Below you can see a close up of the flying pig nose art before having colour applied.



THE CREW

By March 1941, N3333 was being flown regularly by P/O Arthur Alexander 'Sandy' Ballantine (far left) and his gunner Sgt Chris Madsen (left). On the afternoon of 7th March 1941 they were airborne in N3333 performing an air test when they came across a Heinkel 111 in layers of cloud. They made three attacks, hitting the Heinkel on every occasion. Despite these hits, the Heinkel managed to escape into cloud and was not seen again.

Two months later at 3.30am on 4th May 1941, they had just taken off in N3333 on a night patrol when suddenly their aircraft was hit and the engine burst into flames. Madsen got out first, using his specially designed all in one 'Parasuit', soon followed by Ballantine who managed to pull his ripcord at around 1500ft. Both men landed safely with just minor cuts and bruises and the pilot managed to get help from a farmer at nearby Potter Hansworth.

Both men were back flying operationally just three days later. Intriguingly, the combat reports always refer to the gunner as Sgt McTaggart, yet his letter from the Parasuit company after his successful bale out is addressed to Sgt Madsen (his real name).

The full story of the recovery of Defiant N3333 will appear in the Launch Issue of Wingleader Magazine coming soon. In the meantime, the WW2 Treasure Hunters programme covering this dig will be screened on 19th November 2018 on the History Channel.

Special thanks to Christine Ballantine for all the 255 Squadron photos.



LOOK OUT FOR THE LIMITED EDITION LAUNCH ISSUE

IN EARLY DECEMBER WE'LL PRINT A UNIQUE LAUNCH ISSUE WHICH IS SURE TO BECOME A COLLECTOR'S ITEM IN YEARS TO COME.

Issue 1 of the regular Wingleader Magazine will be officially launched on 3rd January 2019.

However, before that, we will be printing a special limited edition 'Launch Issue' which will form part of the crowdfunding campaign that starts on Friday 16th November.

WHAT IS CROWDFUNDING?

For those of you not familiar with crowdfunding, the concept is simple. New ventures invite people to support their projects on websites such as Kickstarter by offering various rewards in return for donations. They set a target of funds to raise and if they hit the target then the donations are taken and rewards sent out, if not then no money changes hands. It's a great way to support a new project and totally secure.

WHY CROWDFUNDING?

We have decided to create a crowdfunding campaign to help cover some of the costs for the first 12 months of issues. New magazines always need a good run to help them get established and this will help achieve that goal. In return we have created some very attractive rewards to appeal to everyone, *including some very rare veteran signed items that will be unique to our campaign.*

For more information about our crowdfunding project please go to:

www.wingleadermagazine.co.uk



STORIES IN THE LAUNCH ISSUE

76 Squadron RAF

Lettice Curtis ATA Legend

Archie's Final Scramble

East Coast Intruder

Interview with Nick Trudgian Part 1

Finding Defiant N3333 - the full story

Peter Jackson's Secret Dambuster



Dambusters Art by Mark Postlethwaite GAvA



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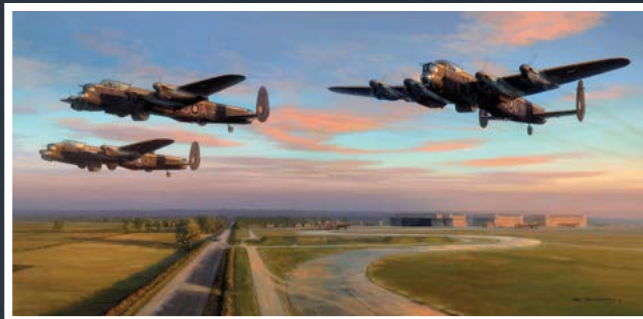
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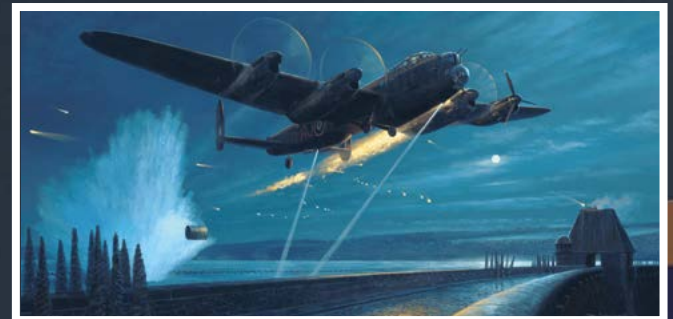
HOPGOOD'S LAST MOMENTS

"Over the past 20 years I have spent a lot of time studying and researching Operation Chastise. I've also been privileged to have met several of the airmen who flew on the raid and to discuss their experiences in person with them. These paintings are all based upon those years of research and show various aspects of that remarkable night of 16/17 May 1943."

Mark Postlethwaite



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