

INFO | Eduard

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Editorial and Graphics - Marketing department, Eduard - Model Accessories, Ltd.

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EDITORIAL

Hello, dear friends!

Even before the end of the first half of this year, we managed to move our model packaging operation to our new facility in Sedlec. This significantly simplifies our logistics, because until now, we would typically move the plastic pressings from Obrnice to Most, where they would be packed into kits, and then transported them to our warehouse and sales department in Sedlec. These places are not far from each other, amounting to a few kilometers, but it still involved a lot of driving. Now, just one wall and two doors separate the model packaging department from the warehouse and sales section, and the plastic sprues are stored across the yard. Sure, in the big scheme of human evolution, it's a small step, but still, a huge help. Among other things, we have an archive of kits that have not yet been restored, of which there are still some sixty, and this is a big step in their eventual return to our range as well. The list of new releases for July thus includes the Spitfire Mk.IXc in 1:72nd scale, along with the Fw 190 A-4 and the Roland C.II in 48th. A few hundred pieces are available from each of these kits. Since we have most of the components in stock, we practically do not need to add anything except the sprues, and we can afford to sell these kits at old, pre-inflation prices. I suspect no one will mind.

Let's turn our attention to July's new releases. They have been on sale for a week now, but I don't think this will matter too much.

Model Kits

Since the first release of our 48th scale P-51D Mustang, we've been thinking about how

to handle the unprecedented amount of color schemes of this aircraft and especially of the centerpiece of this wealth of possibilities, the USAAF 8th Air Force. For a long time, I myself have toyed with the idea of a gradual progression of attention bestowed upon the individual Fighter Groups in my head, but there was still a doubt as to how interesting such a concept would be and how it would pan out. Of course, you can imagine it with decal sheets, but the kit is a little bit different. It would probably be very difficult, if not impossible, to release such a large number of kits and to maintain a consistent level of interest in them. On the other hand, to issue only one Limited Edition kit dedicated to the Mustangs of the 8th Air Force would mean barely scratching the surface of the entire theme, while being somewhat repetitious in covering the most famous airplanes flown by the most famous pilots. After long discussions, we finally decided to release three separate items, dedicated to the three Fighter Wings of the 8th Air Force. After going over dozens of aircraft that offered themselves to us, we put together a mix of ten birds that well document the deployment of the Mustang over the last year of the war. The fact is that we have repeated just one previously released subject in this kit, the famous "Big Beautiful Doll" flown by Lt. Col. Landers. And even this was not taken over from previous releases, but changed to a later version of the marking. The result is a mix of ten aircraft, some of which are the most famous flown by the most famous pilots, and the rest, it must be added that the majority, are lesser known and definitely less covered Mustangs.



We assume that anyone who decides that they cannot live without this Limited Edition release will be able to make a choice quite easily with this type of presentation.

However, the fine tuning of the concept of this kit does not end there. The kit contains only one set of sprues, so only one model can be built from it. On the other hand, the decal sheet is doubled up as needed for two complete models, the stencil data and national insignia are duplicated. If someone decides to take advantage of this option, the Overtrees offer will be a great way to go. And those who don't use it won't lose anything. The price of the kit, despite the large decal sheet, etchings, masks and Brassin wheels and exhausts, all included in the kit, remains the same as for the standard ProfiPACK item.

And while on the subject of ProfiPACK kits, this month we have the Rufe available, the float version of Zero. After all, the Rufe was actually a conversion of a Zero with the classic land based landing gear. This kit offers five color options covering different deployments of the type. The second ProfiPACK release for this month is a reissue of the 1:48th scale Bf 109F-2. I should probably also mention that the Rufe is in 1:48th scale as well.

In the Weekend line, those who have been waiting a long time for a new edition of the Bf 110 G-4 will have something to smile about. The ProfiPACK Bf 110 G-4 kit (Cat. no. 8208), originally released in January, 2021, is also ready to be re-introduced to the market. This kit was planned for January 2021 release, but December 2021 blaze in our warehouse destroyed all unwrapped sprues, so only a small number of packaged kits went to customers. We are now ready for a second attempt with the with the newly manufactured sprues. It will go on sale in



August or September. There are less than 1,000 boxes left, so expect them to sell out quickly. The second July Weekend release is the Fw 190A-5 in 1:72nd scale, and in this case, the choice of color markings are mostly for aircraft with the four-cannon wing.

ACCESSORIES

In our new releases for accessory items, we typically focus on the correspondingly fresh items introduced to the market by the world's kit manufacturers. Among the photoetched brass and masks, we have the Mi-4A in 1:48th scale from Trumpeter, the MiG-17F from Ammo MiG, the Hurricane Mk.I from Hobby Boss, the Do 335 from Tamiya and the F-4E from Meng. All of these are in 1:48th scale. We also have a new ZOOM set for our Bf 110 G-4 in 1:48th and Fw 190 A-5 in 1:72nd. Keeping in 72nd, we are covering the Mosquito PR Mk.XVI as well. In 1:32nd, we have sets for the F-35A from Trumpeter and the A-20G Havoc from HKM.

As for the new Brassin sets, I would point your attention to the collection of sets for our still new Bf 109F in 1:72nd scale, or to the 48th scale sets for the Do 335 from Tamiya and the gorgeous engines for the no less charming Anson Mk.I from Alrfix. Also standing out among the 48th scale releases is the radiator for our P-51D Mustang. I admit that the execution of this part of the kit was not its high point, and I am happy to report that this is being addressed in the forthcoming P-51B. Even so, the printed parts will generally be an advantage over the original injection molded items, and these are very nice replacements indeed. Certainly, those that don't go down the road of replacing this part with the Brassin accessory won't be forced into feeling that the kit they purchased has been compromised in any way in its design and production. We also redesigned and printed the cockpit for the Bf 109F-2, part of a gradual redesign of the old Brassin cast cockpits. There are also attention worthy sets for the F-35B from Italeri in 32nd, as well as an exhaust

nozzle for the F-16 from Tamiya and several smaller sets we put together for the Spitfire Mk.I from Kotare, whose creators we wish good luck, much success and a long career as a successful manufacturer of plastic model kits.

We also have the usual new LööK and Space sets, Big Eds and Big Sins that are also worth checking out. Of course, further descriptions of these may be found below in this newsletter.

Articles

I had the ambition to write an article describing the story around the Bf 109F flown by Werner Mölders, but I couldn't do it. I managed to put together quite a respectable collection of photos, but after analyzing them, I still had nagging doubts and gaps in the information I was able to obtain. In addition, we have not yet been able to find photos that we can legally publish, and without photographic documentation, such an article is meaningless in my opinion. So I will continue to search for more information, consult with people who know a lot more about the Luftwaffe than I do, and hope that something publishable will come out of it. But at this moment I apologize for my inadequacy!

Fortunately, we have plenty of articles in this month's newsletter to ensure that the forces

of boredom are kept at bay. We have the next installment in the report on the air war over Ukraine by Miro Barič. May certainly provided something to report on. Perhaps, you noted that at the end of June more things happened in Russia than in Ukraine, so the next installment will be even more interesting. Maybe it's not just a passing thing! That Russia is truly a land of miracles where the unseen happens and the impossible becomes reality became clear to me during my service days when I was able to get to know the then Soviet Army quite well. I firmly believe in the inability of the Russians to win anything in the foreseeable future in a prolonged regular war. And it won't help them to talk about their wars tooth and nail and call them various obscure descriptions like "Special Military Operations" or "brotherly aid". So I wish for the Ukrainians that their homeland, which the Russians currently consider theirs, be returned to them as soon as possible. It took twenty years for us, I firmly believe that the Ukrainians will do it faster. I hope that the Russians get out of their current mess as quickly as possible and, above all, permanently, because this is really not worthy of a cultured nation and the fact that the Romans once did something similar is not exactly a good argument. Where are the Romans today?

We also have a great piece of an article about the 66th Fighter Wing by Jan Zdiarský. But this issue does not only contain historical articles. We have a report on this year's 24-hour Iron Bunny event in Bublava written by a member of the winning team, Lukáš Loučka, and another Iron Bunny participant, Jan Baranec, weighs in with a description of the Brassin engine assembly for the Wildcat. Jakub Nademlejnský submitted an article about masks for this month's newsletter.

I sincerely wish you all a pleasant read with this month's newsletter.

Happy Modelling!
Vladimir Sulc



LITTLE FRIENDS

66th Fighter Wing over Europe



Photo: 487th BG

Text: Jan Zdiarský

Even tight formations failed to protect USAAF bombers effectively from attacks by Luftwaffe fighters. Only the deployment of the P-51 turned the situation in the Allies' favor.

The strategic bombing offensive of the Western Allies, whose main goal was to weaken German industry and supply, stood on several pillars. The British Royal Air Force began to attack Germany with a gradually increasing intensity by the time of the Battle of Britain (apart from a few rather desperate attempts made sporadically from September 1939). Even before the American Air Force entered the European campaign, RAF Bomber Command moved to night operations and, with few exceptions, remained there until the end of the war. The daytime skies over Germany and occupied Europe were to belong primarily to the Americans, at least as far as long-range bombing operations are concerned.

Achieving the goals that the Americans had set for themselves in this regard consisted primarily in building a strong bomber force and support units, which were supposed to ensure supremacy in the skies over continental Europe through joint operations. Another pillar was war logistics, which was supposed to transport not only new aircraft and fresh crews to Europe, but also spare parts, equipment, hundreds of thousands of tons of fuel, bombs and other ammunition. It was such a complex and today a rather neglected component of the war effort that even a brief description of it would be well beyond the scope of this article. The third but

no less important pillar was fighter support for the bombers.

In Europe, the US Air Force's bombing operations rested on the shoulders of two separate air armies, the 8th Air Force, based in Great Britain, and the 15th Air Force, operating first from North Africa and then from southern Italy.

8th Air Force

The main strength wielded by the US Air Force in the European Theater of Operations (ETO) was undoubtedly the 8th AF, nicknamed the "Mighty Eighth". As the air component of the

Air Force arm of the United States Army (Army Air Force), it was established in January 1942, as VIII. Bomber Command. Under the designation VIII. Bomber Command (which later became a permanent part of the 8th AF structure), it undertook its first operation in the ETO on July 4, 1942, with A-20 Havoc aircraft borrowed from the RAF. At the same time, airfields over eastern England began to see the arrival of regular units of VIII. Bomber Command armed with B-17E bombers. The first distinct operation was a mission to Rouen-Sotteville, France, on August 17th, 1942. In February 1944, VIII. Bomber Command headquarters was integrated into

the 8th Air Force and along with it, as part of the 'new' VIII. Bomber Command, existing bomber groups. Simultaneously, the VIII. Fighter Command was created, whose main task was to provide protection for the bombers.

The 8th AF reached its peak strength in the summer of 1944. By the end of August of that year, it consisted of three Bomb Divisions (later Air Division) with forty Bombardment Groups (or simply Bomb Groups) spread among fourteen Bombardment Wings and a separate Fighter Command, with three Fighter Wings with sixteen fighter Groups, each with three squadrons. In addition to these, the 8th AF included several reconnaissance and special operations, training and other support units. This was a force that was able to send 1,200 four-engine bombers and around 500 escort fighters over Germany in one day. Since the summer of 1944, the German Luftwaffe had rarely been able to effectively oppose such a force.

In 1945, all but one of the Fighter Groups of the 8th AF were armed with P-51D aircraft, or the P-51K.

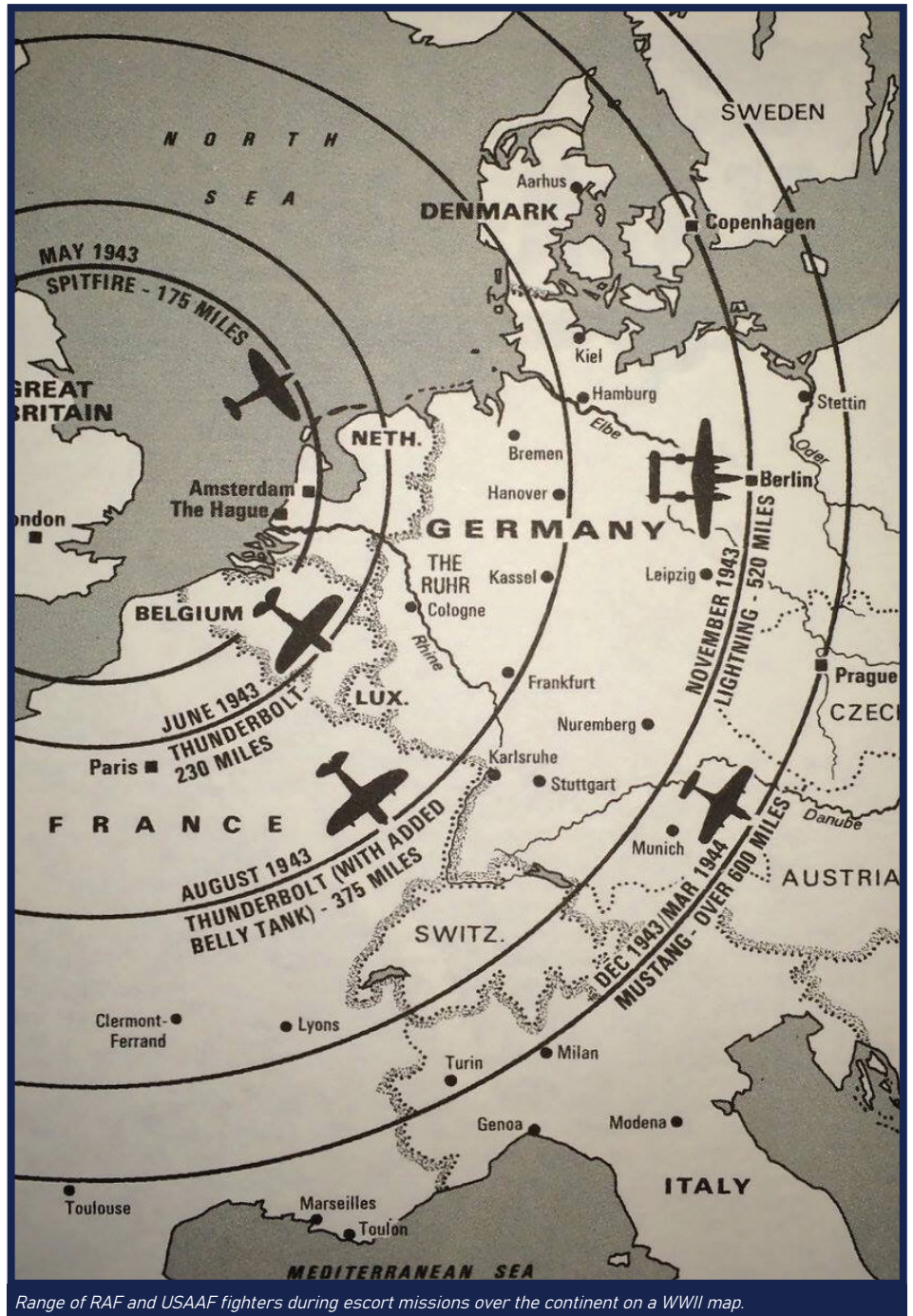
It is not without interest that the last combat operation of the 8th AF was a mission to Pilsen, Czechoslovakia on April 25th, 1945. A few days later, the bombers of the 8th AF participated in Operation Mana to supply food to the population of the Netherlands, which was on the brink of starvation, after German troops cut off the food supply.

15th Air Force

The Second US strategic air force in Europe was the 15th Air Force, formed in November 1943 in North Africa from parts of the tactical 12th and 9th AFs. It was only in December 1943 that the newly formed units of the 15th AF received four-engine bombers and a successful series of bombing missions could thus be undertaken, although the first raid by heavy bombers of the 15th AF on the west coast of Italy on January 22, 1944 had more of a tactical support flavor to it. Major missions were to come mainly after the transfer of the 15th AF to Italy (January - March 1944), when their bombers could reach deeper into occupied Europe and into Germany itself. At the end of the war, the 15th AF had four B-24 Liberator Bomber Wings and one B-17 Flying Fortress Wing. Fighter support was provided by two Fighter Wings with P-38, P-47 and, later, P-51 aircraft. The last mission of the 15th AF came on May 1st, 1945, the target being Salzburg in Austria.

66th Fighter Wing

As noted above, in August 1944, the 8th AF had sixteen Fighter Groups. These were incorporated into three Fighter Wings, namely the 65th FW, 66th FW and 67th FW. The affiliation of specific fighter groups to a given Wing was



Range of RAF and USAAF fighters during escort missions over the continent on a WWII map.

more or less stable. At the same time, these Wings usually provided escort for bombers of specific divisions from the 8th AF (65th FW for Liberators from the 2nd BD, 66th FW escorted B-17s from the 3rd BD and 67th FW B-17s from the 1st BD).

The 66th FW was formed around five Fighter Groups

55th FG

Nuthampstead September

1943 – April 1944

Wormingford April 1044 – May 1945

For the first six months of its operational activity, the unit was based at Nuthampstead Base north of London, which it later had to leave to make way for the newly arrived 398th



BG. Until the summer of 1944, the unit flew the P-38 Lightning, which was replaced by the P-51D Mustang. A number of pilots of this unit thus flew in combat on both types. The identification marking applied up to the P-51 was initially a black stripe on the front of the engine cowl and a black spinner. This was soon replaced by a yellow-green checkerboard pattern and stripes of the same colors on the spinner. A distinguishing feature of the unit was also the color differences in the fuselages of the Mustangs of the individual squadrons, a practice that was abandoned especially by the later months of the war. While the 38th FS had horizontal and vertical tail surfaces painted olive green, the 338th FS flew mostly without any coloring of the tail surfaces. The most impressive livery of this unit were the Mustangs of the 343rd FS, whose anti-glare panels in front of the cockpit arced back to encompass the rest of the fuselage, with the entire fuselage behind the cockpit being sprayed the same olive green. These were not remnants of the OD/NG (olive

drab / neutral gray) coloring, because the 55th FG converted over to Mustangs later, meaning that their machines would have been delivered in natural metal and aluminum spray. The arc of green on the fuselages of 343rd FS Mustangs was often edged with dark red or yellow. On occasion, this coloring also appeared on the aircraft of the 338th FS. On the other hand, at the end of the war, the 343rd FS often had its machines only in bare metal coloring, only with a checkerboard pattern on the nose. Also, the 38th FS in 1945 was abandoning the full coloring of the tail surfaces. Instead, identifier colors were applied to the rudders– 38th FS red, 338th FS light green and 343rd FS yellow.

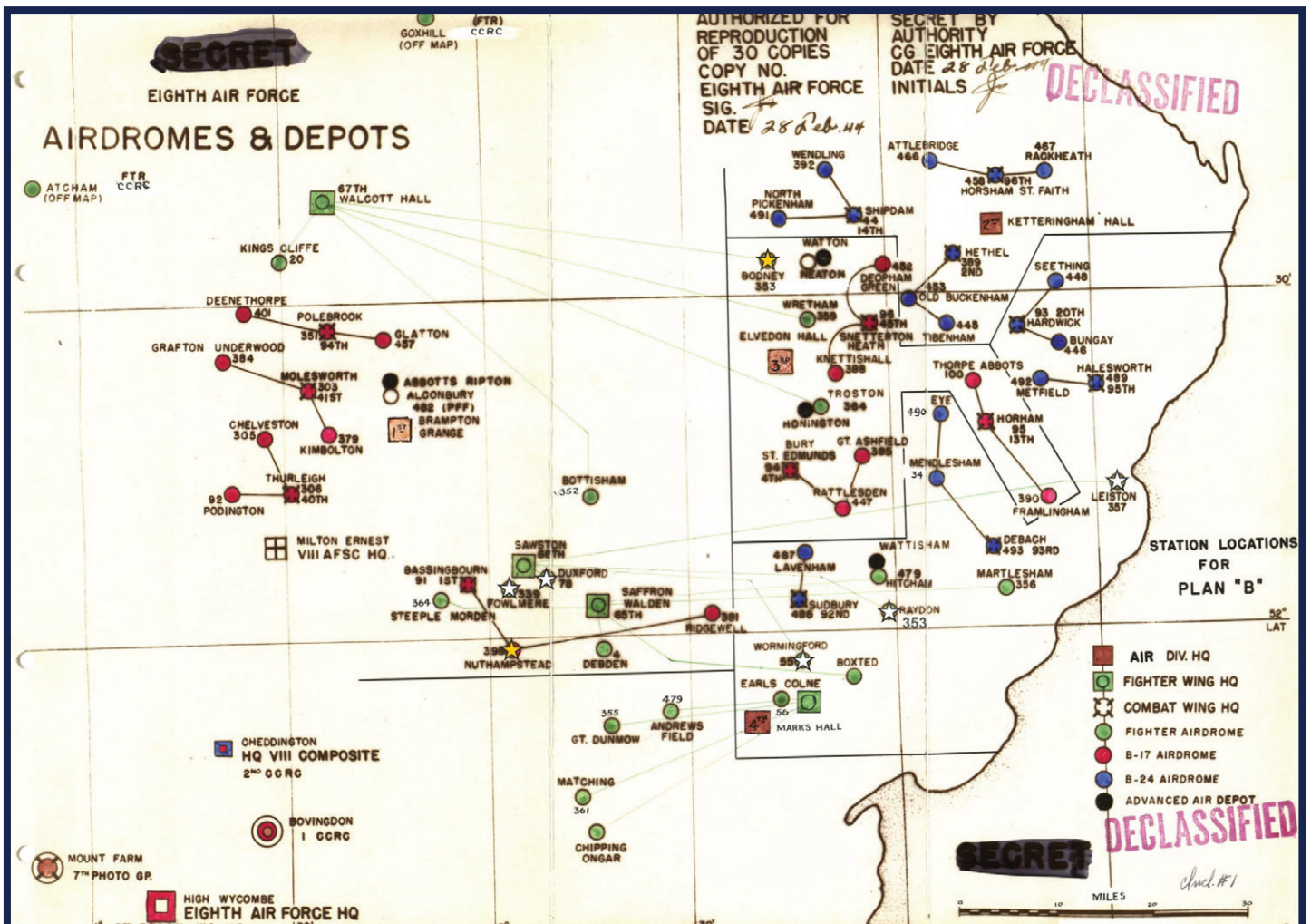
339th FG

Fowlmere April 1944 – May 1945

The 339th FG was among the newer units of the 8thAF, and therefore arrived in England already wielding P-51 aircraft. Fowlmere, near Duxford, became its base throughout its operational deployment in Europe. The P-51Bs and Cs used



P-51 Mustang flight from 503rd FS, 339th FG.



Excerpt from a strategy document of the 8th AF displaying their bases in East Anglia. Bases utilized by fighter units of the 66th FW are marked with a white star, while yellow stars indicate bases initially used by these units but later handed over to other units.



at first were replaced by more modern P-51D and K versions during the summer of 1944, but some older B and C fighters remained in service for quite a long time, until the fall of 1944. The identification marking of the unit was a red and white checkerboard on the front of the engine cowl and included the spinner. Later, unit specific squadron colors were applied to the rudder – the 503rd FS received a red rudder, the 504th FS received a green one, while the 505th FS received yellow.

357th FG

Raydon November 1943 – January 1944

Leiston January 1944 – May 1948

The “Yoxford Boys”, as the 357th FG was nicknamed, moved to England in November 1943. The unit spent a short time at Raydon Base before being moved to Leiston. The 357th FG marking is one of the most impressive to appear in the 8th AF. Many of her early P-51Bs and Cs were still in OD/NG livery, and that combined with the yellow-red checkerboard and, for a period of time, invasion stripes really suited the Mustangs of this unit. However, even natural



metal airplanes (and sprayed aluminum) appear unusually colorful in conjunction with that unit's markings. Although a wide variety of markings cannot be denied to other units within the 66th FW, the 357th FG itself was certainly the most varied. Later, this unit also added identification markings of individual squadrons by spraying its rudders – the 363rd FS used red, the 364th FS yellow, and the 362nd FS rudders often remained unpainted, unless the entire fuselage was sprayed olive. With 609 credited aerial victories and 109 aircraft destroyed on the ground, the 357th FG was the most successful unit with the P-51 and the second most successful unit within the USAAF. It is therefore not surprising that more than half of the fighter aces who earned their glory with the 66th FW came from the 357th FG.



Lt. Jones' Mustang from the 38th FS, 55th FG shortly after returning from a combat operation.

353rd FG

Goxhill June 1943 – August 1943

Metfield August 1943 – April 1944

Raydon April 1944 – May 1945

For more than a year, this unit operated the P-47 and re-armed with the P-51D in October, 1944. The marking of the group was a black and yellow checkerboard on the nose. Sometimes, it consisted of only three rows, sometimes it was applied to more than half of the nose of the aircraft, even to the extent that it obliterated the anti-glare panel in front of the cockpit. For the P-47, the checkerboards were originally skewed diagonally, later they were sprayed parallel to the horizontal axis of the aircraft. These were also applied to the P-51. The color identifiers of individual squadrons also later appeared for this unit: the 350th FS yellow, 351st FS usually without, the 352nd FS black. The coloring of 353rd FG Mustang rudders was not consistent, and the mentioned colors also appeared on aircraft of other squadrons and therefore cannot be considered definitive identifiers of squadrons within the FG.



78th FG

Goxhill December 1942 – April 1943

Duxford April 1943 – May 1945

One of the oldest fighter units of the 8th AF saw its baptism of fire in the service of the 12th AF in Africa, flying P-38 Lightnings at the time. It returned to England much weakened and in April, 1943 was re-equipped with P-47s. It was on this type that the unit would gain its fame. It did not convert on to the P-51 until December, 1944. The unit's marking was a distinctive black-and-white checkerboard over almost the entire nose of their Mustangs (and previously over the P-47 engine cowls). The individual squadrons were later distinguished by the color applied to the rudder: the 82nd FS used red, the 83rd FS white, and the 84th FS black.



3rd Scouting Force

Wormingford February 1945 – May 1945

A special unit, built and supported by the 55th FG, was based with this fighter group at Wormingford. Although it was independent, it

Photo: Museum of Air Battle over the Ore Mountains,
via David Jewell



P-51D 44-15469 "Bucephalus" from 78th FG. On this aircraft Lt. William E. Hydorn achieved an aerial victory over a Me 262 on February 2, 1945.

was functionally related to the 66th FW and was intended to support the 3rd BD. Administratively, however, it fell under the 493rd BG. Its task was to cooperate closely with the bomber associations in weather reconnaissance en route to the target and especially over the target. The Mustang pilots of the 3rd SF were initially dedicated pilots of the 55th FG, but later, their role was taken over mainly by volunteers – experienced former heavy bomber pilots who completed their operational tour with the required number of missions. They knew best what information was needed, and when by their colleagues flying the route behind them. In addition to Mustangs, the unit also flew P-47s and B-17Fs. The color identifiers of their P-51s

consisted of red trim on the leading edge of the fillet. The different checkerboards on the cowlings were consistent with the unit that the aircraft being flown originated with, predominantly being the 55th FG.

For a very short time, the 66th FW also had other groups, most of the time assigned to other Wings – the 4th FG (1945), 56th FG (1945), 359th FG (1943), 361st FG (1943-44, 1945) and the 479th FG (1945), possibly to the 9th AF (358th FG). However, their temporary involvement with the 66th FW was marginal and we only mention them because they are mistakenly listed as a permanent part of the 66th FW by some sources. Despite this, one of them – the 361st FG – is worth bringing up. This unit was

a bit of a jack-of-all-trades, plugging holes where needed. It gradually went through service with all three FWs and at the turn of 1944/45 it was even temporarily tasked with ground support with the 9th Air Force.

The plans for the reorganization of the 8th AF from March 1944, included a version of things that would see the 352nd FG falling under the 66th FW, but in the end it remained part of the 67th FW as did the 50th FG. However, after coming to the ETO, it found itself subordinate to the 9th AF. At the same time, the 353rd FG was to be integrated into the 67th FW. The same document also assigned individual FWs to respective Bombing Divisions, but later reality proved to be different. The 66th FW was to support the 2nd BD, the 67th FW the 1st BD, and the 65th FW was to accompany the 3rd BD on missions.

Big Brothers and Little Friends

From the very first operations of American bombers in Europe in 1942, it was clear that the current group defense tactics of the USAAF bombers was inadequate to deal with the capabilities of the German Luftwaffe. Bomber formations, at the mercy of German single and twin-engine fighter packs, suffered heavy losses. So much so that stopping this method of operations was considered. This can be seen in the raids of the 8th Air Force from the summer of 1942 and especially during the spring to autumn of 1943. It was obvious that without high-quality fighter protection these operations were doomed to failure. The generally known problem was the fact that neither the RAF nor the USAAF had the kind of fighter aircraft that could accompany

A photo from early period of 8th AF bomber escorts shows a P-38 Lightning of 338th FS, 55th FG.



their Big Brothers over Germany. In August, 1943, the P-47 Thunderbolt aircraft, equipped with drop tanks, were able to accompany the bombers to a distance of approximately 375nm, which roughly corresponded to the area of Frankfurt am Main, Hanover, or Kassel. This, of course, provided that they did not get into a fight with German fighters. Any significant change in the flight regime, let alone the necessity of premature jettisoning of the extra tanks, of course significantly shortened their range. The P-38 had a greater range and in December 1943 they were able to scrape the area of "Big B", Berlin itself (approx. 520 nm). However, their combat capabilities at that time were already significantly behind the newer versions of the Luftwaffe's main fighter types, the Bf 109G-6 and Fw 190A-5 and their following variants. Only the P-51B and C, which appeared in Europe at the turn of 1943 / 1944, were able to escort bombers deeper over the Reich itself and the center of Europe. Significantly better protection of the bombers was provided by the P-51D, which entered service during the summer of 1944. These were not only able to escort the bombers to the vast majority of their targets on the continent, but in several cases of special operations of the Frantic type, they protected their Big Brothers taking off from their home bases in Great Britain up to the region of Poltava and Mirgorod in Ukraine (approximately 1,300 nm).

As the Luftwaffe's ability to respond to American raids weakened, the role of escort fighters shifted partly to ground attack. American aviators destroyed locomotives, substations, German planes on the ground, river boats and other means of transport. In essence, everything that could even remotely appear to be a target of military importance had to be on the lookout for the hunters' thirst

Protecting the bombers from Luftwaffe aircraft remained a priority task, as long as there was something to protect them from. However, the impression that the German air force was already completely defeated could be very dangerous. This was especially true in the closing months of the war, when Me 262 jets began to appear more and more regularly among the intercepting fighters, which in classic combat were a difficult opponent even for Mustang pilots. Unfortunately for the Germans, realizations regarding the conduct of the war came too late. "Jets" became the prestigious hunting trophy of many USAAF fighters.

It will probably remain an eternal topic of historical debate, which weapon, vehicle or aircraft primarily provided the Allies with the opportunity to end the war in Europe by the spring of 1945 and which element thus ensured the air supremacy necessary for victory. Among the main favorites of the debates will



339th FG's P-51 escorts a damaged B-17 returning from enemy territory.

Photo: Public Domain

understandably be the planes participating in the strategic bombing of German war industry and transport. And even among proponents of this theory, there will be differences of opinion as to whether these were the four-engined B-17s and B-24s, or their "Little Friends". Even if the final answer were to be the four-engined heavies, it is quite certain that without their "little brothers" and among them the P-51D, they would never have been able to do their job.

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DAWN OF THE AIRCRAFT CARRIERS

Text: Jean Laffite

It was the afternoon of November 14, 1910, and Eugene B. Ely was taking off with his Curtiss Pusher off the deck of the USS Birmingham in Hampton Roads, Virginia. USS Roe can be seen in the background.

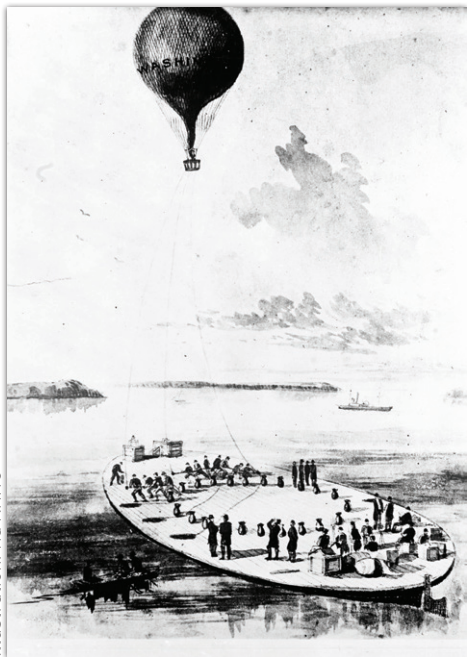
Our June release of Sopwith 2F.1 Camel kit represents the scale model of the very first operational, carrier-borne fighter. It was a modification of the proven standard land fighter design flown by many RNAS squadrons located on the land bases at the Western front during the Great War. Also, this type was the first fighter to attack the airship bases from the deck of an aircraft carrier.

Let's go back in time to the origin of the naval deployment of flying machines. Initially the aviation role was reconnaissance, which by the way is very important up until today. In the beginning the impractical balloons or first airplanes caused doubts among the admirals. No one was able to imagine that the huge balls filled with flammable hydrogen, or the construction of the several wooden planks and some linen could possibly present a threat to the steel giants. On the other hand, the aviation was able to provide better reconnaissance results than any sailor with binoculars on the top of the tallest mast. To spot the enemy first, know his fleet, its formation and course has always been a tactical advantage. In the end of 19th century, the ever-improving naval artillery played its role as well as it was able to increase the effective range and hit the enemy

at the long distances, at the limits of the visual recognition, without jeopardizing their own vessels. Therefore, the aviation was perfectly suited for the role of directing the artillery fire.

The American Civil War gave birth to many innovative solutions in the military equipment designs. Among others it was the first deployment of battle ships, in the case of USS Monitor even equipped with the rotating gun turret which gave name to the whole group of combat vessels designated to fight on the rivers and in the coastal waters. The first submarine deployment is well known as well. Rather amusing, the imagination of a man-driven Confederate submarine named after its creator H. L. Hunley sinking the Union propeller-driven shallop USS Housatonic, on February 17, 1864, in the mouth of Ashley and Cooper rivers as she was on duty to blockade Charleston. Little

known fact is that the Union Army was the first to establish the Army Balloon Corps which used anchored balloons for reconnaissance and fire direction in the battles of Bull Run, Yorktown, Fair Oaks and Vicksburg. A sort of aircraft carrier was created. USS George Washington Parke Custis was rebuilt from the coal transporting boat with the deck devoid of all objects that could present an obstacle to the balloon ropes and nets and was used as river transport boat for the Corps. Its designer, an experienced aviator Thaddeus S. C. Lowe, had two gas generators and a balloon installed on the deck. "I have the pleasure of reporting the complete success of the first balloon expedition by water ever attempted. On Sunday early morning I left the Navy yards assisted by the capable fellow aviators and a new device to generate gas which, even though used for the



A reconnaissance balloon launched from USS George Washington Parke Custis above Potomac River in November 1861 near Budd's Ferry.

first time, performed admirably," commented Lowe on the first sailing.

Not everything went according to the plans, as a Union General Fitz John Porter learned. He was aware of the balloons' value, so he joined Lowe to try the new reconnaissance device. During the operations the balloons were always anchored to the ground to prevent them from drifting away. On this flight however, Porter decided to use the single anchoring rope to speed up the ascending balloon as opposed to three or four ropes suggested by Lowe. This single rope broke, and the balloon silently drifted over the Confederate territory. Consequently, it was fired upon, but the crew remained calm and indeed they managed to make several sketches of the enemy positions. Miraculously the balloon then descended back to the Union positions. The whole event must have looked like one of Baron Munchhausen stories. In the middle of 1862 Lowe got infected with malaria in the swampy terrain and had to rest to recover. After his return he learned that all the equipment and resources to operate the balloons were handed over to the Army. In May 1863, after disputing his salary followed by a fall off favor of the Union Army, Lowe left the Balloon Corps. Brothers Allen were given the management of the Corps, but they were not able to lead the unit as effectively as Lowe and before the year 1863 ended the Balloon Corps was disbanded.

Balloon ships

In 1895 French were the first to build the ship designated specifically for the reconnaissance balloons. Her name was Foudre, had 6000 tons displacements and could carry two anchored and one free balloon. She was not

very successful and after many modifications she served as a hydroplanes' mother ship. Nevertheless, during WWI she served as a submarines' dock. Before the end of the century several isolated military conflicts took place. One of those was a continuous push of the Ottoman Empire troops out of the Balkans. In 1876, thanks to the Russia's contribution, the Turks were pushed out of Bulgaria. In 1878 Austria-Hungary was victorious over Bosnia-Herzegovina and the Ottoman Empire forces were withdrawing in other territories except of Europe. In 1881 Egypt fell under the Great Britain control. Italians did not want to fall behind. Long time ago they had set their sight on the north coast of Africa, Tripoli, and Cyrenaica areas, nowadays forming most of Libya. The war broke out on September 29, 1911, and according to the Italian account went smooth. The fact that in the beginning of 1912, Bulgaria, Monte Negro, Serbia and Greece joined Italy certainly contributed to the success.

So, the Ottoman Empire, in order not to completely loose its influence in Europe, chose the lesser evil and gave up Tripoli, Cyrenaica and Cyprus. The short war, in which Italy lost 1500 soldiers, was the first to feature the deployment of the modern equipment such as airships, airplanes and balloon ships. The first air bombing raid took place as well when on November 1, 1911, the Italian Lieutenant Giulio Gavotti, bombed, if it can be called that way, Tagiura (Jagiura) oasis and the Osman military camp in Ain Zara. He flew Etrich Taube monoplane on the raid and used in total four Cipelli grenades held in the leather sack. Once he reached the target, he screwed the detonators in and threw grenades the size of a grapefruit on the target. Lt. Gavotti was credited with another first ever mission when on March 4, 1912, he flew the first night mission, again in Libya.

The Italian balloon ship Volta, a rebuilt personal steamer Europa, operated at the Libyan coast. The special feature of this ship



Giulio Gavotti, Italian aviation pioneer.

was a substructure which could house the inflated balloon. The naval operations between Italian and Turkish Navy were fully under the Italian control. In then Albanian port of Preveza five Italian destroyers sank four Turkish ones and on the top of it the Italians captured an auxiliary vessel. On November 7, 1912, in Kufuda bay in the Red Sea, Italians destroyed seven Turkish gun boats and practically eliminated the Ottoman Navy in the Red Sea. On the top of it, in the port of Beirut, the Italians destroyed the old Turkish armored ship Avnillah, torpedo launcher Angora and six supply tugboats. The balloon ships did not prove their value and their role changed from reconnaissance to defense. They became the floating platforms for the barrier balloons protecting the ports, ship convoys or military ships. They formed a passive defense against the airships' attacks, as we will speak about later.

Airplanes arrive on the scene

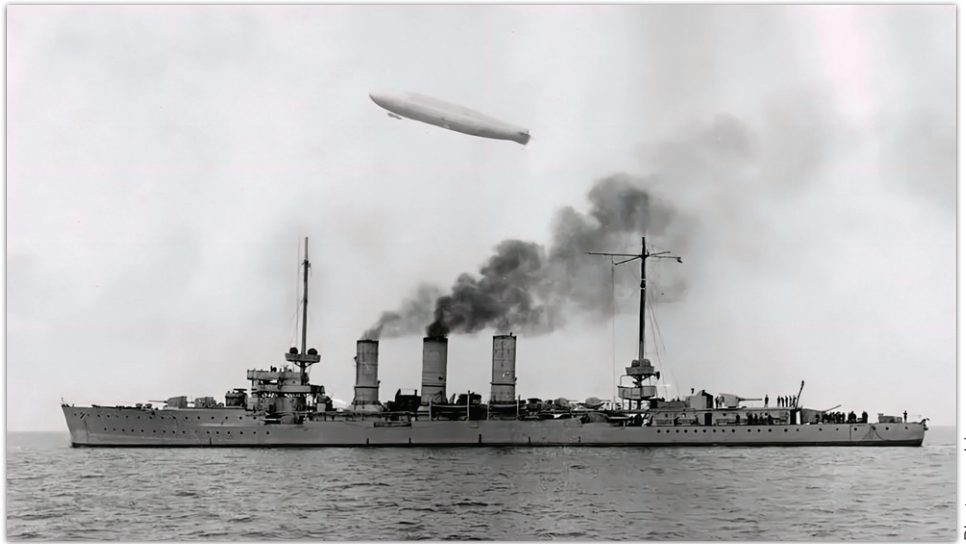
If we realize the fact that the first flight of a machine heavier than air is considered a 279



Italian Etrich Taube in Libya. Giulio Gavotti flew this type on his "bombing" raid.

meters long jump performed by Wilbur Wright in the afternoon of March 17, 1903, and that the first attempts of take off and landing on the ships deck were made by British and Americans in 1910, we learn how rapid the progress of the aviation was in the beginning of the 20th century and we will become aware of the enormous courage demonstrated by those aviation pioneers. In the beginning of the development of the aircraft designated for the naval service two trends became apparent. The deployment of the ground-based aircraft was limited by the take off and landing on the platform installed somewhere on the ship. If it was a fast vessel, for example a light cruiser sailing at 30 knots, approximately 55 kph, and against the wind, the relative speed of the first aircraft and the ship herself did not differ much. The smaller airplane could easily take off from the ships' platform and land back on it or fly to the ground base if it was in the airplane range. And it happened like that during the first attempt to take off from the 25 by 7 meters platform mounted on the USS Birmingham (CL-2) bow. On November 14, 1910, Eugene Burton Ely at the controls of his Curtiss biplane successfully took off from the cruiser which was at anchor in Hampton Roads port in Virginia. After a short flight Ely landed on the ground. The first landing on the ship's deck is again credited to Ely when on January 18, 1911, he landed on the USS Pennsylvania stern (ACR/CA-4) in San Francisco Bay. Really courageous "amazing aviator" died the same year during the air show in Macon on October 19, 1911, when he failed to recover from the dive. He emerged from the wreck, however passed away after a while due to a broken neck spine. Just a note, that in 1933, the US Congress posthumously awarded Ely DFC (Distinguished Flying Cross) for his "extraordinary success as a civil aviation pioneer and his important contribution to the aviation development in the US Navy."

In January 1912, the British launched the aeronautical experiments on board of the HMS Africa and HMS Hibernia battleships. The test flights were performed by Commander Charles Samson flying Short Improved S.27 biplane "S.38" (or "RNAS No.2"). The first successful take off was made in the beginning of May, either 2nd, 4th or 9th, as various sources state different dates. What we know for sure is that Samson took off from HMS Hibernia while the ship was sailing at 10.5 knots i. e., 19.4 kph in the bay of Weymouth in England. Coincidentally King George V was on the fleet's inspection and witnessed the series of flights performed in Portland in four days. Further experiments were conducted on board the HMS London battleship where the take off platform from HMS Hibernia was installed. All these trials led the Royal Navy to the conclusion that the airplanes are useful on the board of the ships for reconnaissance



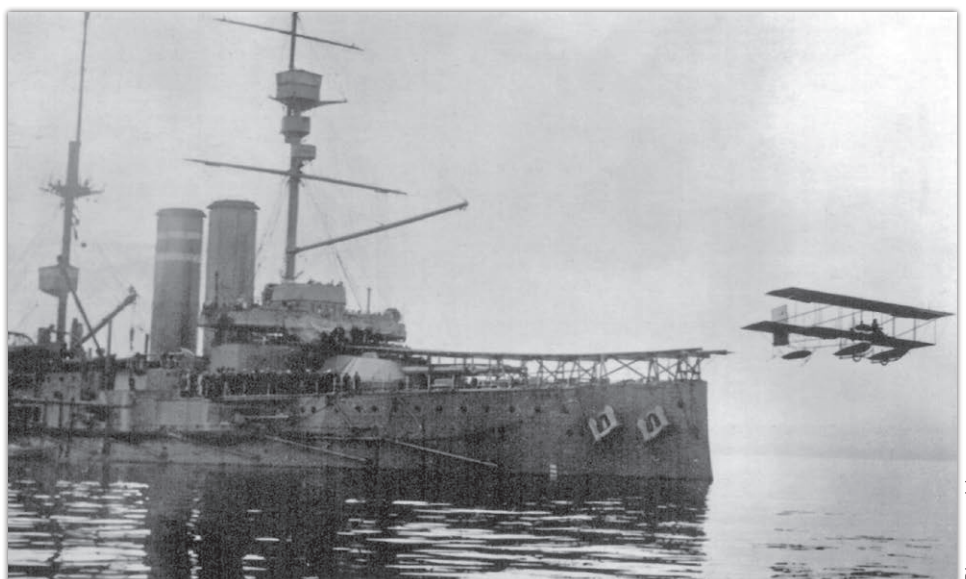
One of the Zeppelins is flying over the German light cruiser S.M.S. Frankfurt during WWI.

Photo: archive



The French ship Fauvette II is just launching the reconnaissance balloon during the trials in the bay near Toulon.

Photo: archive



In the beginning of May 1912, Commander Charles Samson is taking off in his Short Improved S.27 biplane off the HMS Hibernia deck in the bay of Weymouth in England.

Photo: archive

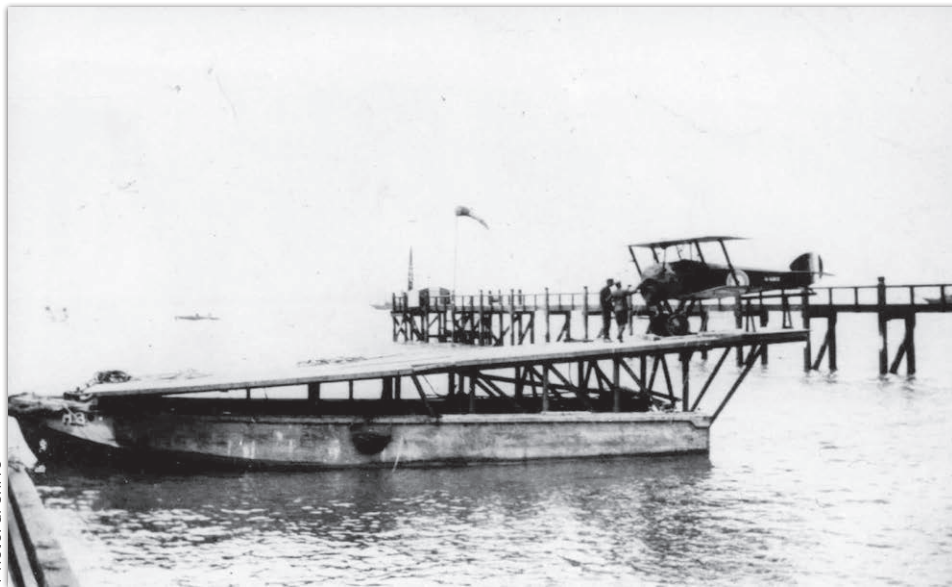


Photo: archive

Sopwith Camel is being loaded on the take-off towing platform.

Photo: archive

On August 11, 1918, FSL Stuart D. Culley successfully took off from the H5 platform towed by the HMS Redoubt destroyer and shot down a Zeppelin L-53.

and other duties but at the same time caused a series of problems. The landing deck, built above the bow complicated the gun fire and the hydroplanes' recovery (Short S.27 was designed as a floatplane) presented a risk once performed in the rough waters. The Royal Navy continued to develop the concept of a hydroplane ship.

A problem' name was Zeppelin

And then the war broke out and soon it was apparent how big problem the existence of the German airships represented. What looked like a clumsy Leviathan full of highly flammable gas, slowly moving through the sky, started to transform into Zeppelin-phobia once the bombs started to fall out of these giants. It cannot be said that the British did not address the Zeppelin threat. Right from the start the First

Lord of Admiralty, Winston Churchill, played his role. Thanks to his initiative the air defense of the British Isles was transferred from the Royal Flying Corps (RFC), who anyway were busy in the expedition corps in France, to the Navy air component, Royal Naval Air Service (RNAS). Soon it was clear that the performance of the available British aircraft is not sufficient to oppose Zeppelins and the solution had to be found how to attack them. In addition, the Germans switched to the night attacks. The Admiralty arrived at the conclusion that if the attacks from the air were not possible it was necessary to attack the airships while they were still in the hangars at their bases.

Flying boats

Another way to use the airplanes by the navy were the hydroplanes with the boat-like

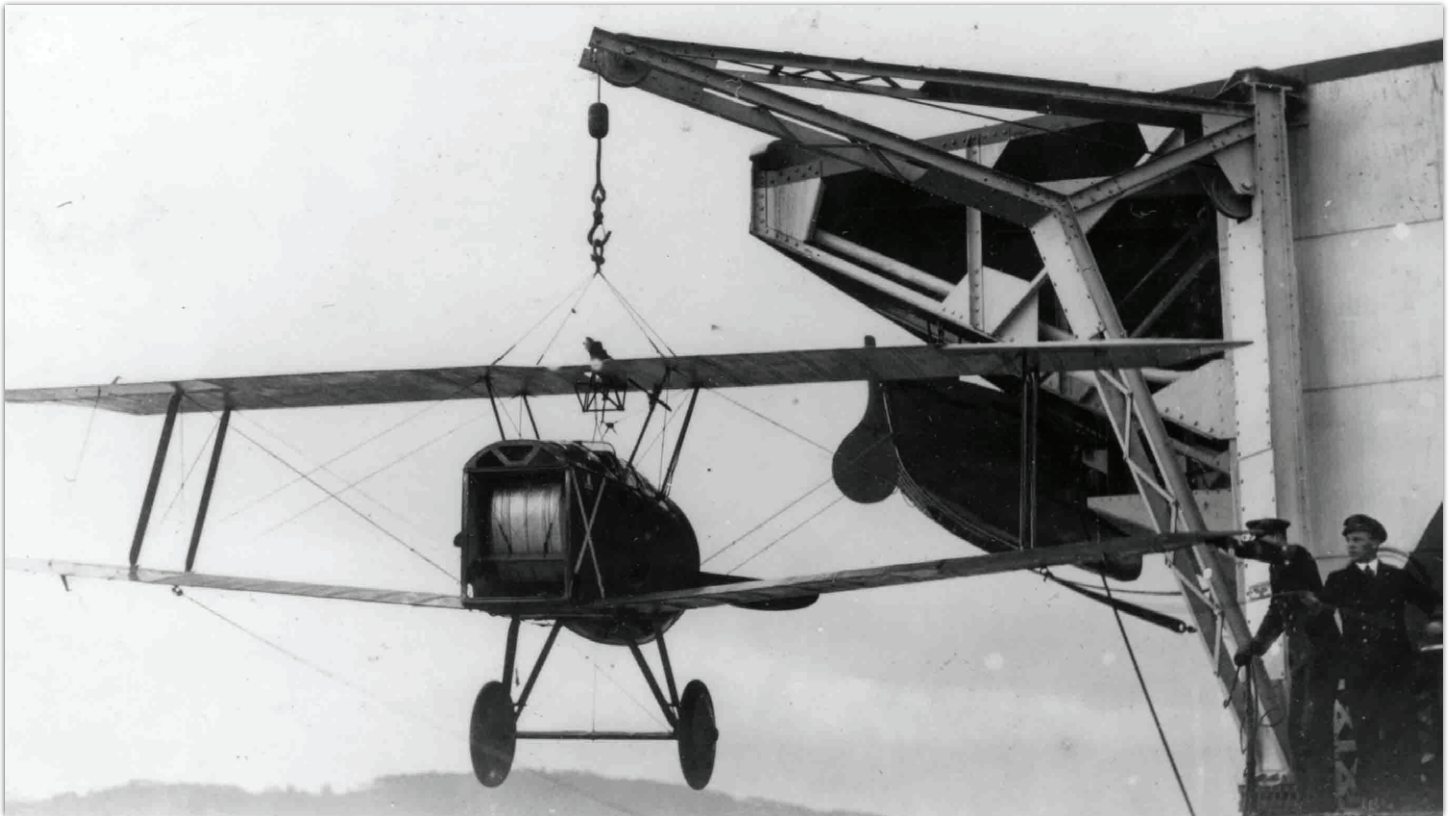
fuselage. The whole aircraft fuselage was in this case sealed to float on the water surface and replaced the huge floats installed on the standard aircraft. The concept of the "flying boats" came to existence in the United States in the Curtiss Aeroplane and Motor Company workshops owned by Glenn Curtiss. In 1913, for its time very advanced Curtiss Model H was designed, a hydroplane with a boat-like fuselage intended for long-haul flights. The British Navy immediately showed the interest in both purchasing several airframes as well as the license to build them as Felixtowe F.1. On May 14, 1917, Flight Commander Robert Leckie flying Curtiss H12 shot down Zeppelin L22 (LZ 64 class Q). The future Air Marshall was born in Glasgow, Scotland, however in 1909 his family left for Canada where he joined the army. In 1915 he paid 600 Canadian dollars for the pilot training at the Curtiss Flying School, however he only logged three hours on Curtiss Model F flying boat at Hanlan's Point until the school was forced to close for winter. Robert Leckie managed to take part in shooting down L70 (LZ 112 class X) with Fregattenkapitän Peter Strasser, a German aviation icon, on board. Leckie manned the gun while DH.4 aircraft was piloted by Major Egbert Cadbury.

First attacks against airship bases

On September 22, 1914, the British attempted to attack the airship base for the first time. The raid on the base near Dusseldorf, where the airship Z.IX operated from, failed, however. On the second attempt Lt. Reginald Marix flying the Sopwith Tabloid serial number 168, destroyed the army Zeppelin Z.IX (LZ 25, army class) from the altitude of 200 meters. After landing in Antwerp, he had to flee the German Army which was just advancing through Belgium. Encouraged by the success the RNAS wanted to attack the Friedrichshafen base. The mission was flown by single-seat Avro 504C airplanes taking off from the French fort of Belfort. Their bombs did not cause any damage due to the fierce AA fire and the airship L7 (LZ 32 class M) escaped undamaged.

First airship kills by a ground and carrier-born aircraft

The first destruction of the airship in the air is credited to RNAS pilot, FSL Reginald Warneford. On June 7, 1915, he dropped six 20 lb bombs (9 kilos) from his Morane-Saulnier L high wing airplane (serial number 3252) on LZ37 airship (class M) near Gent. The airship exploded in an enormous blast which also damaged Warneford aircraft and due to the engine failure, he had to perform an emergency landing on the enemy territory. While on the ground he managed to repair the engine and after half an hour could fly back to friendly lines. On August 21, 1917, Flight Sub-Lieutenant Bernard Arthur Smart



Landing on the sea surface was standard until sufficiently long landing decks were built on the first aircraft carriers. The front and detachable rear section of Camel 2F.1 were often recovered individually.

flying a Sopwith Pup from the platform mounted on the gun turret of the cruiser HMS Yarmouth, managed to shoot down an airship LZ 23 (LZ 66 class Q). After that he landed on the water and was recovered by a destroyer.

Kill scored from pontoon

If you ever saw a picture of an airplane taking off from the pontoon towed by a fast ship, be aware that a fighter taking off in such a bizarre manner achieved a success. The credit goes to the Canadian pilot FSL Stuart D. Culley. On August 11, 1918, destroyer HMS Redoubt was towing the H5 pontoon as a part of Harwich Force in Heligoland Bay when Zeppelin L53 (LZ 100 class V) was spotted. Culley took off in his Camel from the pontoon and after a long climb shot down the airship.

Hydroplanes against Zeppelin bases

During WWI quite many German airship bases were built. The largest ones were located on the North Sea coast in the North-Western Germany: Nordholz, Ahlhorn and Tondern. The Royal Navy learnt about them soon after they were built. Right at the outbreak of the war the British decided to destroy Nordholz base near Cuxhaven. The attack was scheduled for Christmas 1914 after the attacks from October and November had not been successful due to the inclement weather. Nevertheless, the Royal Navy activity starting on December 21, 1914, by gradual sailing of the part of the fleet did not escape the German attention. On the Christmas

Day the British assault group ships set sail and on the following day, at 6 am the hydroplane ships HMS Empress, HMS Riviera and HMS Engadin reached the planned hydroplanes' launching point. Their assembly and launching on the water then commenced. There were nice Short Folder hydroplanes participating in the mission, each armed with three 20 lbs bombs.

In the end only seven of them took off at 06:54 am (RNAS No. 119, 120, 136, 811, 814 and 815).

The weather was unfavorable. The low clouds obscured the whole mission area from the German observation but at the same time made the crews' navigation difficult. Regardless, soon they were spotted by a German patrol ship which sounded an alarm and consequently the airships L5 (LZ 28 class M) and L6 (LZ 31 class M) took off from the Nordholz base. British aircraft lost the orientation and after a futile search for the base the crews decided to



2F.1 Camels ready for take-off from the HMS Furious deck.

drop the bombs on any target they could come across. Once they started to run out of fuel, they turned to their return path. They themselves became the target of the airships they were supposed to attack. Only two aircraft reached their mother ships. Only by a miracle none of the pilots perished even though two of them were shortly interned in the neutral Netherlands.

Tondern and HMS Furious

The short platform mounted on the gun turrets were of course only suitable for take-off and if there was no ground base within reach the pilot's only option was to land on water. Then he and his airplane were retrieved. The ship concept allowing to land and take off again dated back to 1912 experiments. The ship featured the take off platform on the bow and the landing one on the stern. In March 1918, the armored cruiser HMS Furious, properly modified, and prepared, was chosen for the trials.

There were three hangars at Tondern base which names started with the letters TO, i.e. Tobias, Tonia and Tosca. When HMS Furious entered the service, the Admiralty immediately came up with the idea of how to test her in combat. The plan for the attack on Tondern was code-named Operation F.6 and copies of the Tondern hangars were built at the Turnhouse airfield. Initially eight pilots were chosen for



One of the aircraft that landed in Denmark after a successful raid on the Tondern base.

the raid, but one had to drop out and there was no time to train his replacement. Mission F.6 was launched in the morning of June 27, 1918, however, when two days later the formation rendezvoused with the support group, the mission had to be aborted due to the strong winds. The second attempt was code-named F.7 and was launched on June 17 when HMS Furious

set sails again escorted by destroyers. In the morning of June 18, at 03:04 am, there were seven Sopwith 2F.1 Camels ready on the HMS Furious deck when the storm struck. Instead of aborting the mission again it was decided to postpone it for 24 hours and HMS Furious, with her escort, waited out the storm by cruising near the Danish coast till the morning of June 19. The



Squadron Commander Edwing H. Dunning flying Sopwith Pup is performing the first successful landing on the HMS Furious deck on August 2, 1917, during the trials in Scapa Flow. The ship was sailing at 26 knots with 21 knots headwind. That provided 87 kph headwind speed on the deck therefore the airplane flew at very low speed relative to the deck. Five days later, during the third attempt to land, Dunning crashed into the sea and perished.

weather conditions continued to be less than ideal, but the flight operations were possible, so it was decided to launch the mission. All seven Camels, each with two attached 49 lbs. (22.5 kilos) bombs took off from HMS Furious deck between 03:13 and 03:21 am.

The first group was formed by three aircraft flown by Capt. W. D. Jackson, Capt. W. F. Dickson, and Lt. N. E. Williams. The second wave consisted of four airplanes piloted by Capt. B. A. Smart (his Zeppelin kill is described above), Lt. S. Dawson, Lt. W. A. Yeulett and Capt. T. K. Thyne. The last-named pilot was forced to return due to engine trouble before reaching the target. At 4:35 am the first group arrived in Tondern and caught everyone by surprise. In the past, there was a fighter flight deployed to Tondern consisting of four Fokkers and four Albatrosses but in 1917 it was disbanded due to the frequent accidents caused by the wet ground. Its duties were taken over by a Navy hydroplane base near the island of Sylt but in the morning of June 19, 1918, they evaluated the weather as not suitable for flying and cancelled the patrol flights. According to the plan the airplanes from the first wave focused on the hangar Tosca which was the largest of all and at that time housed L54 (LZ 99 class U) and L-60 (LZ 10878 class V) airships. The hangar was hit by three bombs and caused a large fire which destroyed both airships. The fourth bomb of the first group hit the hangar Tobias which was consequently attacked by the second group. It also caused the fire by until today it is not clear what burnt in fact. No German was killed during the attack, only four men were wounded.

The sailors on the HMS Furious deck, looking for their Camels returning back were disappointed. Not even one returned. Only two of them made emergency landings on water near the British vessels. At 05:55 am, Dickson landed near destroyer HMS Violet, half an hour later, Smart landed at 6:30. Yeulett was not lucky. He got lost over the sea and crashed. On June 24 the wreck of his Camel was washed ashore near Havrig and the body of his unfortunate pilot was found four days later near Holmsland. Three aviators from the first wave calculated that due to the insufficient fuel they will not make it back, so they headed to the neutral Denmark. The naval Camels (N6771, N6605 and N6823) landed one after another and the pilots were interned. They managed to escape later. One story for all: FL Samuel Dawson successfully landed his Camel N6605 despite the pierced tire on the sand beach Holmsland Klit (Klegold) near the village. He intended to source the gas, refuel, and fly back to his ship. Before he could do any of it, he was detained by police and escorted to the hotel where he met his 2 colleagues. The New Zealander did not want to accept the fate of an interned soldiers. He sneaked out of the hotel in a civil coat and hat and fled. He

switched a bicycle for a train until he made it on board of the ship headed for Sweden. From there he continued to Norway where he boarded the ship headed for Scotland. Fourteen days after the raid he reported back to his base. For his actions he was awarded the Distinguished Flying Cross and remained on active duty. In 1919 he sailed on board of the modified cruiser HMS Vindictive with Franco-British fleet to support the troops fighting Bolsheviks at Petersburg. Sadly, on September 17, 1919, the unbeatable "Kiwi" ran out of luck. He did not return from the patrol flight. The brave aviator was buried in Koivisto, the former Finnish town which is now part of Russia (Primorsk). He was 25 years old. The Tondern base was seriously damaged, and the attack the Germans used it only for backup. Most importantly, the British raid clearly proved

that the future is in the aircraft carriers which aircraft present bigger combat potential than impressive, but technically outdated Zeppelins.

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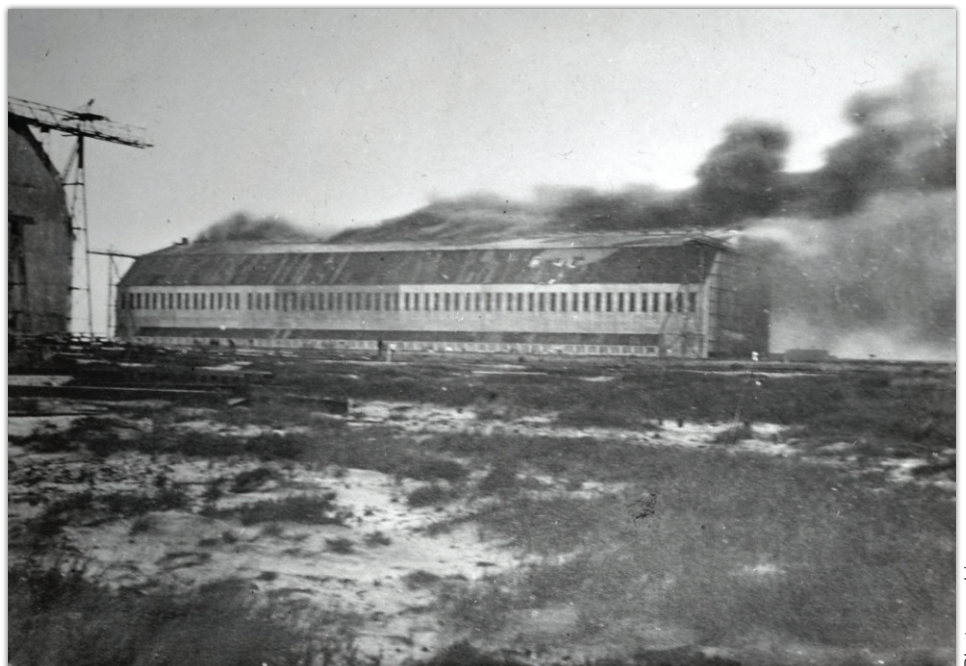
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The burning hangar Tosca at the Tondern base. The airships L-54 and L-60 stored inside were destroyed.

Photo: archive



Air War over Ukraine

Patriot vs. Kinzhal



Text: Miro Barič

A Ukrainian operator prepares a Patriot battery for action.

This instalment covers the May period and picks up exactly where the previous instalment ended. The Ukrainian attacks against important targets in the Russian rear and the Russian bombing of Ukrainian cities continued without pause. Patriot air defence systems, which have just arrived, have been heavily involved in their defence. Another major weapon from the West has also appeared on the scene, and there has been another black day for the Russian air force.

Photo: Ukrainian Armed Forces, social media and other public sources

As we noted at the end of the previous instalment, the Ukrainian capital Kiev has enjoyed almost two months of relative calm. But then the Russian attacks resumed and continued throughout May. This time, however, with a big difference – the Russian missiles were countered by Patriot batteries. The first arrived on April 21 and the second on April 27. One of them was delivered from the USA and the other from Germany. In addition, the Netherlands provided two additional launchers to reinforce these batteries. The Russian forces decided to destroy the Patriot batteries at any

cost. After a month of continuous attacks, Putin officially announced the destruction of five Patriot batteries of the two supplied ... This probably needs no further comment.

On contrast, the Russian Ch-47M2 Kinzhal missiles have lost their aura of invincibility. These were put into service by the Russians at the turn of 2017/18. Officially, they have a range of 2,000 km, reach a speed of Mach 10 and can carry a conventional or nuclear warhead. According to Russian propaganda, they are hypersonic weapons. In reality, they are ballistic missiles developed from Iskander

surface-to-surface missiles and modified for launch from aircraft – specifically Tu-22M3 and MiG-31 types. With ballistic missiles, all you have to do is calculate their trajectory and send the missile their way, so to speak. Real hypersonic weapons are able to maneuver in such a way that there is no time for the defense to react to a change in trajectory.

Moscow claimed that it had deployed Kizhals against Ukraine from the very beginning of the war. However, they have only used them in small numbers. The reason for this is their high cost (reportedly \$10 million) and the small number

of units produced. The biggest attack took place on March 9 this year, when the Russians fired six missiles of this type at Ukraine. At least two missiles were lost last year. One Kinzhal apparently crashed due to a malfunction while still on Russian territory, another was destroyed when its carrier, a MiG-31, crashed last October while taking off from Belbek airfield in occupied Crimea.

The first kill

Now, for the first time, Ukrainian air defences have also destroyed Kinzhal. It happened early in the morning of May 4 over Kiev. The Economist magazine talked about it with 30-year-old Ukrainian Patriot operator Vyacheslav. He said that according to the manual, it was possible to destroy the Kinzhal, but he was only convinced when the order was given to fire the missile and the shoot-down was confirmed. Applause, joy and much swearing followed. Vyacheslav also noticed that the Kinzhal was flying about three times slower than the Russian propaganda communicated. "We have understood Patriot works. The next time, when we saw not one but six Kinzhals on our displays, it was just a matter of routine," he told The Economist.

Vyacheslav underwent a shortened training that lasted three and a half months. He first trained in Oklahoma, USA, and then in Poland.



A long list of achievements of the Ukrainian air defense battery.

However, according to the Ukrainians, even this training was too long. After all, Western systems are more automated and there is nothing exceptionally complex about their operation. "The IRIS-T is much less complicated system than the Buk system I was operating before. It's like switching from a calculator to a MacBook Pro. Western air defense batteries basically do the work for you," The Economist quoted Denis Smazny, training

coordinator for IRIS-T and NASAMS, as saying. The debris of the Kinzhal, whose shooting down on May 4 was mentioned by Vyacheslav, fell on a playground. Photos of the debris appeared on social networks. At first, Kiev denied the shoot-down because it did not want to reveal its capabilities to the enemy. However, the Ukraine officials eventually confirmed it. The wreckage of the Kinjal was put on display in Kiev. According to some doubters, they do not



A Ukrainian operator prepares a Patriot battery for action.



Illustrative photo of a MiG-31 with a Kinzhal missile underneath.



Wreckage of the Kinzhal on display in Kiev.



Ukrainian anti-aircraft unit with Humvee vehicles and Stinger missiles.

This unit also carefully marks its achievements on its Humvees.



Ukrainian soldiers at the front with portable rockets.

correspond to the outer shape of the missile, but according to others, they are part of the internal assembly of the Kinzhal and therefore have nothing to do with the outer shape.

What's interesting, is the hole in the body of the downed rocket. This corresponds to the hit by the Patriot system. This is because the PAC-3 version missiles do not primarily use an explosive warhead with shrapnel that, when exploding near an enemy missile, might not destroy it. When the first versions of Patriot were deployed, it happened that the enemy missile was merely damaged and kept falling along the ballistic curve. The PAC-3 was therefore developed specifically to destroy ballistic missiles. There are 180 small nozzles on the body of the PAC-3 missile, which are used for fine maneuvering. It also has an improved active radar, so it guides itself to the target. This allows it to react quickly to the movement of an enemy missile and destroy it with a direct hit by its kinetic energy.

Six more kills

After this setback, Russia sought to destroy the Patriot batteries at all costs, or at least deplete their ammunition supply. During the course of May, Kiev faced as many as twenty attacks. Not only did their number increase, but also their intensity. In the period under review, Russia fired 16 % of the number of missiles it had fired in the previous 15 months. This is three times the average. Attacks have also been intensified. The aim was to keep the Patriot batteries in place, detect their location and then destroy them by continuous shelling. Therefore, the attacks mostly started with suicide drones, continued with cruise missiles, and ended with Kinzhals. One of the strongest attacks came on Tuesday, May 16 – this is the one where Vyacheslav mentions shooting down six Kinzhals.

The Russian goal that night was clearly to overwhelm the Patriot. They fired a large number of different missiles from the north, south and east all at once. Aircraft fired Kinzhal missiles, ships fired Kalibr missiles from the Black Sea, and Iskander missiles were fired from the ground. The Ukrainian side claimed to have destroyed all the missiles despite the extremely intense attack. The Russians, on the other hand, boasted that one of their missiles destroyed a Patriot system. However, the latter cannot be destroyed in one hit because it is made up of individual elements spaced far apart. In addition to the launchers themselves, there are the control and command modules with radars, which can be several kilometres away. The Russian claim can thus be described as wishful thinking. The US Department of Defense later said that the Patriot system had suffered light damage but was repaired

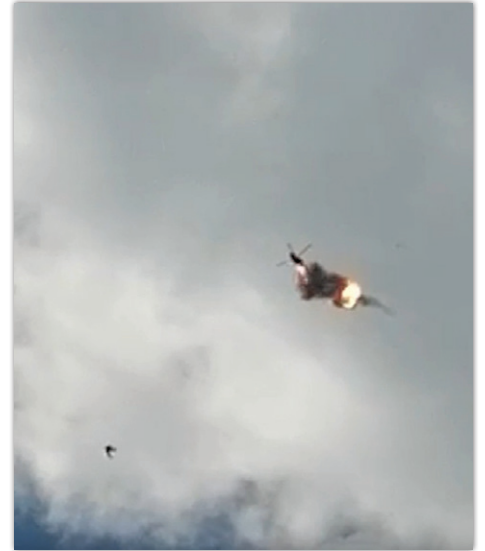
and fully operational again in a few days. The activity of the Patriot system on the night of May 16 was also captured in videos that were posted live on social media. Recognizing the importance of Patriots for the protection of its cities, Ukraine's secret service cracked down on the bloggers who posted the videos. This is because they can provide the Russians with information about the current location of the batteries, which is very sensitive. The Russians did not give up for a whole month. At the end of May came a series of attacks that took place at night, during the day, and then again at night – that is, virtually continuously. They had hardly attacked during the day until then. They also tried different tactics. For example, in addition to the different directions and heights of the attacks, cruise missiles and suicide drones circled the site near Kiev, just to lure the air defense forces into action. However, none of this led to success. Other cities, however, are not as well protected, and this is causing damage and loss of lives in them.

Black Day of the Russian Air Force

However, despite all the workload, Ukraine was able to use its air defence systems to attack, or rather to set a trap for the Russian air force. The latter has made a habit of attacking with glide bombs from its territory into northern Ukraine with impunity. However, this changed on Saturday May 13, which became a truly black day. In fact, an entire strike group preparing to launch its deadly payload on Ukrainian targets was shot down in the Bryansk region.

Two Mi-8 helicopters, a Su-34 bomber and a Su-35 fighter hit the ground in succession. They all went down engulfed in flames and smoke. Photographs of the wreckage showed shrapnel holes and all nine crew members of these aircraft lost their lives.

To this day, it is unclear what exactly happened. Initial reports spoke of a mistake by the Russian air defenses, but official Russian sources said that the destruction of the Russian



A falling Russian Mi-8MTPR-1 from the 15th Army Aviation Brigade shot down in Bryansk Oblast on May 13.



Burning wreckage of a Russian Mi-8MTPR-1 on the ground near the village of Klinky.

air force machines was the work of saboteurs and launched a large-scale ground operation to catch them. Unofficial Russian military bloggers, however, have been writing from the beginning



A photo of this Russian Mi-8, which had crashed sometime earlier under unknown circumstances, also surfaced during May.



A Russian Su-24 that had been grounded for a long time in Novosibirsk.

about the trap set by the Ukrainian air defenses. Indeed, the Russian air force had let its guard down and was always conducting operations from its territory in the same way. The Ukrainian side has studied the Russian procedures thoroughly and has brought air defense missiles to the border of the Chernihiv region. The next time the Russian air force attempted an attack, it shot down the entire group involved. Officially, however, the Ukrainian side is silent about the whole incident. It is clear that it does not want to provide any information to the enemy.

The Russian group consisted of a Su-34 bomber preparing to drop guided glide bombs on the Chernihiv region just inside the border. At least one of the Mi-8 helicopters was in the electronic warfare version and was tasked with jamming the Ukrainian radars, creating a brief window that would allow the Su-34 to carry out its deadly mission unimpeded. The Su-35 provided fighter cover for the entire group. It is possible that the second Mi-8 was also the electronic warfare version, or was ready to rescue crew in case of an aircraft being shot down.

The first Mi-8 crashed in flames after being hit near the town of Klincy, about 50 km from the Ukrainian border. Three crew members were killed. One woman on the ground suffered burns from the falling burning debris. Another Mi-8 crashed in the Unechsky district east of the town of Klincy. Again, the entire crew of three was killed. A Su-34 crashed near the village of Nizhneye, south of Klinty, close to the Ukrainian border. Both pilots lost their lives. Finally, the pilot of the Su-35 was killed near the village of Suretsky.

It was the worst day for the Russian Air Force since March 5, 2022, when two Su-34s, two Su-30s, two Mi-24/35 helicopters and one Mi-8 helicopter were visually confirmed downed in Ukraine. Heavy casualties are also known to have occurred in the repeated Ukrainian shelling of the Russian-occupied Chornobaivka airfield

in Kherson area. The worst day for the occupiers there was March 16, 2022, when at least seven Russian helicopters were destroyed, according to satellite images.

More Russian losses

In addition to this major incident, however, the Russian Air Force lost several other aircraft during the reporting period. On Wednesday, May 10, one Kamov Ka-52 was shot down in the Avdiivka area in the Donetsk region. Both crew members were killed. At the same time, the Ukrainian 110th Brigade reported a helicopter shoot-down in the area, apparently the same incident.

On Friday May 12, a Mi-28 helicopter crashed in the Dzhankoy district of Crimea. The cause of the crash was apparently a technical failure. The least information is available on the loss of a Ka-52, which occurred on Monday May 22 in Russia's Belgorod region near the border with Ukraine. The circumstances of its crash are not known, all that is known is that both pilots were killed this time as well.

Among the casualties related to the war in Ukraine, one Su-24 may be counted, which was damaged on the ground of an aircraft factory in Novosibirsk, far away from the front line. The undercarriage of this aircraft was set on fire and damaged in a guerrilla attack on Monday May 8. However, it was there for a long time parked and not used. It was therefore more of a symbolic attack.

Storm Shadow in action

On the Ukrainian side, only one helicopter was damaged in combat missions in May. The Mi-24 returned to its base with a large hole in the vertical fin on Wednesday, May 17.

Other Ukrainian losses are related to the delivery of new Western weapons. This is a bit of a mysterious story, so we'll take a closer look at it. On Thursday, May 11, British Defense Secretary Ben Wallace confirmed that Ukraine



A decommissioned Su-24 was damaged by landing gear ignition on May 8.



Ukrainian Mi-24 damaged on May 17 with the hole in the vertical fin.



ADM-160 MALD decoy target used on 12 May in the attack on Luhansk.

had received Storm Shadow cruise missiles, capable of hitting targets at a range of more than 250 km. This range is enough to hit virtually all Russian-occupied territories in Ukraine. Wallace praised the scientists and engineers who made it possible to integrate them onto older Soviet-era aircraft used by the Ukrainian Air Force – in this case, the Su-24.

Storm Shadow missile was jointly developed by France and the UK in the 1990s and entered service in 2002. The French use the name SCALP-EG. The missile has a length of 5.1 m, a span of 3 m and a weight of 1,300 kg. Once launched, it drops and follows the terrain at low level. It is powered by a jet engine, with which it reaches a speed of Mach 0.8–0.9. It is guided by GPS and target information is entered on the

ground before launch. Once launched, it cannot be changed. Just before the target, the missile starts to climb, drops the warhead cover and is guided by an infrared camera that is hidden under this cover during approach. Thanks to it, it recognizes the target it has entered. If it can't find it, it aims for an open area to limit collateral damage. Storm Shadow is designed to destroy fortified targets like command posts, airfield shelters, ammunition depots, as well as ships and bridges. It has a twin warhead – the first punches a hole in the target, the second detonates with a delay until inside.

The missiles were successfully deployed by Ukraine the following day. On Friday May 12, they were used to destroy a fuel depot in the city of Luhansk, which until then had been out of range of Ukrainian weapons. Moreover, the depot was not destroyed by a direct attack – the missiles flew in an arc, turned behind Luhansk and struck unexpectedly from behind, from the east. Another interesting means supplied from the West, the ADM-160 MALD deception targets, were also used in the attack. These flying decoys amplify their image on radar and can pretend to be attacking aircraft of various types, or cruise missiles. They thus draw the attention of air defenses and allow a real attack vehicle to stealthily penetrate.

Ben Wallace undoubtedly had a hand in delivering these powerful weapons to Ukraine. His colleague Oleksiy Reznikov therefore gave him a postcard of a Su-24 with Storm Shadow missiles at a joint meeting. Reznikov published it on Thursday, May 25, in an unretouched form. This is strange because the Ukrainian Air Force tries to remove the aircraft's identifying features in all published images. In this case, both the aircraft number and unit insignia were left. The postcard is also decorated with a large

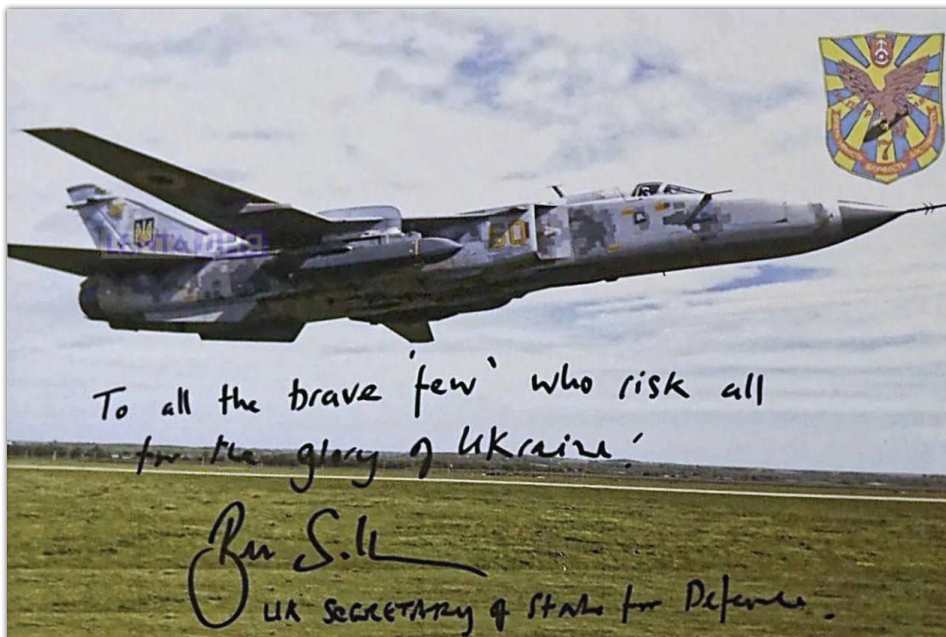
emblem of the 7th Tactical Air Force Brigade. It did not take the Russians long to launch a major missile attack on Sunday May 28 on the Starokostiantyniv airbase in Khmelnytskyi region, which is home to this unit. Stranger still, the Ukrainians, who almost never report their losses, immediately confirmed the destruction of five Su-24s. Thanks in part to these oddities, there was speculation that the destroyed planes were in fact grounded, unairworthy wrecks, and the whole action was just a decoy for Russian missiles.

Drones over the Kremlin

Attacks similar to those on Luhansk have been taking place all month across the occupied territory in preparation for the Ukrainian offensive. In addition, however, drone strikes deep inside their territory have also attracted the attention of the Russians. On Wednesday, May 3, two drones even attacked the Kremlin directly. Both were reportedly shot down by air defenses, but one crashed into the dome of one of the buildings and caused a small fire. Moscow was also targeted at the end of the month, on Wednesday May 31. According to the official Russian statement, eight drones were attacking, five were shot down and three were disabled by jammers. What is certain is that some of the "disabled" or "downed" drones crashed on homes in an upscale neighborhood in the south of the Russian capital.

To distract attention, Russian legions operating in Ukraine also launched attacks across the border in late May. Their aim is to overthrow Putin, but these are strange bedfellows who are close to neo-Nazis. However, they are up to the task of unleashing chaos in the border area. The Russian border guards were unable to stop them, so they occupied several villages near the border. They had to withdraw troops from Ukrainian territory and deploy the air force to dislodge them. However, this did not prove very successful. An attack by a pair of Su-34s on an occupied border guard building was caught on a security camera, and the Russian pilots certainly won't put that mission behind them. The planes attacked with a ground flight with unguided bombs and instead of hitting the building, they properly plowed the field far away from it.

Despite the intense fighting, both sides continued to exchange prisoners on a regular basis. Some of these were also interesting from the point of view of the air war over Ukraine. For example, on Saturday, May 6, it was announced that 45 soldiers had returned to Ukraine, including 42 defenders of the Azovstal steelworks in Mariupol. They were exchanged for three Russian pilots. In this case, therefore, the ratio for the exchange of prisoners was one to 15.



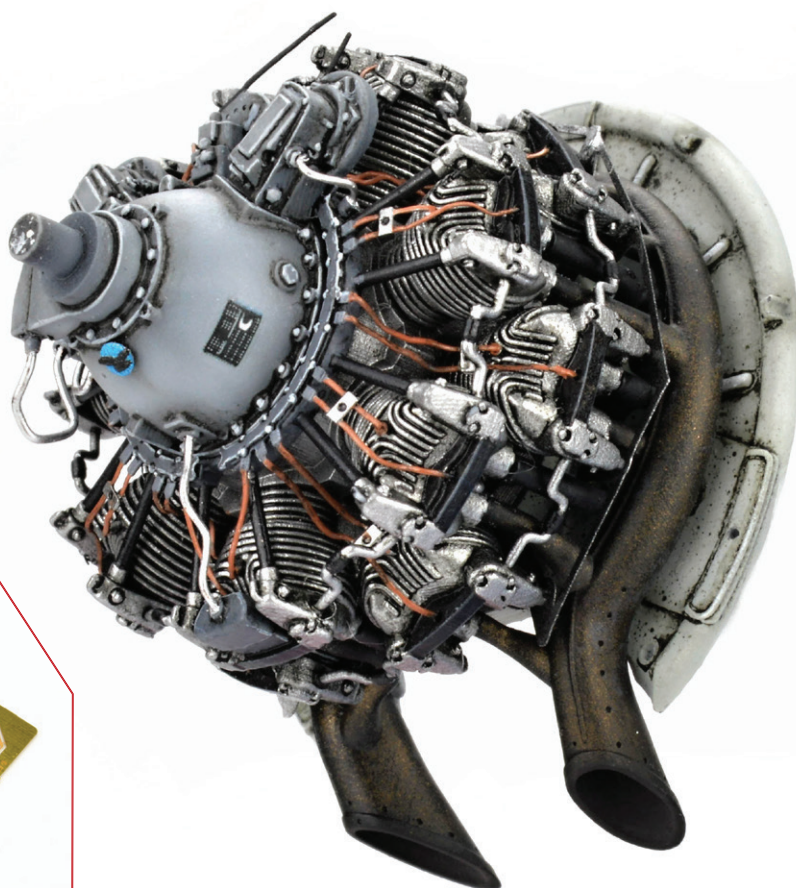
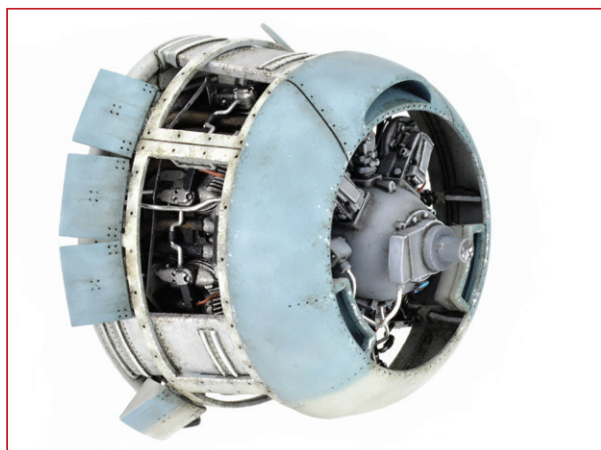
Ukrainian Su-24 with Storm Shadow missiles on a postcard signed by British Defence Secretary Ben Wallace.

STEP **BY** STEP

F4F-4 engine PRINT 1/48

#648828

built by **Jan Baranec**



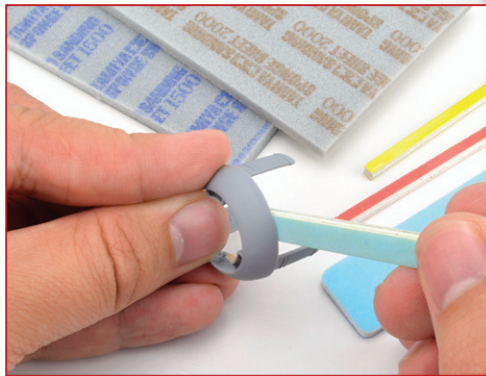
◆ Contents of the F4F-4 Wildcat engine set, composed of 3D prints.



◆ Individual parts can be separated from their supports using a razor saw.



◆ I separated the smaller parts from their supports using high-quality cutting pliers.



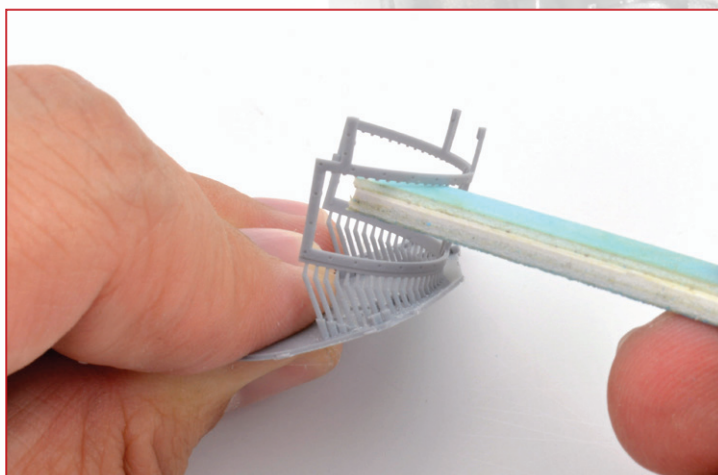
- ◆ The rest of the supports can be cleaned most easily with modelling files or sanding sponges.



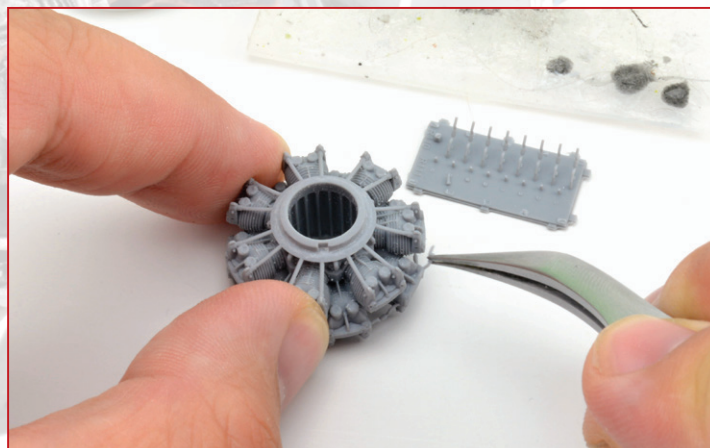
- ◆ If you can see a slight layering on some sections of some parts, it can be sanded with 1500 grit or finer sanding sponges.



- ◆ For more complex parts where sanding isn't really an option, the light raster can be treated by scrubbing with a coarse brush dipped in pure isopropyl alcohol.



- ◆ I clean some of the more fragile parts partially attached to the supports for better handling. The parts do not twist as much and damage to them is minimized during cleaning.



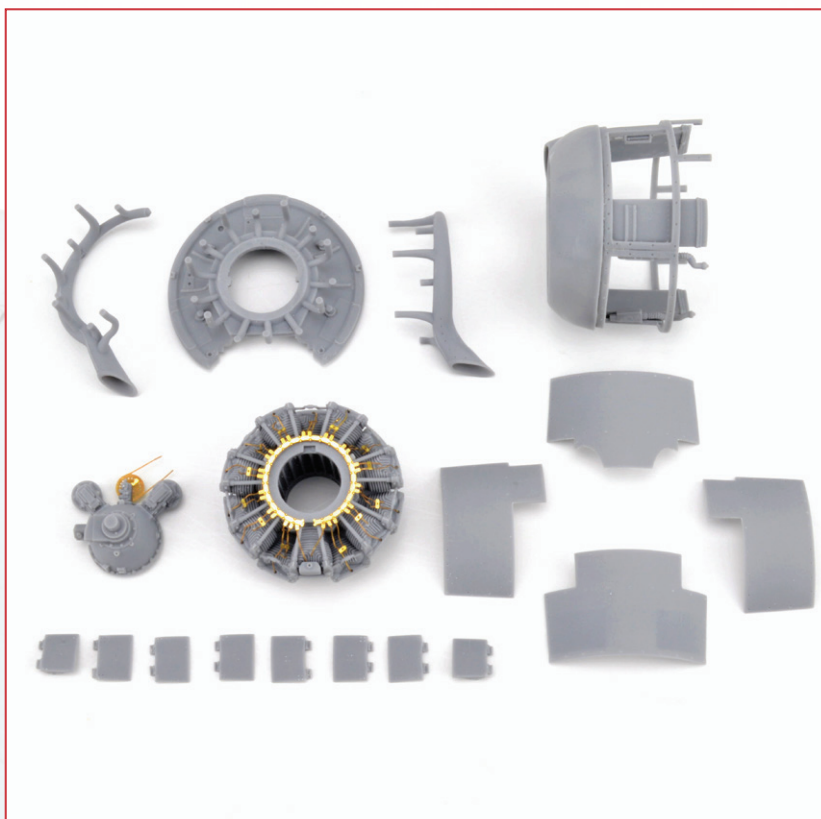
- ◆ Medium or thick CA glue is used to affix the smaller parts.



- ◆ Due to the high accuracy of 3D printed parts, individual components can first be assembled dry and then thin glue can be applied, allowing capillary action to do its thing.



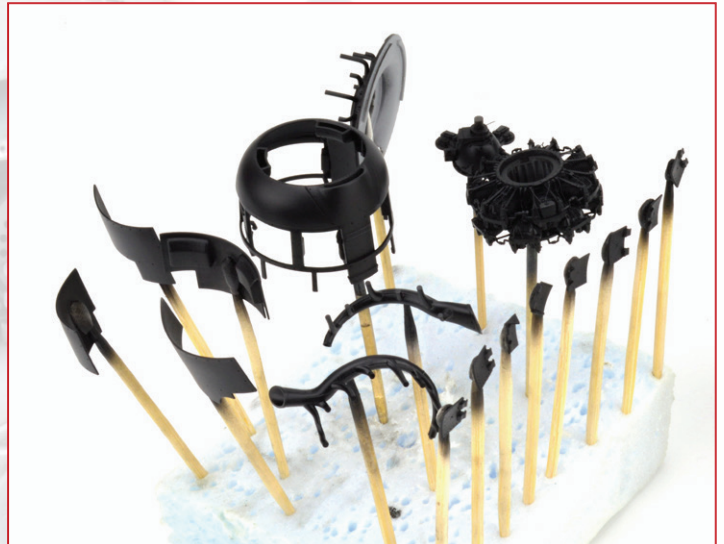
- ◆ Excess glue can be removed with a debonder.



- ◆ Individual parts and subassemblies ready for a first coat, consisting of Mr. Finishing Surfacer 1500 Gray.



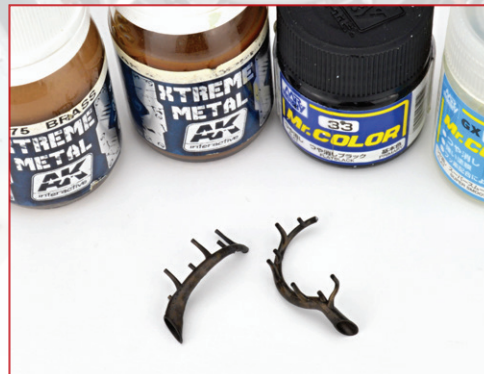
◆ Before applying the surfacer, I sprayed all the etched parts with Mr. Metal Primer to improve adhesion of all subsequent coats.



◆ As a base color, I chose Mr. Black Spray Putty Finishing Surfer 1500 grit.



◆ I sprayed the engine body including its cylinders with Gunze Silver from the Super Metallic line, specifically Super Fine Silver SM01.



◆ The exhausts were sprayed with a combination of highly diluted AK Interactive Bronze and Brass metallic paints in an irregular pattern. If this effect is overdone, it can be toned down with heavily diluted black paint. The final step was spraying the exhaust pipe with Gunze GX114 Matt varnish.



◆ The inner surfaces of the parts were painted light grey according to the instructions, using Gunze C325.



◆ The uniformity of the basic spray can be broken up via lightening the gray color by adding a few drops of off-white C069 and creating a mottling effect.



- ◆ The outer surfaces were painted with Gunze C367 Blue-Grey mentioned in the instructions.



- ◆ Again, these blue-grey surfaces were toned down by spraying a mottle using C367 with a few drops of off-white C069.



- ◆ As per the instructions, the reducer of the drive unit was sprayed with Gunze C306 Grey.



- ◆ The interiors of the larger surfaces of the housing were lightened by spraying with a mixture of Gunze C306 and off-white, C069.



- ◆ All relief, corners, screws and lines were treated with a very thinned transparent smoke color using Gunze C101.



- ◆ Manifolds for the individual pistons were painted black using an AK Interactive brush.



- ◆ I painted the protective jacket of the ignition system cables using a brush with a mixture of red (Mr. Paint) and earth brown (AK interactive 3rd generation).
- ◆ The distributor is glued to the engine body and needs to be painted with Gunze C306. I mixed a similar shade using black (AK Interactive) and dirty white (Vallejo) with the intention of brushing this on.



- ◆ The intake ducts were brushed on with silver paint (chrome) from Mr. Paint.



- ◆ Everything was clear coated with Gunze GX100 Super Clear III gloss varnish to provide protection against pending weathering with oil paints.



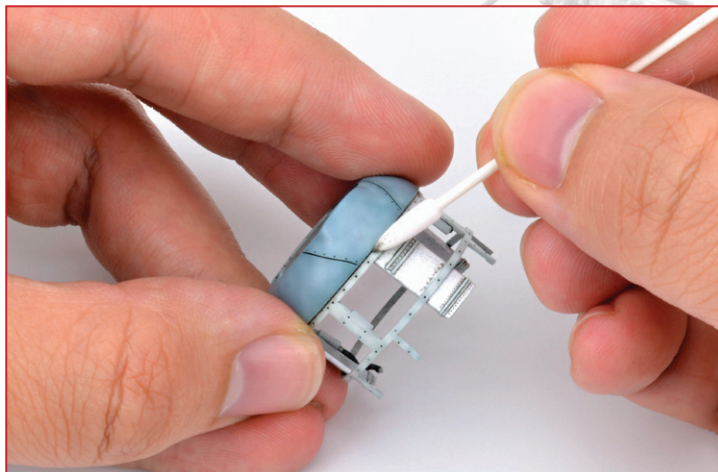
- ◆ The production label in the form of a decal is part of the plastic kit and not the engine set. For better adhesion, I applied it using Gunze's Mr. Mark Setter.



- ◆ I washed the silver parts of the engine with diluted black oil paint from Ammo.

- ◆ For the other parts, I mixed a wash of black and dark brown oil paints (Ammo Oilbrusher).





- ◆ Excess oil paint can be wiped off using various cotton swabs or it can be washed away with a brush dipped in oil paint thinner.



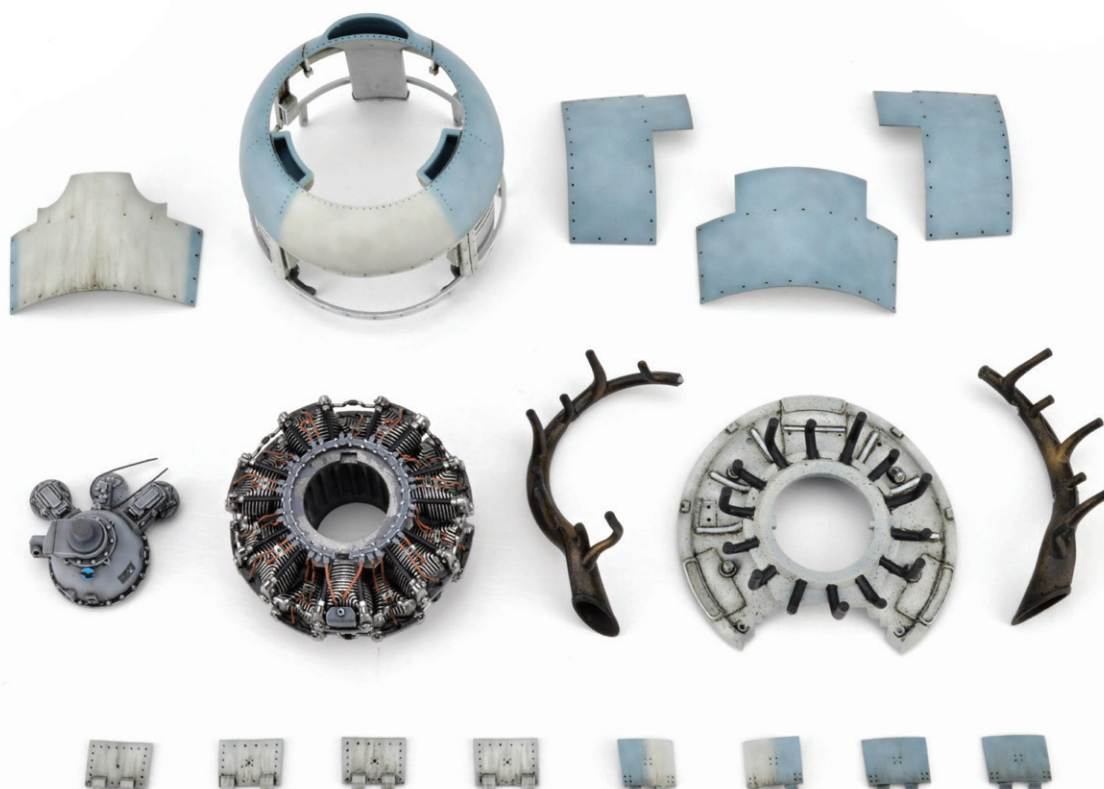
- ◆ Using a splatter brush dipped in a thicker mixture of black and dark brown oil paints, the weathering over the lower part of the engine cowl was simulated.



- ◆ The weathering was sealed with matte varnish before final assembly. I did not use the matt varnish on the metal parts of the engine, so as not to destroy the effect offered by the silver color.



- ◆ The last step before the final assembly was to paint the edges of the reduction gear with a light gray color.



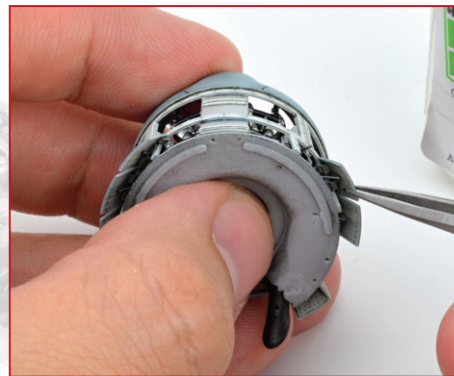
- ◆ Finished individual subassemblies and components before gluing.



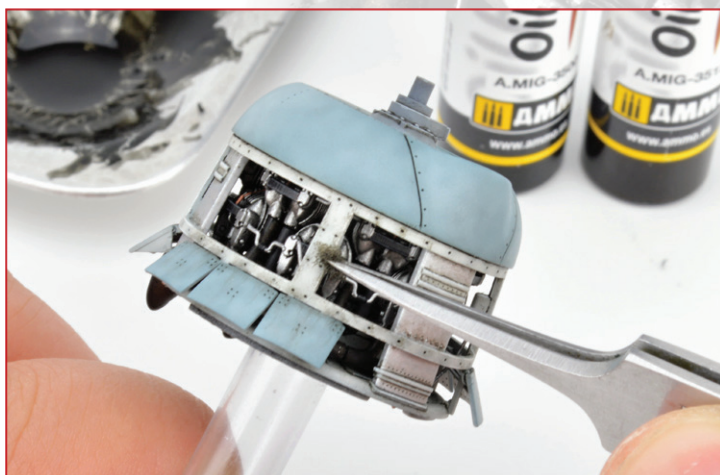
◆ According to the instructions, copper wires were shaped, glued in place and then painted, along with the remaining piping and wiring, silver.



◆ After assembling the main parts, the actuating rods of the engine cooling flaps were addressed.



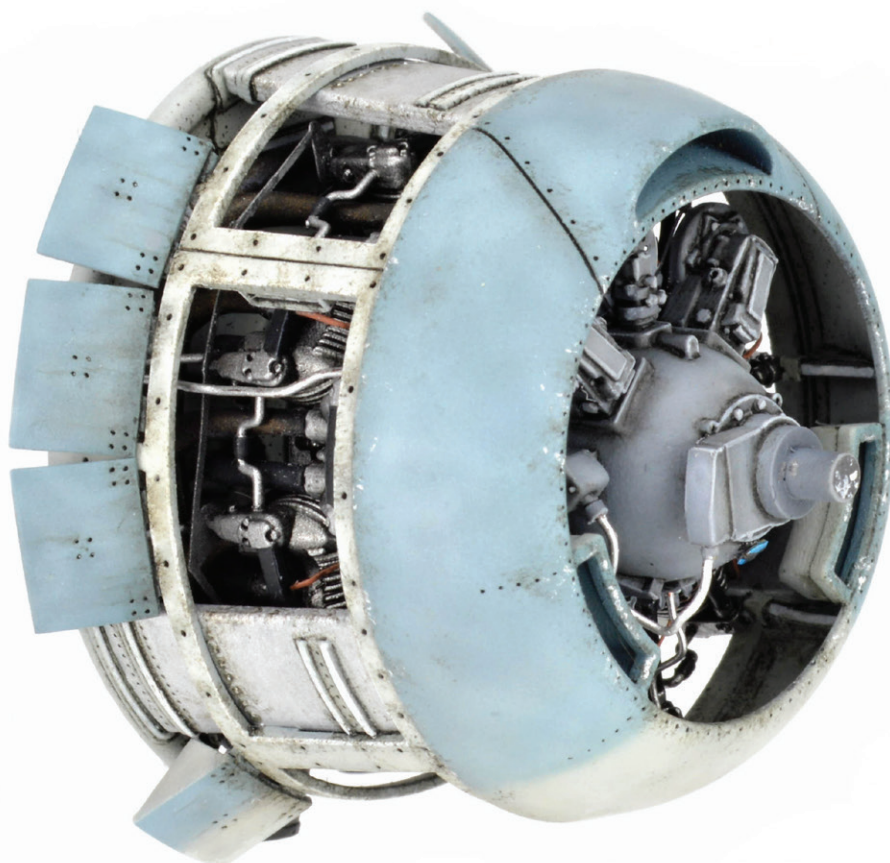
◆ The cooling flaps were attached to their appropriate places according to the instructions using instant (CA) glue.

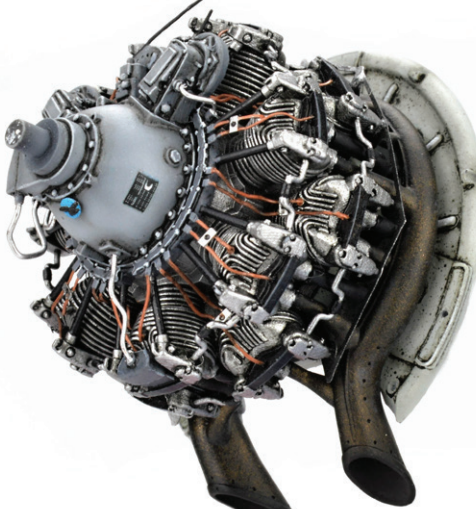
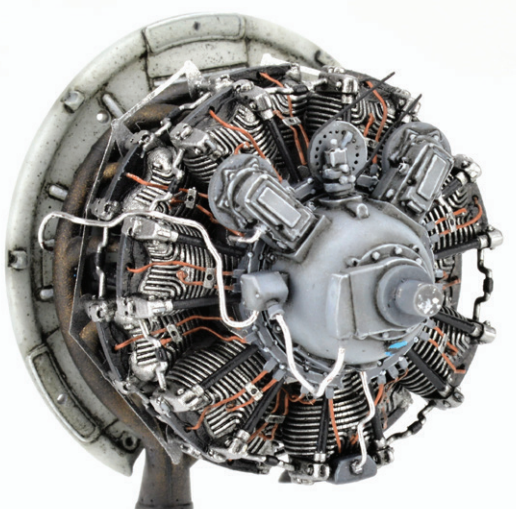
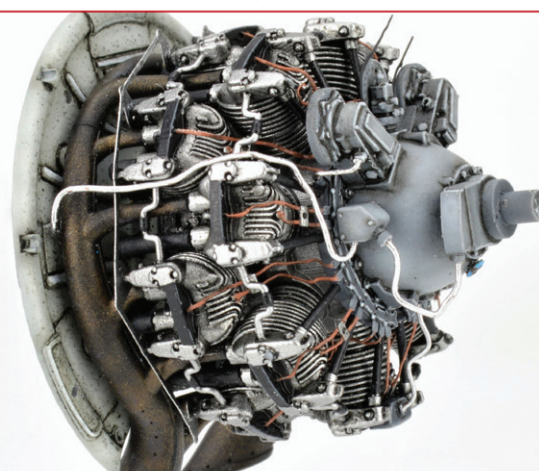
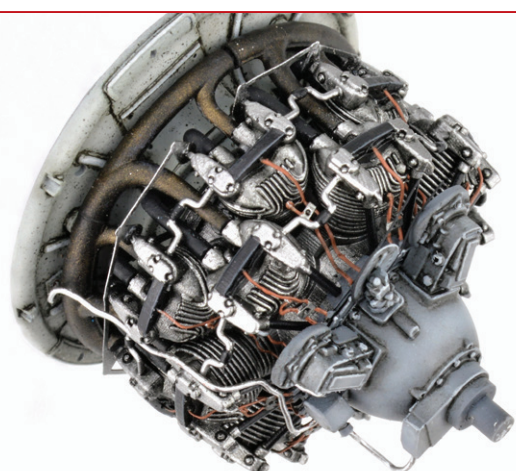


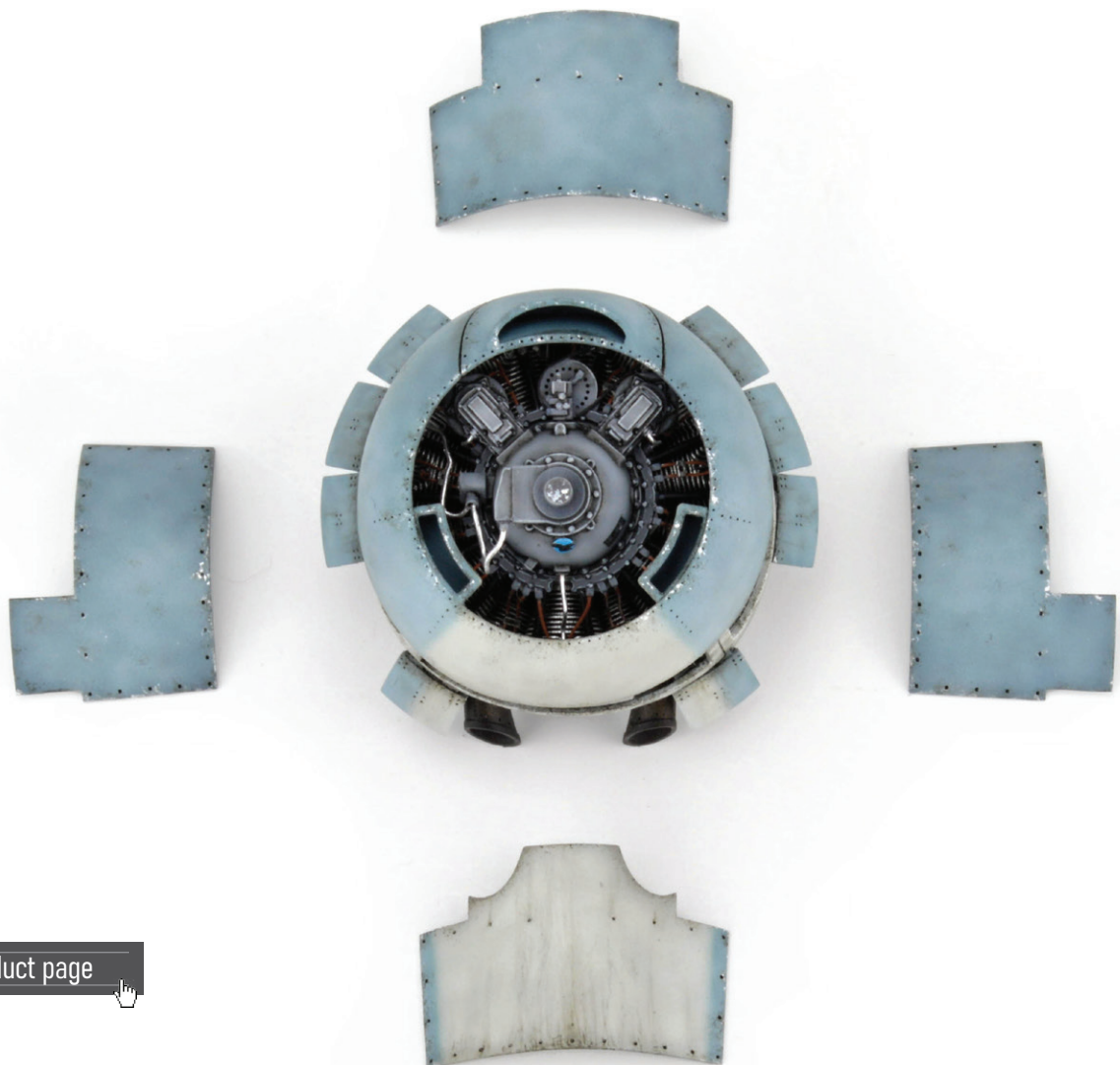
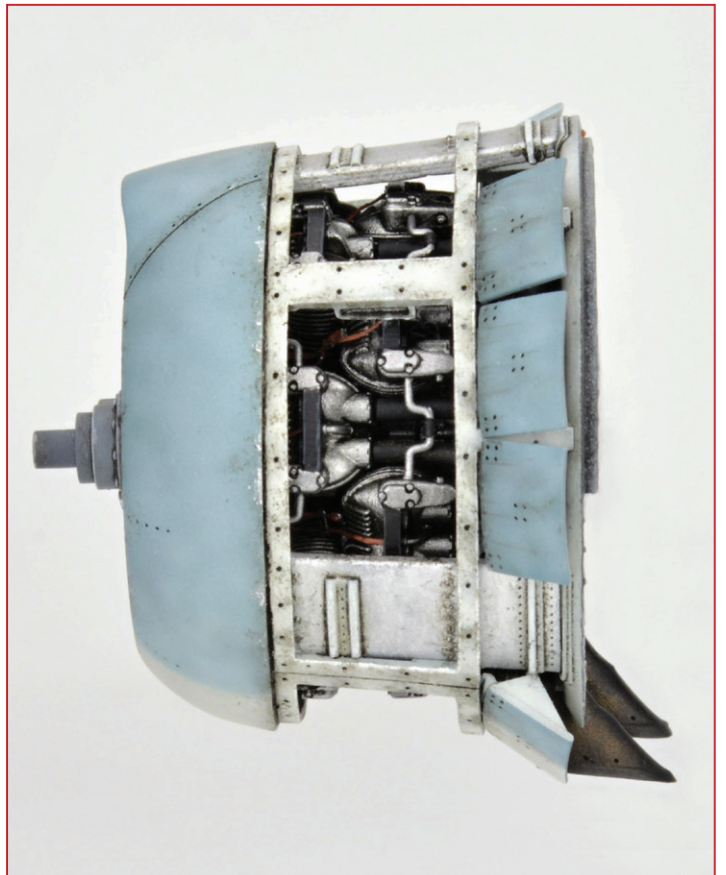
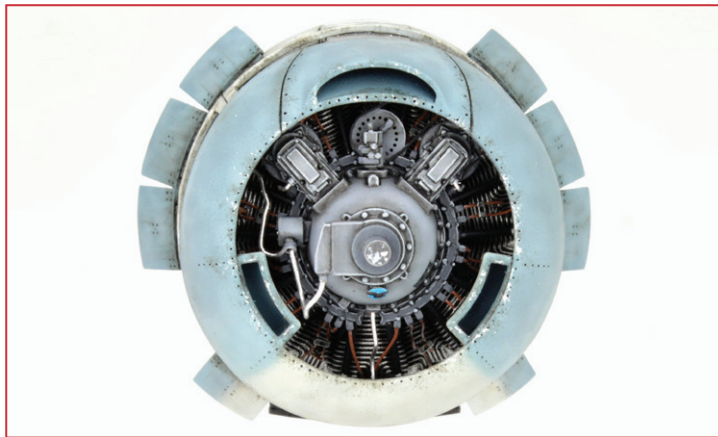
◆ Weathering of adjacent surfaces was accomplished using a weathering sponge, lightly dabbing on a mixture of black and dark brown oil paint. If you overdo this effect, it can be dampened using a dry or lightly moistened brush with oil paint thinner.



◆ The last step was to create abrasions and scratches with a thin brush and silver paint.







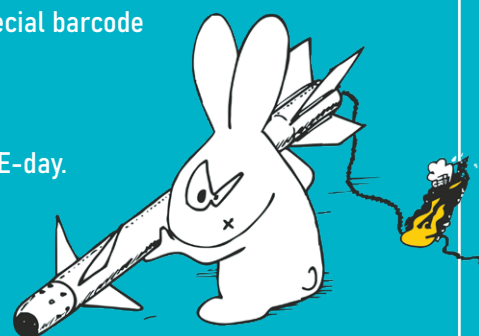
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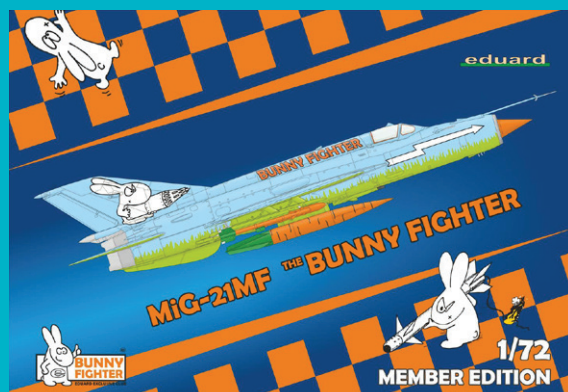


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MiG-21MF + T-shirt 1/72

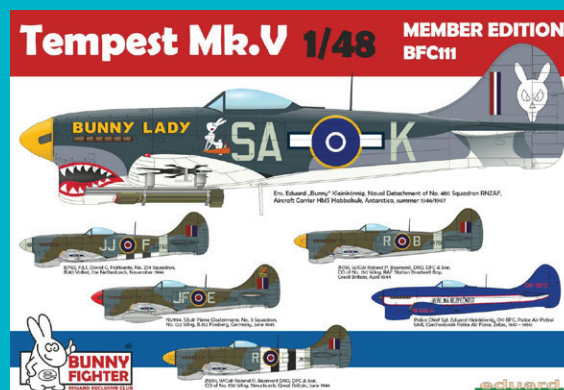


BOX CONTENT:

Plastic parts, Marking options 4, Decal Set, PE parts, Mask, Brassin parts (undercarriage wheels, cockpit, exhaust nozzle, FOD).



Tempest Mk. V + T-shirt 1/48



BOX CONTENT:

Plastic parts, Marking options 6, Decal Set, PE parts, Mask, Brassin parts (two different types of wheels, landing flaps, dust filter with eyelid, intake ring and RP-3 60lb rockets), 3D decals for main and sidewalk instrument and control panels with photo-etched details and seat belts.

IRON BUNNY 2023

Our Premiere that was also to be our Swan Song

Text: Lukáš Loučka

Photo: Ján Hitka

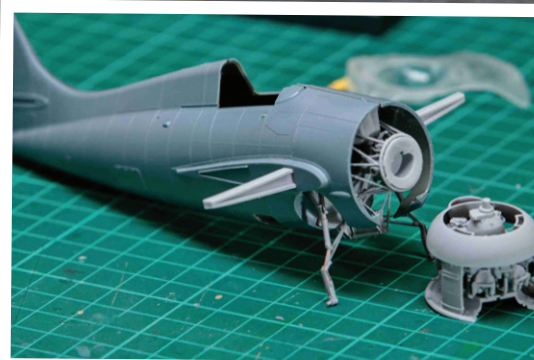
The Iron Bunny competition has held my attention since its first year and I watched with enthusiasm the performances of the individual teams who were tasked with building a competition model in 24 hours. I missed the annual event in the years that it was canceled due to covid. But this year was not to be limited by anything and I was pleased when Honza Novotný and Rob Szwarc invited me to join a newly formed team with Miloš Völkle. I agreed without hesitation. Of course, we had to choose a befitting name for our team, so the “Plastic Killers” was unanimously agreed upon.

Compared to previous years, the enthusiasm of the participants subsided a bit, and so we were able to register our team without any problems. It even happened that the starting field was incomplete and two places remained free. Coupled with the rising prices of rent, services, accommodations and other pieces of the cost mosaic and worries associated with such an event, Luboš Kuna, the organizer of the competition, decided that this year would be the requiem for Iron Bunny and the competition would end for good.

That's why we were happy to be able to experience this modeling equivalent of the 24 hours of Le Mans for ourselves. Honza, who has competed in the Iron Bunny contest in the past, tried to explain to us three novices what kind of preparation we should have for the competition and what to train for. Because as they say, hard on the training ground, easy on the battlefield.

The competition itself took place in the westernmost part of the Republic, and the journey itself for the boys from Karviná and Ostrava was really challenging – 600 km across the Czech Republic. At this time of the year, Bublava attracts tourists more than modelling does, but the beautiful weather and surrounding nature were just a bonus to create an overall great impression of the competition. Friday evening was reserved for familiarization, briefing, dinner and a quiz. During the briefing, Luboš Kuna informed





us that the model we would be building would not be disclosed until the morning, and until then the type of aircraft was kept secret. So our planned preparations could not take place and the morning start was really rough! He also explained to us the system of changing team members, using breaks and meetings. Each team member was allocated a total of 12 hours to be spent on individual tasks. Monitoring the exact time spent on said tasks was done using chips, so it was impossible to overstay one's welcome.

Saturday morning was dominated by a healthy nervousness and anticipation of the disclosure of the build topic. At 8:30, it was clear that the model for 2023 was the Wildcat from Eduard. Since the goal was to score as highly as possible, it was appropriate to dress it up as much as possible. So we went with the range of accessories that were available – Brassin cockpit, 3D printed engine and gun bays, etched flaps, undercarriage bay, machine gun barrels, undercarriage wheels and bronze undercarriage legs.

Our strategy was that the more capable members of the team would deal with the preparation of additional parts for the build, gluing and prepping for the handover to the buttoning up of the fuselage crew. They had 4–5 hours to do this, and Miloš and I set off for a local tradition.

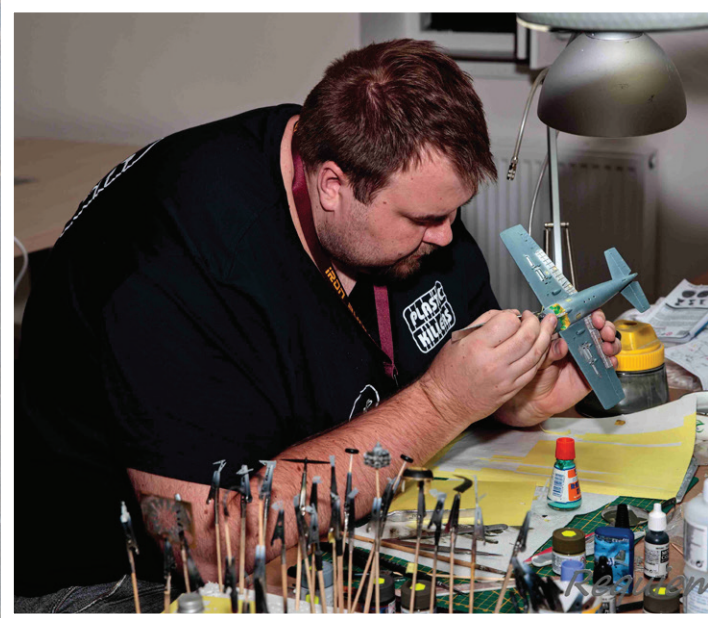
An obligatory part of Iron Bunny is the so-called “Bublavský bahňák” (can be translated as Bublava's Muddy Boy because of the years the competition was held in autumn). This is an orientation “run” with four checkpoints. By conquering each station, you receive a component or a sprue from the competition kit. All in all, it was an about 11 km pleasant walk with time left over for a cold beer at a pub that was conveniently located along the route.

After making the grade and acquiring the required missing parts from the kit, it was time for a short rest before taking our shift. I have to once again praise Robert and Honza for what they both managed during their initial building phase. Even though we were always working with the feeling that we were not keeping up, we had to pay attention to every detail as well as cleanliness and geometry of the build, which have a profound impact on the final score. Time flew by at a frantic pace, and looking at the surrounding tables, I sometimes wondered if we were falling too far behind. During the night, the organizers also prepared a blackout, or a simulated power outage, and spraying had to be done with a head mounted flashlight. Fortunately, this didn't last too long and the lights were soon back on. After finishing my last shift at 4:30 in the morning, I barely crawled into bed with the resolution that I would definitely be up to finish the model and kept my fingers crossed for the boys. Unfortunately I woke up at about 11:30. So the only thing I checked on the phone was whether or not we had time to hand over the finished model. After making sure, I rolled over onto my other side and didn't wake up until lunchtime. After lunch, the room with the models and their score sheets was made available. To our great delight, our Wildcat took first place with a score of 81.5 points (out of 100), which is a great result for a 24-hour build. According to the organizers, we even got the most points ever. So the euphoria was certainly there. With the results announcement, we had a reason to be even more happy, namely that Luboš Kuna decided to give the contest another chance and that the competition will take place next year and we will have the opportunity to participate in it again.

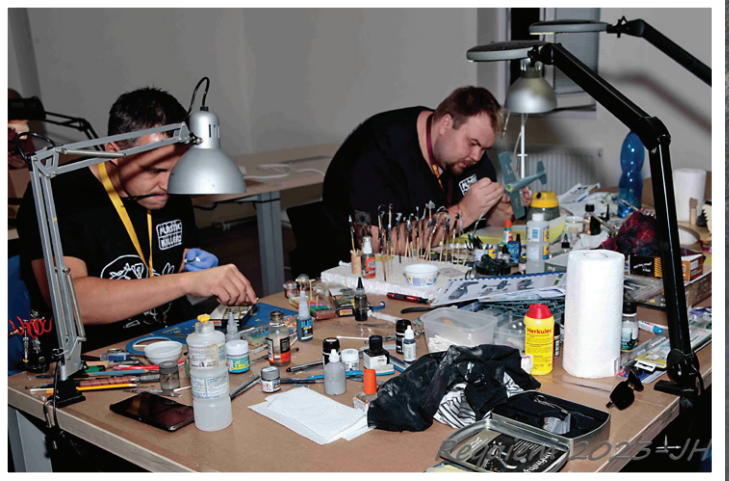
And I am already gearing up for participating and our goal will be to enjoy it as much as we did this year. The entire organization of the competition was top-notch. The Iron Bunny team who looked after us, cooked for us, entertained us and were with us the whole time deserve real credit! Everything was perfect and I would like to thank them all once again. Thanks also must go out to our colleagues from other teams and also to Vladimír Šulc, all of Eduard and the judges, without whom this competition would not be the adrenaline rush it is! And that is something that is the exact opposite of normal plastic modeling. So thanks again everyone and see you in a year!



FINAL



Requiem 2023-JH



2023-JH



Requiem 2023



THE WINNING MODEL





Frosty battlefield

Text: Jan Bobek

Illustration: Marek Ryś



American General Billy Mitchell told Congress in 1935: "I believe that in the future, whoever holds Alaska will hold the world. I think it is the most important strategic place in the world." Because the Kuril Islands could be invaded by Soviet troops with American support, the Japanese command wanted to make cooperation between the U.S. and the USSR as difficult as possible if Stalin entered the war against Japan. Therefore, the Japanese command focused on the Aleutian Islands, some of which they wanted to conquer, to establish bases on, and then attack American supply and military vessels. The attack on the Aleutians and the landings on Attu and Kiska in June 1942 were not an action to divert attention from the attack on Midway, as it is sometimes stated. It was a strategically equivalent part of an invasion operation that had northern and southern objectives, with reserve forces operating roughly halfway between the Aleutians and Midway.

After the Japanese carriers sailed from the Aleutians, the Tōkō Kōkūtai was tasked with fighter cover for the invasion force. Among other seaplanes it operated A6M2-N Rufe fighters. The fighter unit began operations in early July 1942, and was later detached to form the 5th Kōkūtai, redesignated Kōkūtai 452 towards the end of the year.

The weather in the Aleutians is cool and very changeable even in summer, characterized by low clouds. American flying boats and two- and four-engine bombers

soon began attacking Japanese forces. Because of the low altitude, their raids were not only covered by fighter escorts, but were preceded within minutes by fighter attacks against air defense positions. These operations involved pilots of Lightnings, Airacobras and also Curtiss P-40s of both the US and Royal Canadian Air Forces.

Rufes were initially moored in the shallows and maintenance was done in largely improvised conditions on shore. A hangar was later built on Kiska Island, but the Allies meanwhile quickly built new airfields on the Aleutians. While defending their bases, Rufe pilots often fought against superior numbers, but were also tasked with anti-submarine patrols and attacks on Allied airfields. The Rufe unit shot down fifteen aircraft certainly and five probably from the summer of 1942 to March 1943. In less than eight months of its combat deployment, it operated against the enemy during sixty days, in many cases conducting multiple actions in a single day. Twelve Rufes and ten pilots were lost in aerial combat. Another 23 Rufes in the Aleutians were written off because of malfunctions and weather.

Among their opponents were P-40 pilots from the 11th FS, 343rd FG. In 1942, they operated out of Fort Glenn on Umnak Island and 11th FS was one of the units that faced a raid by Japanese carrier planes during the attack on Dutch Harbor. Initially, 11th FS was armed with Curtiss P-40Es, which are listed in its reports until August 1943. From

September 1942, it also used P-40Ks, and after August 1943 unit's airmen were flying P-40Ns. While operating in extremely difficult conditions, 11th FS airmen scored six victories and eleven of them did not return from combat. During World War II, nearly 100 more 11th FS aircraft were damaged or destroyed due to accidents. In 1942, 11th FS was led by Lt/Col John Stephen Chennault, son of the legendary Flying Tigers commander. And because the apple didn't fall far from the tree, tiger-inspired paintings also appeared on the noses of 11th FS Curtisses, but they were more prominent than those of his father's American Volunteer Group.

John S. Chennault, like his opponents, faced extremely adverse conditions for combat. He scored one Rufe seaplane on September 25, 1942. Both sides took pride in their ability to accomplish combat missions in the Aleutian area. After the war, Chennault commented in a unit history, "As long as I live, there'll never be another like the "We'll Be There" Squadron. We went through so much and were so ill prepared in everything but morale, but we had that. The hardships the men had to put up with and the manner which they accepted them made you proud to be an American."

John S. Chennault, who later served in the Korean War, is buried next to his father in Arlington Cemetery.

For more details on the Rufe and its deployment to the Aleutian area, see the [April 2023](#) issue of INFO Eduard magazine.

Back in Russia

Text: Jan Bobek

Illustration: Antonis Karydis



Jagdgeschwader 26 "Schlageter" is best known for its deployment in Western Europe, which lasted continuously from September 1939 until the end of the war. However, in 1941 its 7th Staffel was deployed for several months in the Balkans, Sicily and Africa. In August 1942, a specialized high-altitude 11./JG 26 was established in France, but in November it was transferred to Italy, then Sicily, and subsequently became involved in fighting in North Africa. In early 1943 it was incorporated into 11./JG 51.

The largest part of JG 26 to separate from its parent unit was the contingent that arrived in Russia in early 1943. This was again the 7./JG 26 under the command of Hptm. Klaus Mietusch and 1./JG 26 led by Maj. Johannes Seifert consisting of a Stab and three Staffeln. Their Fw 190 As were then a novelty on the Eastern Front. JG 26 was backed up by JG 54 "Grünherz", which was familiarizing itself with the Focke-Wulfs at this time. Mietusch with his 7./JG 26 joined 1./JG 54 on the Leningrad front. As a replacement, 4./JG 54 moved to France and continued on the Bf 109 G type. Seifert's 1./JG 26 began operating from the Relbitsy base west of Lake Ilmen in early February 1943. Technical support was provided by ground personnel of 11./JG 54, whose pilots, without their Bf 109 Gs, moved to Western Europe as well.

In mid-February 1943, 1./JG 26 performed attacks against Soviet infantry massing around Lake Ilmen. The pilots completed up to ten sorties a day over several days,

and the enemy troops eventually withdrew. Seifert's 1./JG 26 first encountered Soviet aircraft on 16 February west of Demyansk. Airmen from Stab and 1./JG 26 claimed eleven Il-2s without loss of their own.

The first encounter with the Soviet fighters showed that after two years of fighting these had learned a lot and handled well both their new domestically produced aircraft as their machines delivered under Lend-Lease. The battle occurred on 17 February south of Lake Ilmen. 1./JG 26s clashed with a formation of Il-2s with fighter escort identified as Yaks and P-40s. The fighter escort prevented the loss of the bombers, one of the German pilots crashed into the ground during the engagement, another was shot down by a fighter, and the third pilot was shot down by flak. Four more Fw 190s sustained damage, one of which was so severe that the machine had to be written off. Pilots from 1./JG 26 reported three Curtiss P-40s shot down.

The climatic and combat conditions on this battlefield were very different from what the Schlagetergeschwader airmen knew from their time in France. Air battles were usually fought at lower altitudes and in smaller formations. Fighting often occurred over the front area, where Soviet anti-aircraft artillery was also a tough opponent. One of the airmen who had experience with this battlefield was the commander of 3./JG 26 Hptm. Rolf Hermichen. At the beginning of the war he served as a Bf 110 pilot in 6./ZG 1, which was later redesignated 9./ZG 76 and

then 6./SKG 210. He achieved four victories in the Battle of France and added three more during the Battle of Britain. Before the attack on the Soviet Union, he scored one more victory in Norway. In the fighting in the East he performed many strafing attacks and also achieved his last three victories in the Bf 110, shooting down a Pe-2 bomber and two Yak-1s. In 1942 he was appointed commander of 3./JG 26.

Photographs of JG 26's deployments to the Eastern Front are very rare and a number of them relating to Hermichen were published by the late Jerry Crandall in his book *Fighters of the Iron Cross*. Hermichen scored his 22nd victory after returning to the Eastern Front on February 18, 1943, in a dogfight with a LaGG-3 fighter pilot, while fighting a formation of Il-2s. For the illustration, rendered on a boxart by Antonis Karydis, we have selected Hermichen's duel with Pe-2 bombers, which took place on March 7 south of Lake Ilmen. He claimed two victories and apparently clashed with several crews from 46. BAP, which conducted a free search for targets in German-occupied territory. The only casualty was the crew of Lt. Georgiy G. Reshetnikov, who remains missing together with his navigator Ml. Lt. Mikhail I. Nakonechnyuk and gunner Serzh. Grigory F. Silenok.

When the guns jam

Text: Jan Bobek

Illustration: Adam Tooby



Martin Becker, with 58 kills, was among the ten most successful German night fighters. Originally serving as a reconnaissance pilot, he switched to night fighters in the spring of 1943, specifically to 11./NJG 4. In August of that year, his unit was re-designated 2./NJG 6 and he became its commander in October. Becker soon began to achieve success against the RAF, claiming six victories in one night and seven on another occasion. On the boxart, Adam Tooby captured one of Becker's fights in the summer of 1944 with his frequent adversary, a Lancaster crew.

After achieving his 43rd victory, Becker was appointed to command IV./NJG 6, based in Germany, in late October 1944. However, parts of his unit were also detached in Romania and Bulgaria at the time. In addition to Messerschmitt Bf 110 G-4s, the IV. Gruppe was also armed with Junkers Ju 88 G-6s, which was the case for most parts of NJG 6 at the time.

Becker and his crew achieved their most notable success on the night of March 14–15, 1945. The fight was described in detail by Theo Boiten in the publication *Nachtjagd War Diaries*. The British bombers, which included B-17s in RAF colours, had several targets and the German fighters were greatly hampered by the British jamming radio communications.

Around ten o'clock in the evening, ground control guided fighters from II., III. and IV./NJG 6 and some from NJG 5 to the area around

Lützkendorf. Among them was Ju 88 G-6 "ZZ+MF" under the command of Becker. His crew consisted of radar operators/gunners Lt. Johanssen and Ofw. Rauch, and Ogefr. Welzenbach as flight engineer. Their machine was equipped with a FuG 220 Lichtenstein SN-2 radar and also a Naxos system for detecting British radars on board of bombers.

Becker's crew, by combining the two systems, managed to identify six Lancasters in succession and hit them, with some of them observed to hit the ground. Then the Junkers' front weapons suffered a jam and Becker wanted to return to base. However, Johanssen suggested that if they could get forward and under an enemy bomber, he could open fire from the rear twin MG 131 guns. The crew successively guided Becker under two Lancasters and one British B-17. Johanssen managed to hit all of them. He also observed some of the crew bail out of the B-17 and the aircraft hit the ground. This gave Becker and his colleagues nine victories in one combat flight.

The crews of NJG 6 in the area around Lützkendorf claimed a total of sixteen downed bombers. The RAF lost eight Lancasters in this area and three others were damaged, at least one of which was hit by Johanssen. Fire from this radar operator also sent one Boeing B-17 to the ground. This was BU-O (HB 802) from No. 214 Sqn RAF commanded by Flt/Lt Norman Rix DFC. His crew consisted

of British, Australians and New Zealanders and all managed to survive. Their colleagues from another Flying Fortress were not so lucky. They were all captured, but after a few days, five of them were murdered.

Rix's Boeing was hit at 3,000 feet on its return from the target. The airmen aboard the Flying Fortress thought they had been hit by light flak, but Johanssen clearly identified his target; it was the first time he saw a B-17 with the distinctive silhouette of its tail surfaces. Rix bailed out of the aircraft very low to the ground and almost immediately after opening his parachute he ended up in the tree canopy. Later, while in custody, he managed to convince his wardens to lay down their arms with the German troops in the Bavarian town of Ettringen. He contacted an American tank patrol and informed them that Ettringen was already in British hands. As a result, Allied troops took the site without a fight.

Karl-Ludwig Johanssen completed 68 combat sorties as a radio and radar operator and was credited with assisting 59 night kills. His boss, "Tino" Becker, flew only 110 combat sorties during World War II, 27 of them as a reconnaissance pilot. Together they were decorated on March 20, 1945. Lieutenant Johanssen received the Knight's Cross and Becker, who already had this decoration, received the Oak Leaves.

The First Winter

Text: Jan Bobek

Illustration: Adam Tooby



When Adolf Hitler broke the Molotov-Ribbentrop Treaty and attacked Stalin's Soviet Union with his allies on June 22, 1941, the greatest ground and air battles in world history took place. However, the forces of Germany and its satellites launched the attack later than originally planned. And the command's ideas that the Soviets would be defeated by winter were wrong for many reasons. In addition, the Soviet Union soon began to receive help under the Lend-Lease Act. Coming winter 1941/1942 German ground and air units were in a situation for which they were often ill-equipped, unlike their opponents who knew the terrain and the Russian winter well.

One of the units that fought in Russia at that time was Jagdgeschwader 54 "Grünherz" under the command of Kommodore Hannes Trautloft. One of his Gruppen, I./JG 54, was commanded from February 1942 by Hptm. Hans Philipp, whose duel is depicted on a boxart by Adam Tooby. Trautloft ordered preparation of report relating Geschwader experiences from November 1, 1941, to April 30, 1942. It is available in the Bundesarchiv under the signature RL 10/477. The document is 80 pages long and in a few paragraphs, I will try to summarize some interesting points from the first seven chapters.

JG 54 was deployed on a frontline stretching 330 km long in the Army Group Nord area between Lake Ilmen and Leningrad. It was subordinated to Luftflotte 1 within the I. Fliegerkorps. Its armament consisted of

Bf 109 F-2s and the first F-4s were received by III. Gruppe in March 1942. In December the temperature dropped to minus 10°C, but by January it reached minus 42°C. During this period, JG 54 flew 8,946 combat sorties and 1,258 ground attack sorties. In doing so, it claimed the shoot-down of 51 reconnaissance, courier and transport aircraft types, 107 bombers, most of which were modern Pe-2 and Il-2s, and destroyed 518 fighter aircraft, more than 80% of which were modern aircraft.

During the winter the Soviet airmen modified their formations in a manner similar to that used by the Germans. Due to the technical superiority of the Bf 109 F, their enemies began to use a defensive circle against which the Germans had to develop offensive tactics. On this battlefield JG 54 encountered for the first time the Curtiss P-40s, which they judged to have good rate of climb and ability to manoeuvre in turns.

The Soviet formations usually flew machines with white camouflage paint as well as the original dark camouflage, which made it difficult for the Germans to get an overview of the number and position of their enemies. The Bf 109 F usually used a four-plane formation (Schwarm), which was split into a pair (Rotte) that attacked and a second Rotte that provided cover. The recommended method of attack was at close range from the rear, due to the quality of the armour of the Soviet machines. When the firing ceased, it was recommended to pull in and fly over the enemy so that the German machine would not be hit by debris.

Soviet bomber formations usually flew in numbers of three to twelve machines with a strong fighter escort. Against such superior numbers, it was necessary to call in additional Rotten and Schwärme from other sections of the front in order to draw the fighter escorts into the fight and then attack the bombers. The Pe-2 formations were very disciplined and it was not recommended to attack them directly from the rear. If a bomber was hit, the other Pe-2 crews would try to line it up in the centre of the formation to protect it.

According to the JG 54 pilots, the Il-2s had excellent armour and it was recommended to fire at the tail surfaces, ideally from above or from the side. The JG 54 report shows respect for the rear gunners of enemy bombers. Mention is also made of the problem of retraining rookie pilots, who had a great appetite for combat but at the same time underestimated the enemy.

Escorting German bombers was more difficult than in the summer of 1941, mainly because of the timing of rendezvous and also because Ju 88 crews tended to use looser formations. JG 54 rated better the Stukas crews, who maintained tight formations in a disciplined manner.

JG 54 judged the enemy anti-aircraft defences to be highly effective, these were particularly dangerous during strafing attacks. It was not recommended to attack a single target twice, and it was essential to fly low when departing.

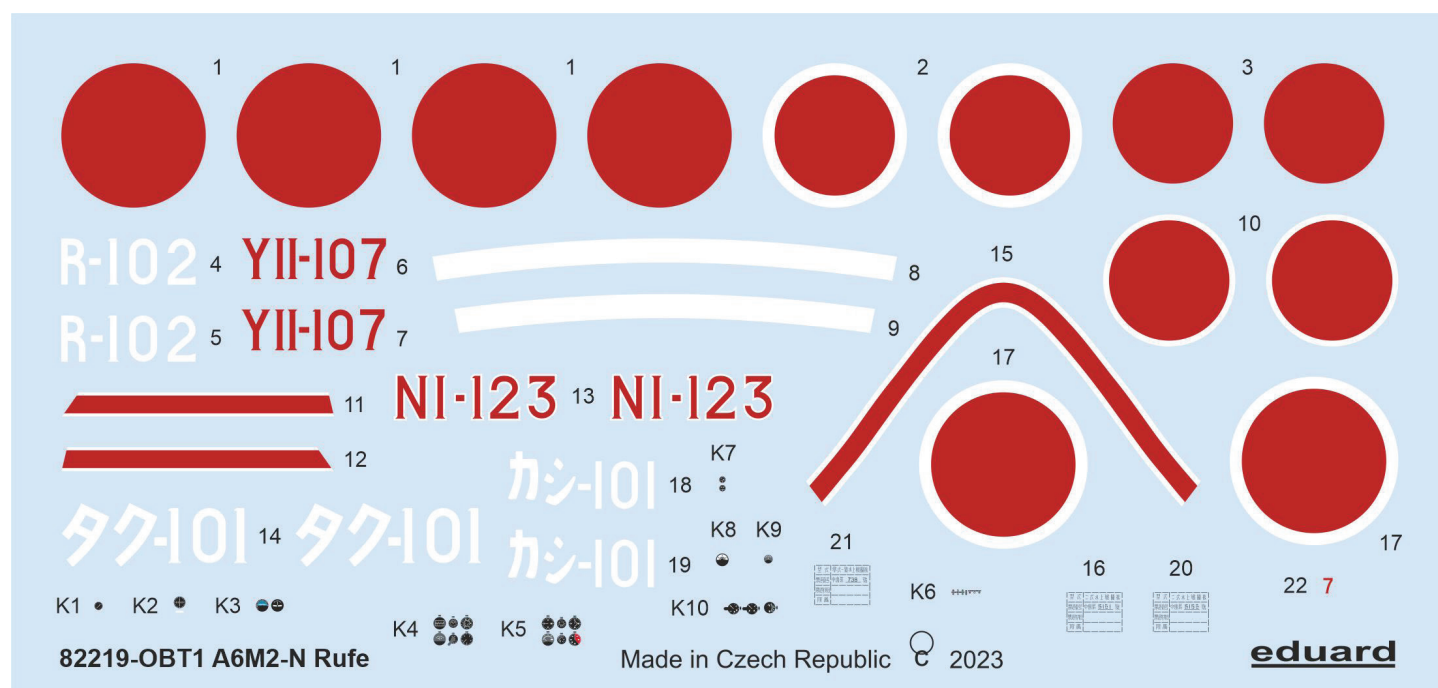
A6M2-N Rufe

1/48

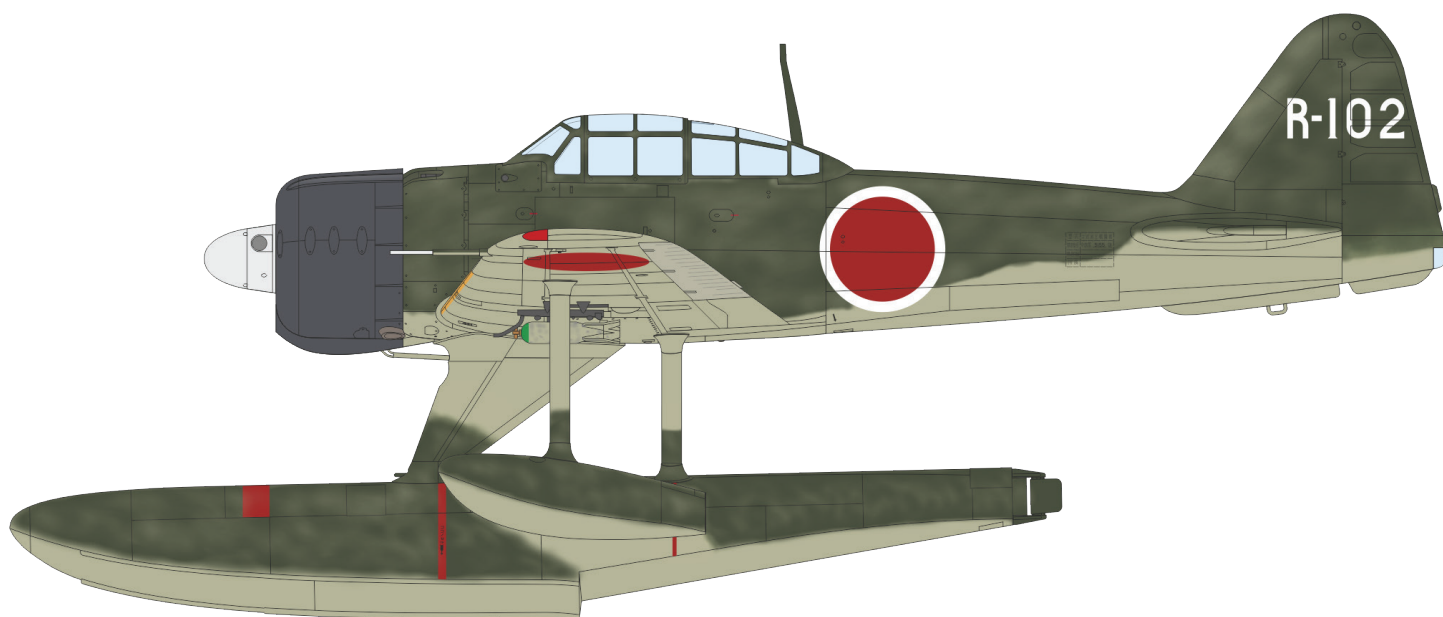
#82219

The ProfiPACK edition kit of Japanese interceptor/fighter bomber floatplane A6M2-N (Allied code name Rufe) in 1/48 scale. Kit presents Rufe serving in Imperial Japanese Navy Air Service during World War II.

- plastic parts: Eduard
- marking options: 5
- decals: Eduard
- PE parts: yes, pre-painted
- painting mask: yes
- resin parts: no

[Product page](#)


■ Kōkūtai 452, Kiska island, Aleutians, early 1943

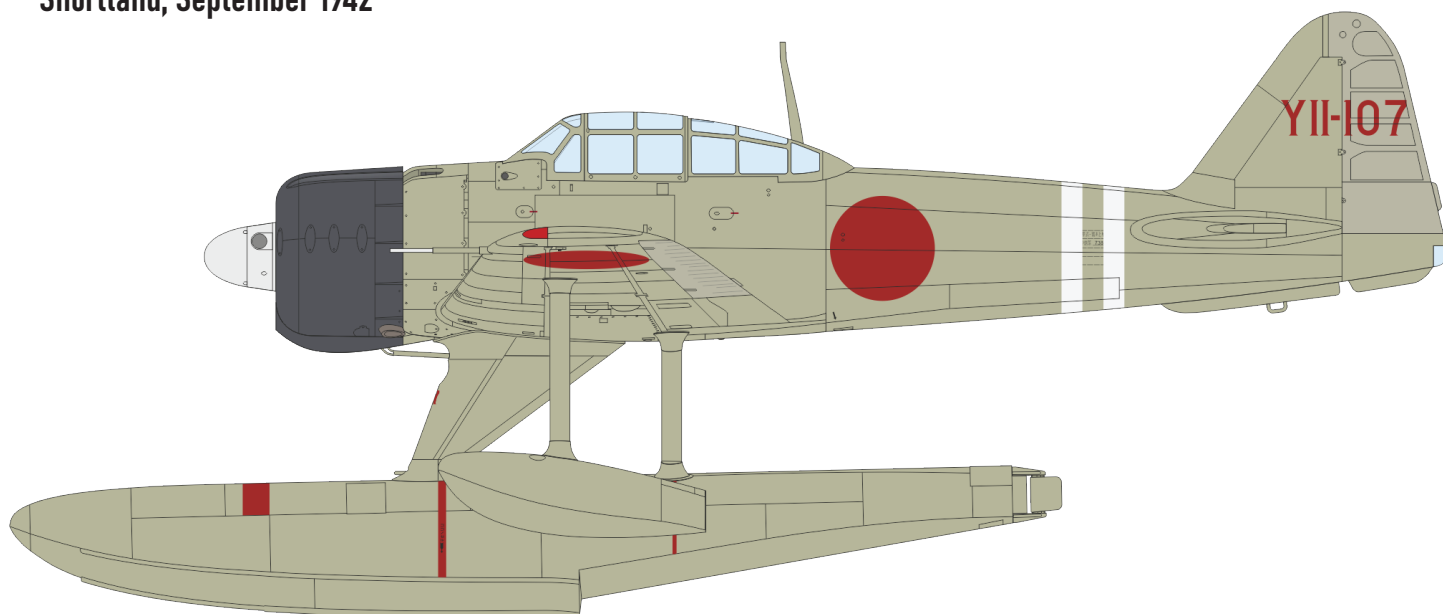


This Rufe got dark green paint at the unit level. The camouflage later showed signs of wear, especially on the wing and on the rear fuselage around the horizontal tail surfaces. The aircraft of this fighter unit successively bore at least four different markings on the tail surfaces, depending on how the unit was designated and subordinated to different commands. Its most successful

fighter was the CPO Gi-ichi Sasaki. The native from Miyagi Prefecture joined the Navy in 1937. He became a pilot of two-seat float planes and participated in combat in China. He took part in the conquest of the Philippines and the Dutch East Indies on board of the Mizuho seaplane tender. After its sinking, he was assigned to the Tōkō Kōkūtai in the Aleutians, which was eventually

renamed the 5th Kōkūtai and then Kōkūtai 452. He achieved a total of four individual victories – five shared and one aircraft credited shared as probably destroyed. He was killed on February 19, 1943, over Amchitka Island in a dogfight with a Curtiss P-40 pilot.

■ Seaman 1st class, Takio Maruyama, aviation unit of seaplane tender Kamikawa Maru, Shortland, September 1942

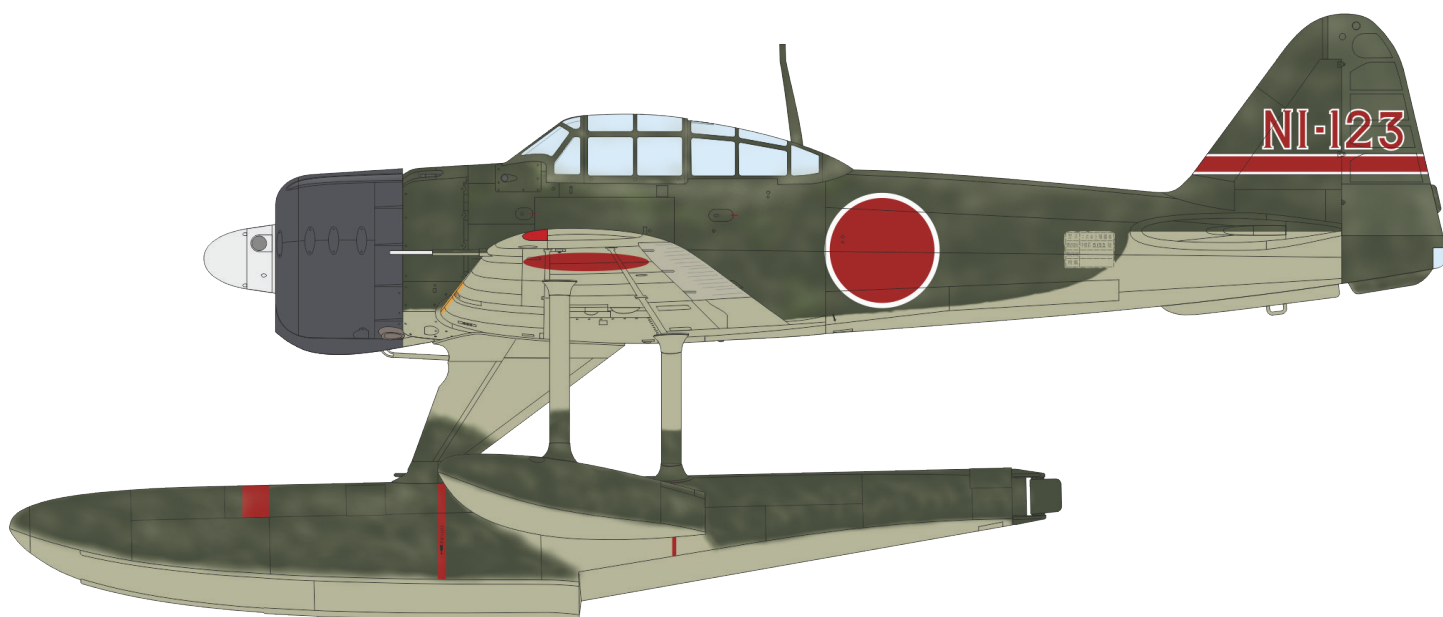


This plane was early production Rufe with folding wingtips. The Kamikawa Maru was completed in 1936 as an ocean liner but was converted to a seaplane tender a year later and was combat deployed in the aggression against China until the spring of 1941. At the start of the fighting in the Pacific, her air unit was equipped with E13A1 Jake and F1M2 Pete seaplanes, but by September 1942 she was deployed in the Solomon Islands

area with eleven A6M2-Ns and two F1M2s. The main tasks of her airmen were base protection, convoy escorts and also attacks on ground troops on Guadalcanal. In addition to engagements with B-17s and Cactus Air Force pilots, the Kamikawa Maru airmen also got into combat with aircraft from the USS Hornet (CV-8). One of them was Takio Maruyama. He was credited with one victory over a B-17 bomber. The Kamikawa Maru

and Maruyama's performance with the No. 107 aircraft was cited in a letter of commendation by the Commander of the Combined Fleet in September 1942. Maruyama with machine YII-107 was killed on October 10, 1942, in a dogfight with VMF-223 Wildcats while escorting Japanese vessels from the so-called Tokyo Express bound for Guadalcanal. On board the light cruiser Tatsuta was Lt. Gen. Hyakutake.

■ Kōkūtai 802, Faisi-Poporang base, Shortland Islands, February 1943

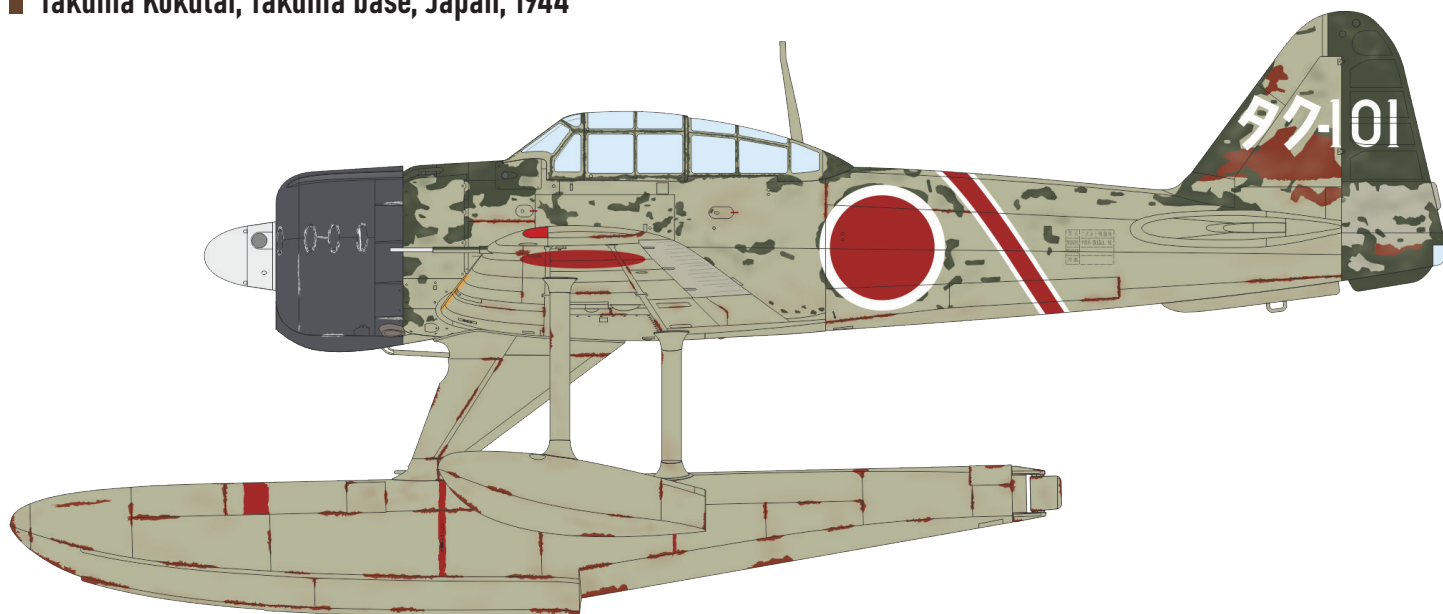


This aircraft was among the new ones that Kōkūtai 802 took over in Japan during early 1943. At the unit level, the aircraft received a dark green paint and it probably had a late production stencil on the fuselage. The tail sported a horizontal red stripe on the vertical tail surfaces, which was probably the unit's identifying marking. It is likely that the aircraft took part in the aerial combat on February 13 and 14 during the defense of the Shortland

Islands and Buin, in which the American units suffered fairly significant losses. After relocation to the Marshall Islands area in March 1943, Kōkūtai 802, under the command of Lt.(jg) Yamazaki, was primarily engaged in anti-submarine patrols and the pursuit of four-engine bombers. Long-range reconnaissance was carried out by another part of this unit, which was armed with H8K Emily flying boats. In September 1943, the designation of its

aircraft was changed to Y4 in connection with the transition to the subordination of the 22nd Kōkū Sentai (Air Flotilla). The identification markings on the tail surfaces of Rufe seaplanes changed from red to white during service in the Marshall Islands. In October, fighter unit of Kōkūtai 802 was integrated into Kōkūtai 902, and in November, the fighter unit clashed with US Navy aircraft during a raid on Truk.

■ Takuma Kōkūtai, Takuma base, Japan, 1944

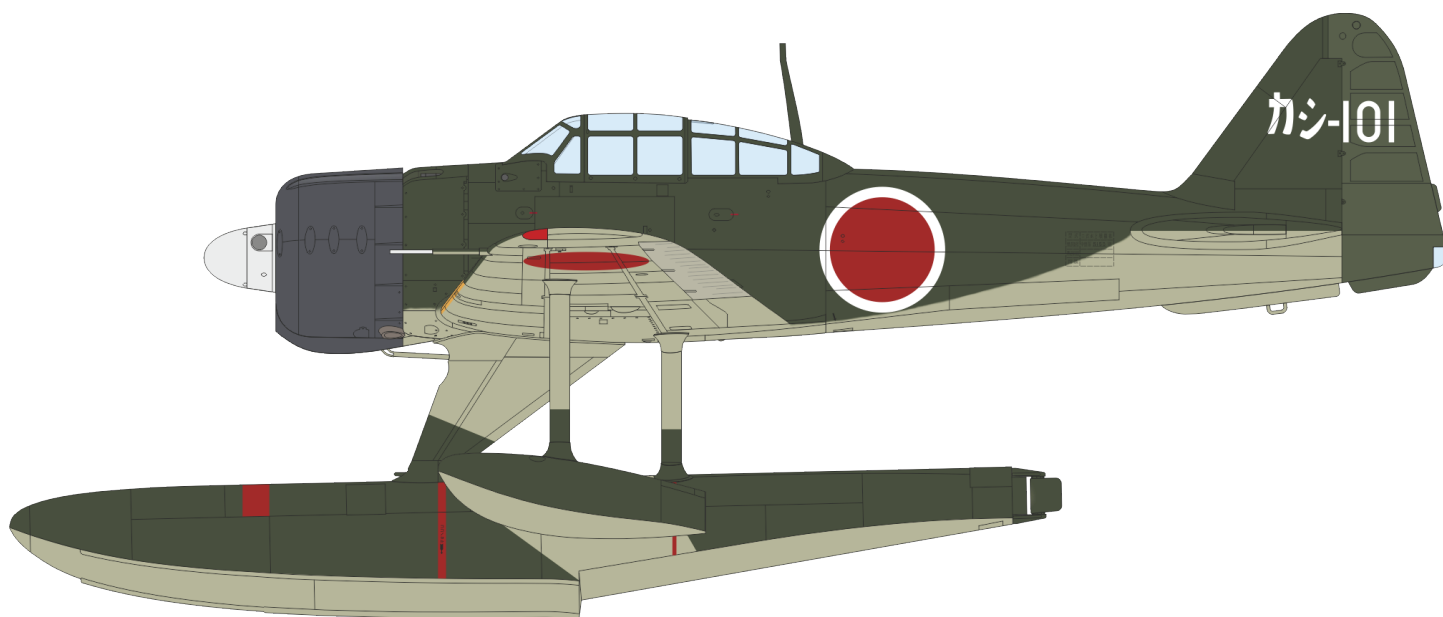


This aircraft was originally finished with grey paint on all surfaces. Later, at the unit, it was given a dark green paint job on the upper surfaces. By the time it was in service with Takuma Kōkūtai, the green paint was badly worn, with reddish-brown primer and metal surfaces visible in some areas. The stripe on the fuselage was probably the designation of the aircraft flown by leader

of fighter unit. Takuma Kōkūtai was established in mid-1943 to train seaplane crews and it included a fighter unit with Rufe aircraft which was also tasked with training, including dogfight practicing. However, the command envisaged the eventual deployment of Rufe aircraft by this unit for the air defense of Japan. A photograph of a Rufe seaplane from the Takuma Kōkūtai exists,

showing the mount of Ensign Kyoshi Suga armed with 30 kg bombs for use against B-29 bombers, but there is no evidence that such a combat deployment occurred. In 1945, part of the Takuma Kōkūtai was deployed on Kamikaze missions. Takuma Kōkūtai was disbanded at the end of the war.

Kashima Kōkūtai, Kashima base, Japan, 1944



This late production aircraft was finished in a factory applied dark green paint. Kashima Kōkūtai was established in 1938 as a training unit for seaplane crews. Her fighter unit, armed with Rufe floatplanes, was deployed several times to fight alongside Katori Kōkūtai airmen in the Home Defence and achieved several fighter and

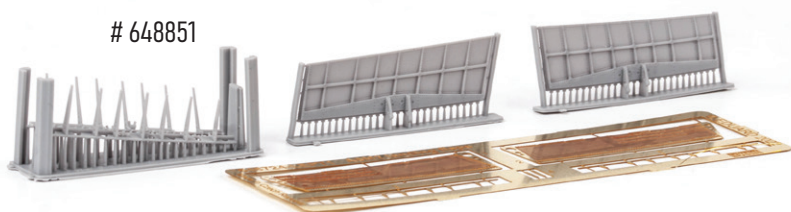
bomber kills. It was probably with this unit that the Hellcats of VBF-12 from USS Saratoga (CV-3) came into conflict around Kashima on February 16, 1945 and the Hellcats of VF-29 from USS Cabot (CVL-28) on March 18. In the first mentioned combat, the American fighters reported five Rufe kills and in the latter encounter claimed

four victories. In May 1945, the Kashima Kōkūtai training section was cancelled, and a number of aircraft and crews were deployed on Kamikaze missions. Kashima Kōkūtai was disbanded at the end of the war.

RECOMMENDED: FOR A6M2-N Rufe 1/48

481109	A6M2-N Rufe landing flaps (PE-Set)
644205	A6M2-N Rufe LööK (Brassin)
644208	A6M2-N Rufe LööKplus (Brassin)
648845	A6M2-N Rufe seat PRINT (Brassin)
648846	A6M2-N Rufe exhaust PRINT (Brassin)
648847	A6M2-N Rufe cannon barrels & cockpit guns PRINT (Brassin)
648848	A6M2-N Rufe folding wingtips PRINT (Brassin)
648849	A6M2-N Rufe gun bays PRINT (Brassin)
648850	A6M2-N Rufe cockpit PRINT (Brassin)
648851	A6M2-N Rufe landing flaps PRINT (Brassin)
648852	A6M2-N Rufe engine complete PRINT (Brassin)
3DL48114	A6M2-N Rufe SPACE (3D Decal Set)
EX934	A6M2-N Rufe TFace (Mask)

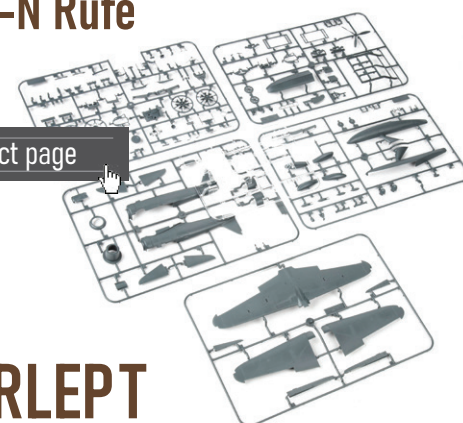
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OVERTREES

#82219X
A6M2-N Rufe
1/48

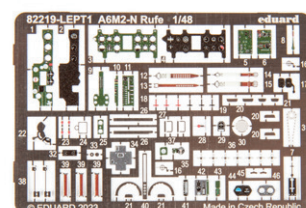
Product page



OVERLEPT

#82219-LEPT
A6M2-N Rufe PE-Set
1/48

Product page

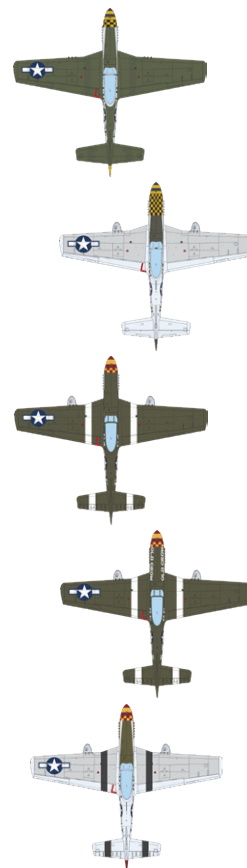
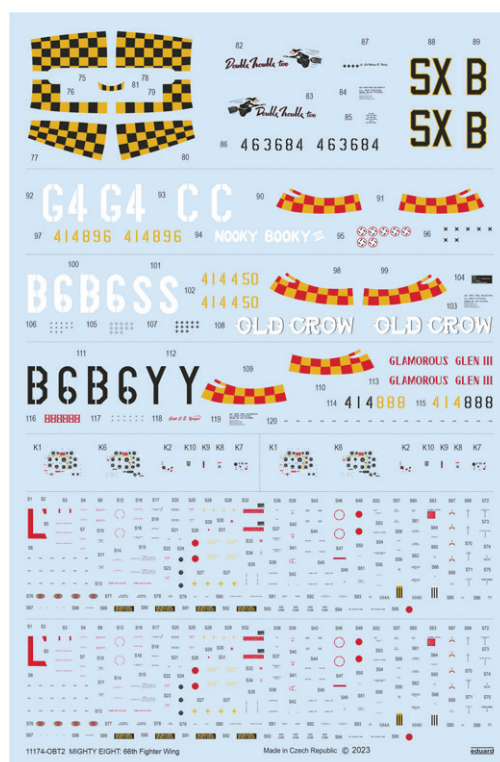
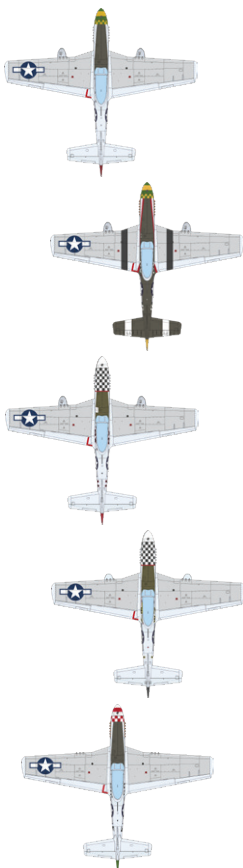


MIGHTY EIGHTH: 66th Fighter Wing

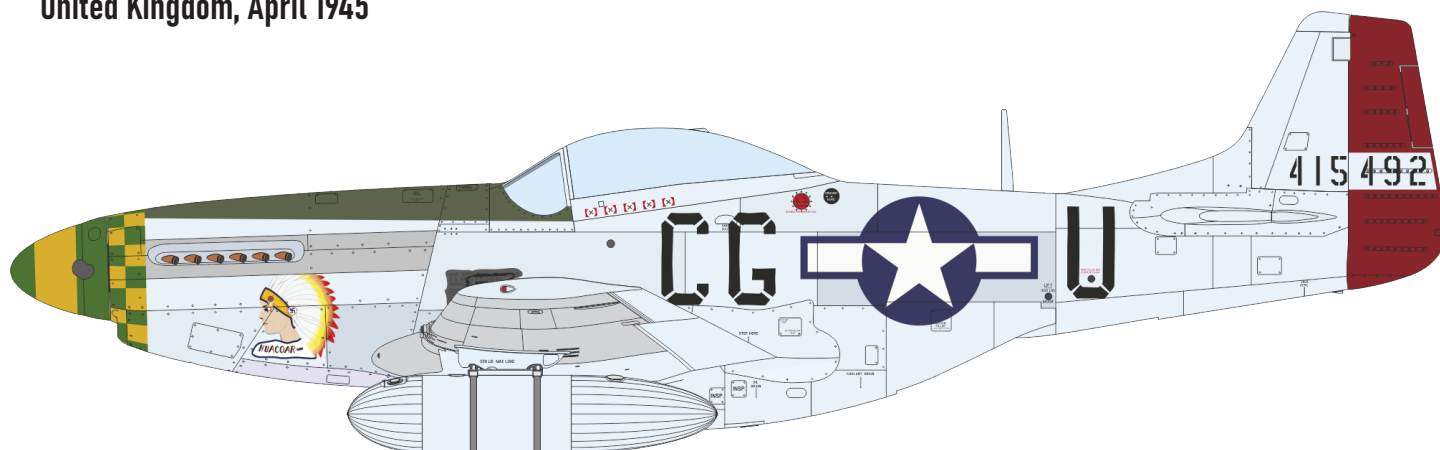
#11174

The Limited edition of the kit of the famous US WWII fighter aircraft P-51D Mustang in 1/48 scale. The kit offers aircraft from the 55th FG, 78th FG, 339th FG, 353rd FG and 357th FG.

- plastic parts: Eduard
- marking options: 10
- decals: Eduard
- PE parts: yes, pre-painted
- painting mask: yes
- resin parts: yes, exhausts and wheels

[Product page](#)


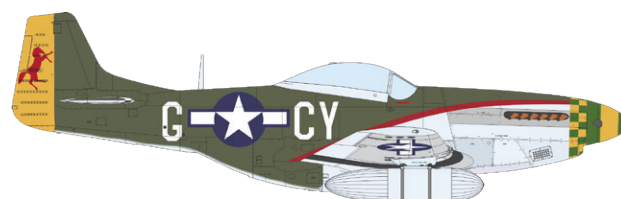
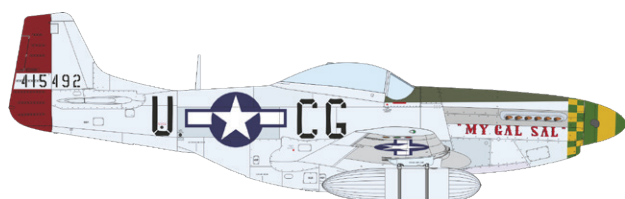
■ P-51D-15, 44-15492, Lt. Billy Clemmons, 38th FS, 55th FG, 8th AF, Wormingford, United Kingdom, April 1945



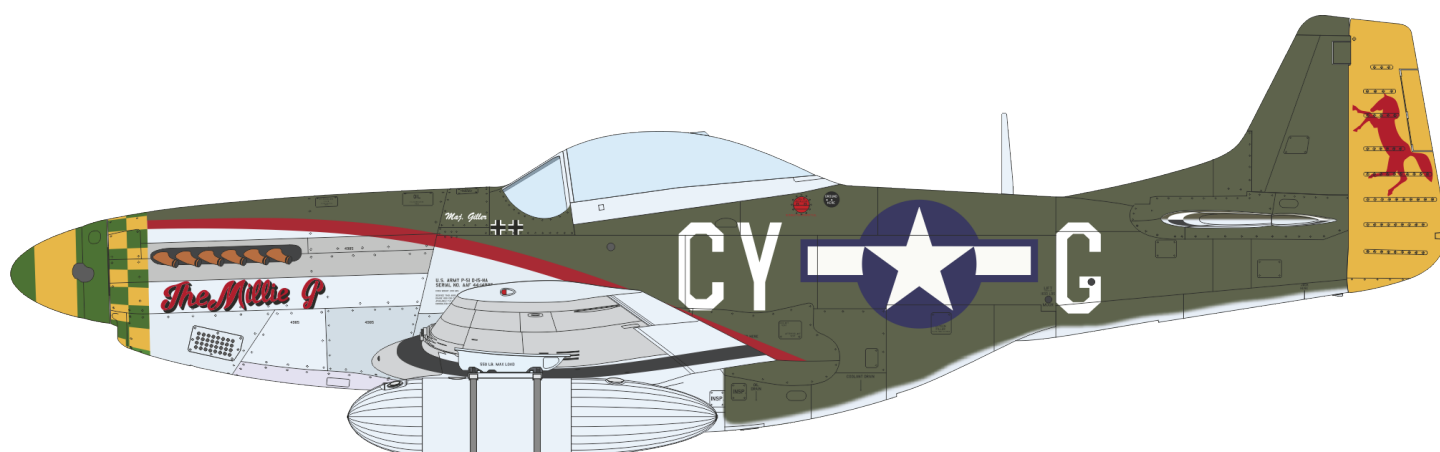
Billy Clemmons started his pilot training in January 1943 and in February 1944 obtained his "wings". After he completed his training in August 1944 he was assigned to 38th FS, 55th FG. In the course of his war-time career he flew 62 combat missions and scored four and half air victories including one individual and one shared kill of the Me 262 jet. He destroyed five more aircraft on the ground. He decorated his personal Mustang with an Indian's head with inscription "Huacoar" on the

port side of the nose and the starboard featured the inscription "My Gal Sal". During the Korean War Clemmons was called back to the active duty and attached to the 75th Fighter Interceptor Squadron which flew F-86 Sabre jets. Then he was ordered to the 513th FIS in England and France. After his return to the United States he was assigned to the Flight Training Headquarters as an instructor on T-37 and T-38. He attended several military schools, including the Air War

College in Montgomery, Alabama. Consequently he was attached to the Department of the Chiefs of Staff in Pentagon, Washington D.C. and later took part in the introduction of the global military command and management system which was, in fact, the predecessor to the internet. After he finished his military career for several years he worked for Waco Hotel Supply and in the end he started his own restaurant equipment company, Clemco Restaurant Equipment Co.



■ P-51D-15, 44-14985, Maj. Edward B. Giller, 343rd FS, 55th FG, 8th AF, Wormingford, United Kingdom, September 1944

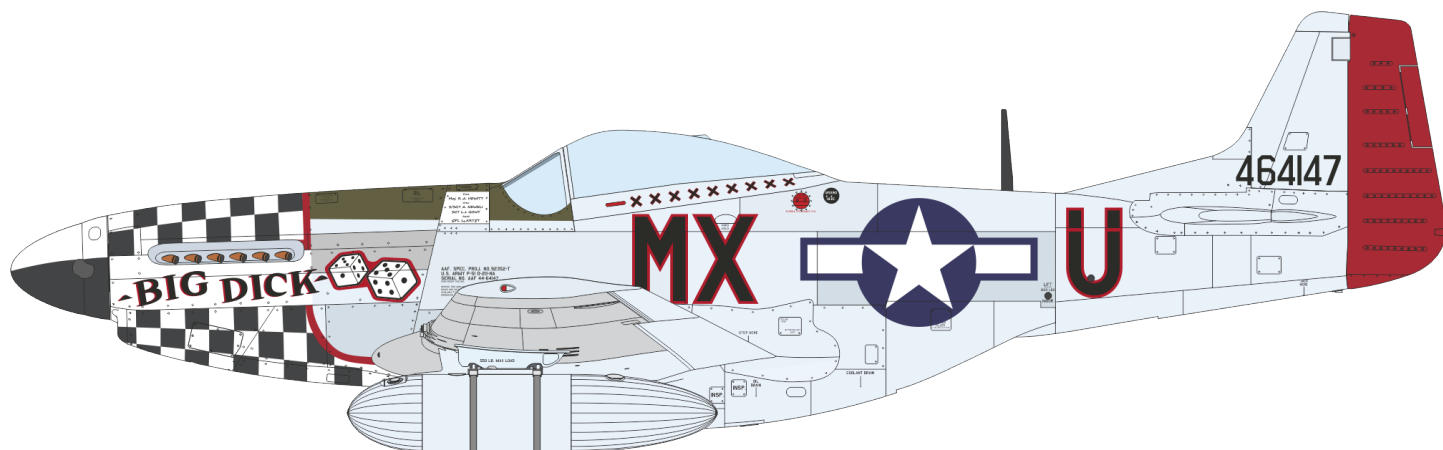


Edward Giller was born in Jacksonville, Illinois, in 1918. He graduated from the Kemper Military School in Boonville, Missouri and in 1940, the University of Illinois with BS in chemical engineering. In September 1941 he joined the military and at the same time the pilot school where he gained his wings in April 1942. During WWII he commanded the 343rd FS and later became the deputy commander of the 55th FG. As a fighter pilot he flew 115 combat missions and

logged 465 hours in P-38 and P-51. He destroyed three enemy aircraft, including Me 262 jet and six more airplanes on the ground. Giller flew two Mustangs, s/n 44-14985 and s/n 44-15701. Both of his Mustangs were christened "Millie G" after his wife Mildred who was a flight attendant. Giller's Mustang sported the standard 343rd FS marking i.e. black prancing horse on the yellow rudder. After the war, in 1948, he obtained MS in the chemical engineering and in 1950 a doctorate

in the chemical engineering. He served as an executive director of the Weapons Effect Division center. After that he became an assistant director and then director of the research at the Air Force Special Weapons Center at Kirtland Airbase where he also acted as a USAF liaison officer in the Orion, nuclear spaceship project. He passed away in October 2017 at the age of 99.

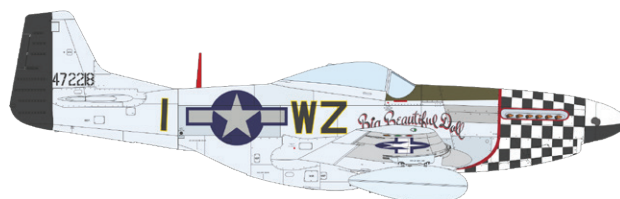
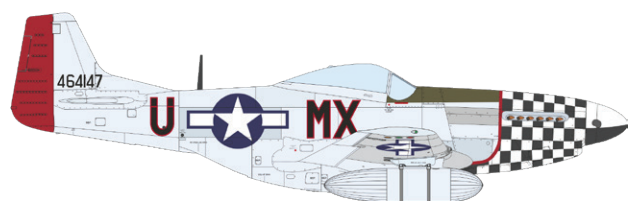
■ P-51D-20, 44-64147, Capt. Richard A. Hewitt, 82nd FS, 78th FG, 8th AF, Duxford, United Kingdom, April 1945



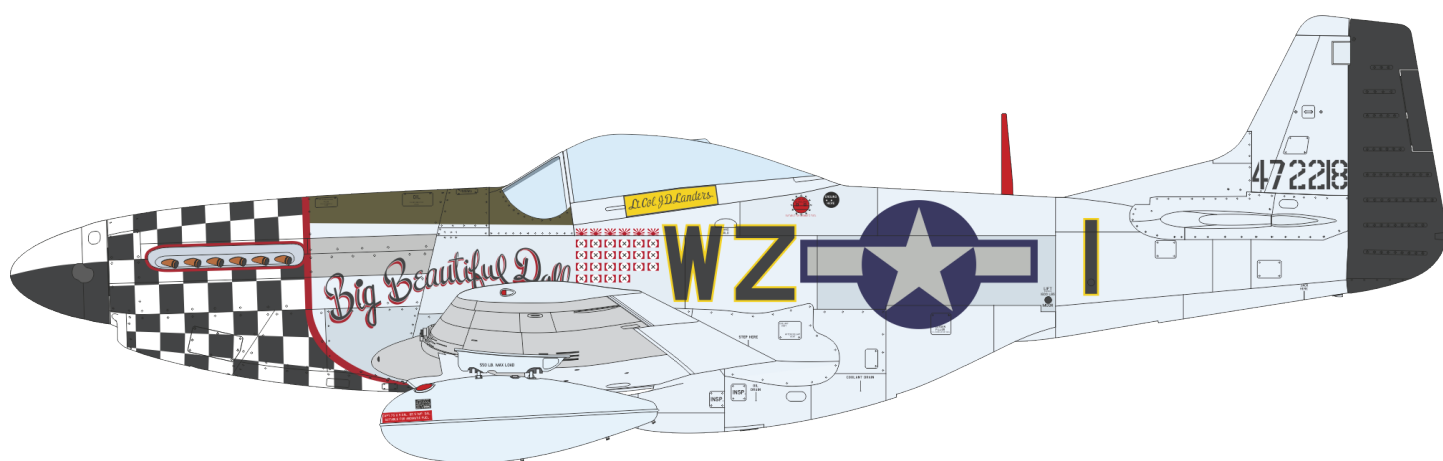
Richard A. "Dick" Hewitt joined the 78th FG based at Duxford in September 1943 and flew with this unit until the end of hostilities. The unit operated P-47 but in December 1944 converted to P-51D Mustang and in the end of that month already flew its first mission with them. Hewitt logged 20 missions flying this type out of his total 100 missions. On March 21, 1945, he assumed command of the 82nd FS after he had shot down three Bf 109 two days

earlier. On April 17 he destroyed a Me 262 on the ground after he had shot down another Schwalbe shortly before the landing at the Lechfeld airfield. This kill however remained unconfirmed because his wingman, the only witness to this kill, was consequently shot down and became POW. Hewitt ended the war after two tours of duty during which he logged 426 hours. Official Hewitt's score was four aerial victories plus four individual

and one shared enemy aircraft destroyed on the ground. During his second tour of duty, Dick was promoted to the 82nd FS commander. His awards include Silver Star, four DFC and 13 Air Medals. The inscription "Big Dick" on his Mustang refers to Hewitt's nickname. After the war he wrote a book "Target of Opportunity."



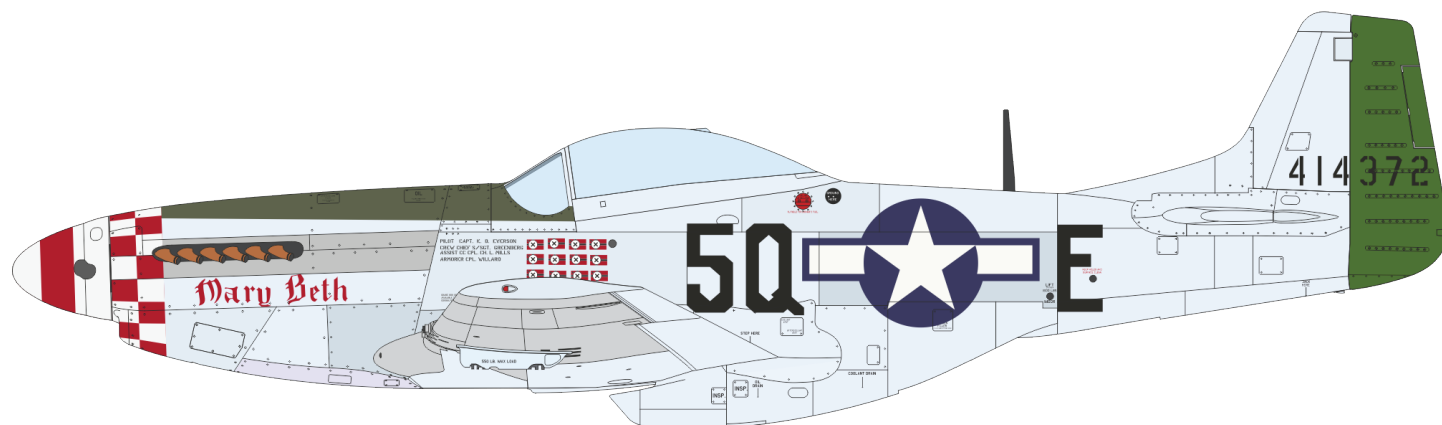
■ P-51D-20, 44-72218, Lt Col. John D. Landers, CO of 78th FG, Duxford, United Kingdom, March 1945



John Dave Landers was born on August 23, 1920, in Joshua, Texas. He joined the Army Air Force in April 1941. After completing the pilot training, In January 1942 he was assigned to the 9th FS in Australia, a unit that flew P-40s. In the Pacific theatre, he scored six kills, and in January 1943, he was called back to the States. There, he served as a flight instructor, but in April 1944, on his own request, was reassigned to a combat unit. It was 38th FS based at Wormingford, operating P-38,

which converted to P-51 as of July 1944. After being promoted to Lt. Col., he assumed command of the 357th FG, which he led from October to December 1944. After some downtime in the United States, he returned to Great Britain and was named CO of 78th FG, holding this post until the end of the Second World War. In December 1945, he left the military and worked in construction. He died on September 12, 1989.

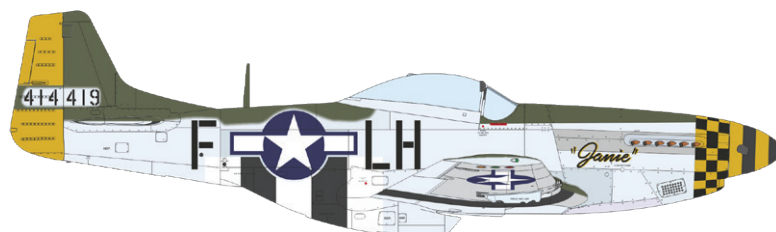
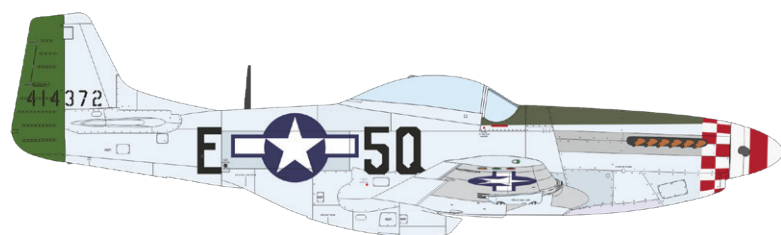
■ P-51D-10, 44-14372, Capt. Kirk B. Everson, 504th FS, 339th FG, 8th AF, Fowlmere, United Kingdom, April 1945



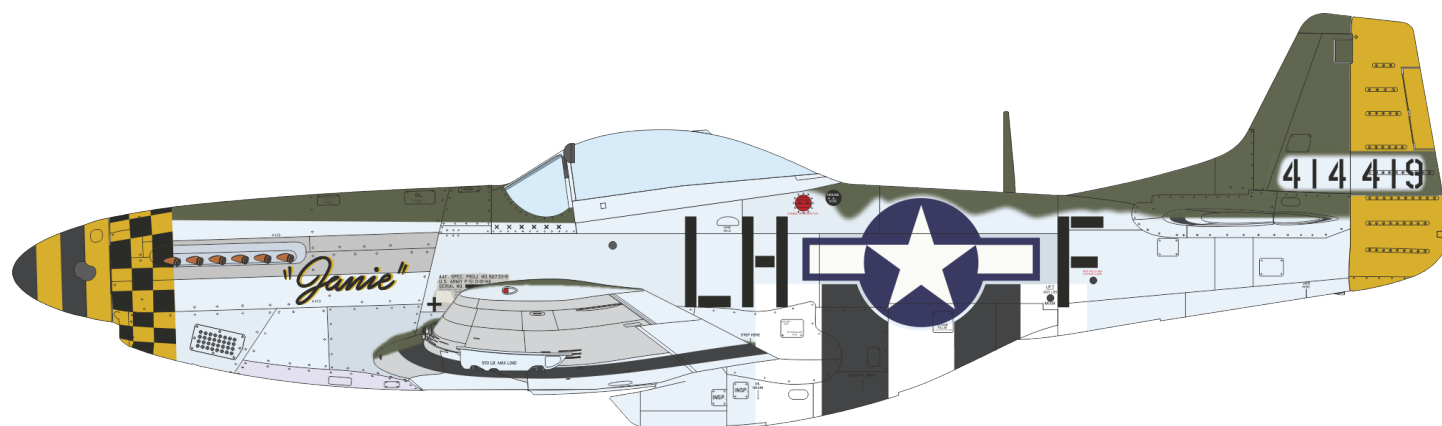
Everson's airwar career took off in 1945 only. Regardless, he achieved great successes in the numerous diving strikes on the German-occupied airfields. Mustang he regularly flew was inherited from Richard C. Penrose who had christened it

"Beaver Chant". Everson renamed it "Mary Beth". On April 4, 1945 he shared a victory over Me 262 above Parchim. Three days later he shot down a Bf 109 nearby Celle. On April 10, during the strafing attack on the Neuruppin airfield, he

destroyed three enemy aircraft and on April 16 three Fw 190 fell victims to his guns at Klatovy airfield. On the following day Everson reappeared over the Klatovy airfield and this time he claimed the destruction of seven airplanes.



■ P-51D-10, 44-14419, Capt. William B. Price, 350th FS, 353rd FG, 8th AF, Raydon, United Kingdom, December 1944

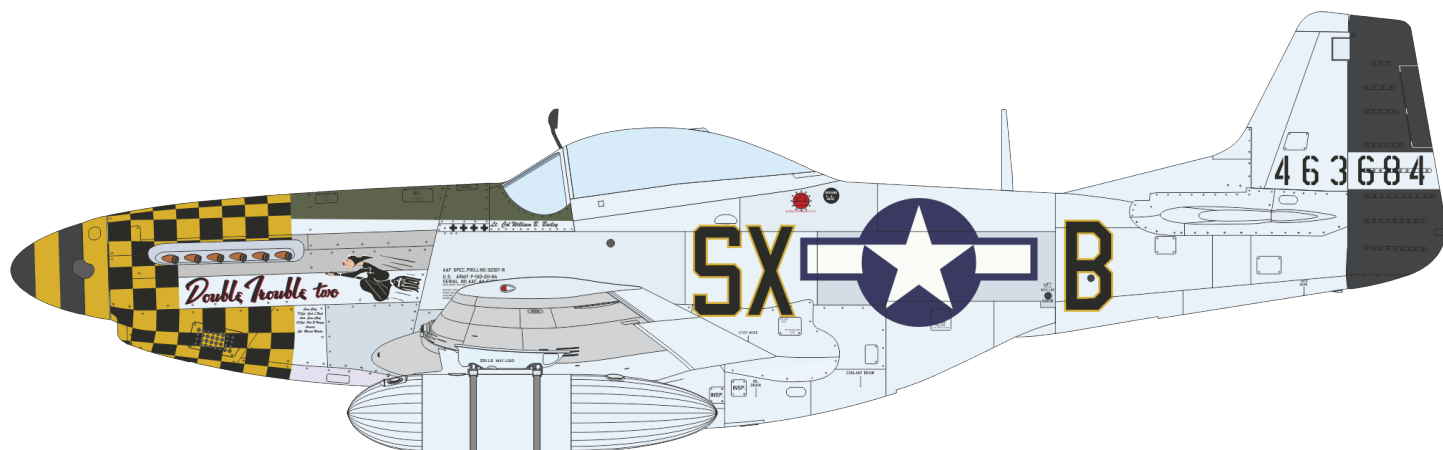


Bill Price was a member of the 350th FS, 353rd FG from November 1942 till December 1944 and flew with it 108 missions in two tours of duty. Flying P-47 he achieved two aerial victories and four on

the ground. After the unit converted to new P-51D Mustang he scored his last kill at the controls of the aircraft named "Janie". Price's Mustang was camouflaged with a green paint on the upper

surfaces, probably British Dark Green. The aircraft nose sported the black and white checkerboard, identification marking of the 353rd FG.

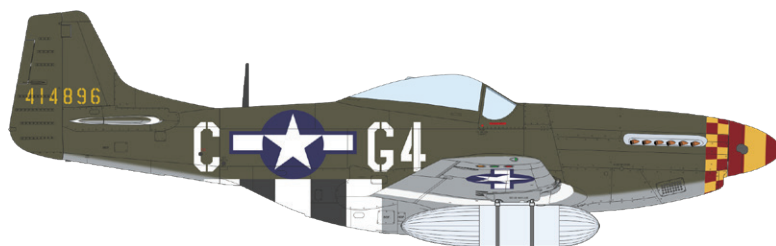
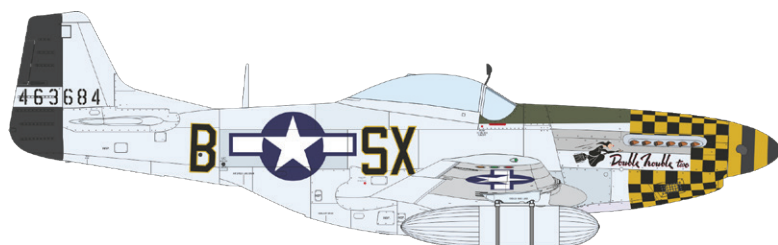
■ P-51D-20, 44-63684, Lt. William B. Bailey, 352nd FS, 353rd FG, 8th AF, Raydon, United Kingdom, May 1945



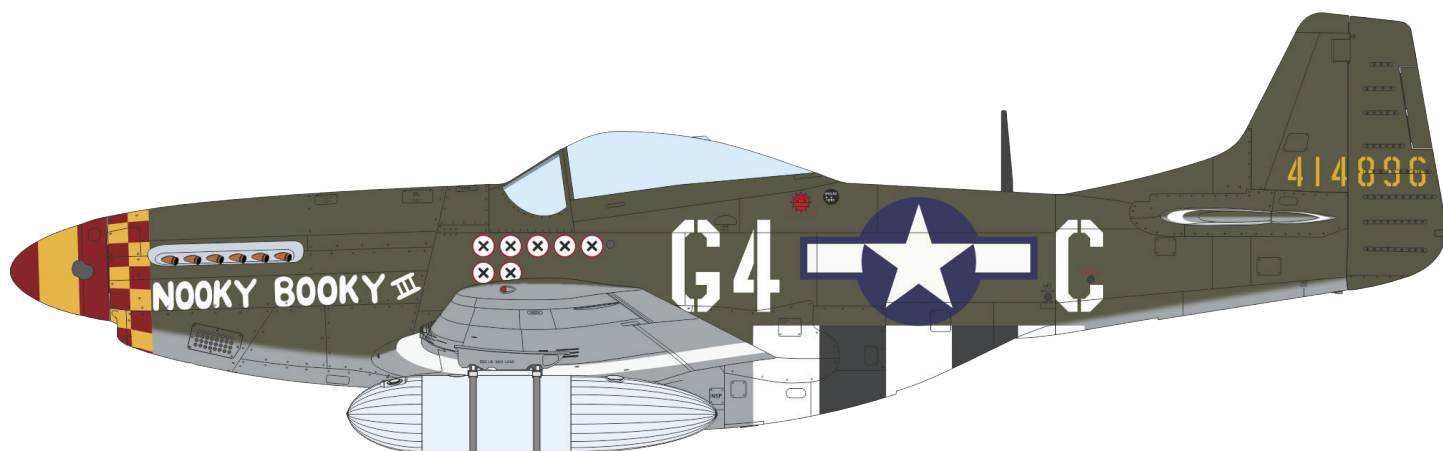
Lt. William Bradford Bailey commanded the 352nd FS since its formation in October 1942 until July 7, 1944 and in the end of the war he was one of the most experienced pilots of the unit. After his long

tenure with 352nd FS, he was transferred to the 353rd FG Headquarters and until the end of the conflict he flew in total 186 missions (454.05 flight hours). On March 2, 1945, a the controls of his

Mustang named "Double Trouble Two" he claimed two Fw 190 destroyed south of Wittenberg. These were last Bailey's kills of the war. His final score stood at three aerial and three ground victories.



■ P-51D-10, 44-14896, Maj. Leonard K. Carson, 362nd FS, 357th FG, 8th AF, Leiston, United Kingdom, September 1944

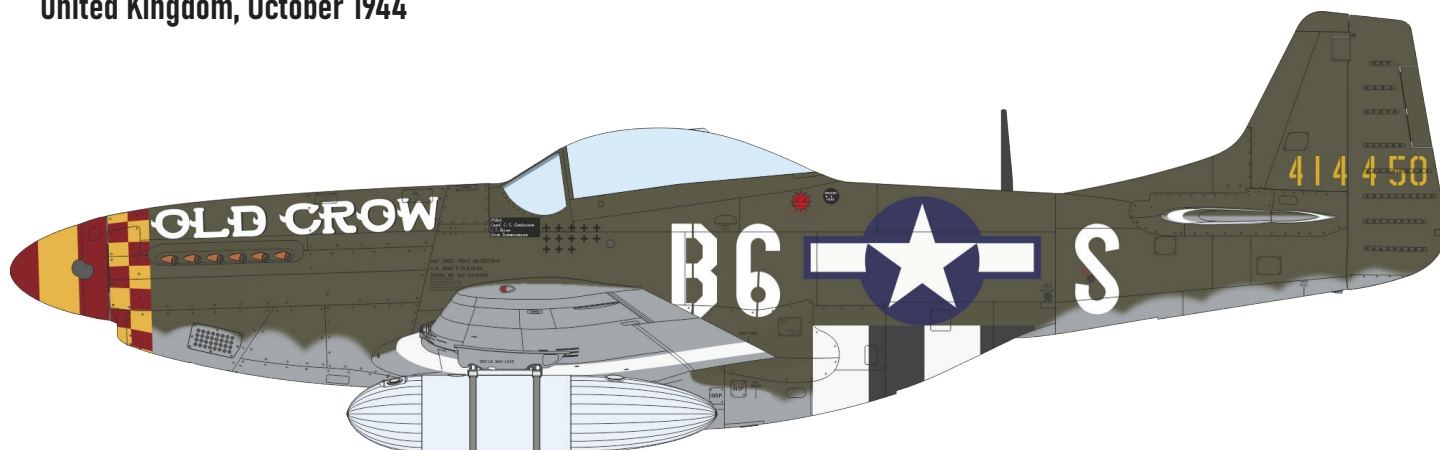


Captain Leonard "Kit" Carson was one of the most successful pilots of the 357th FG. He finished the war as a commander of the 363rd FS with 18.5 kills to which he added three airplanes destroyed on the ground. He flew four P-51 Mustangs, all of them carried his personal inscription "Nooky

Booky" on the engine cowling. The aircraft s/n 44-14896 was his third. It sported seven kill markings on the side of the fuselage which Carson scored till the beginning of November 1944. The plane was marked with the standard identification stripes including the invasion

bands on the fuselage. Carson's Mustang was camouflaged in the dark green paint on the upper surfaces including the landing flaps' interiors. The paint was probably British RAF Dark Green. The lower surfaces were painted in Medium Sea Grey.

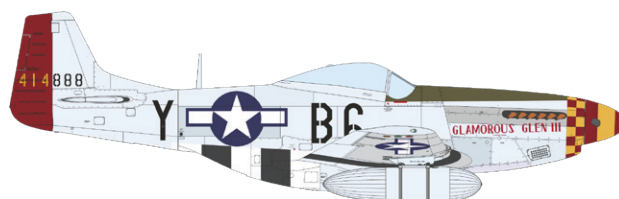
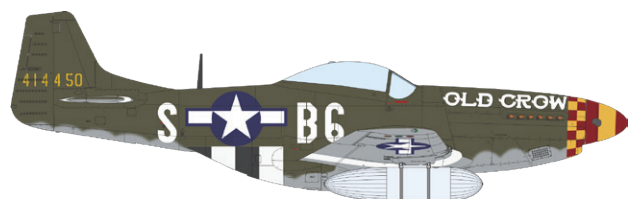
■ P-51D-10, 44-14450, Capt. Clarence E. Anderson, 363rd FS, 357th FG, 8th AF, Leiston, United Kingdom, October 1944



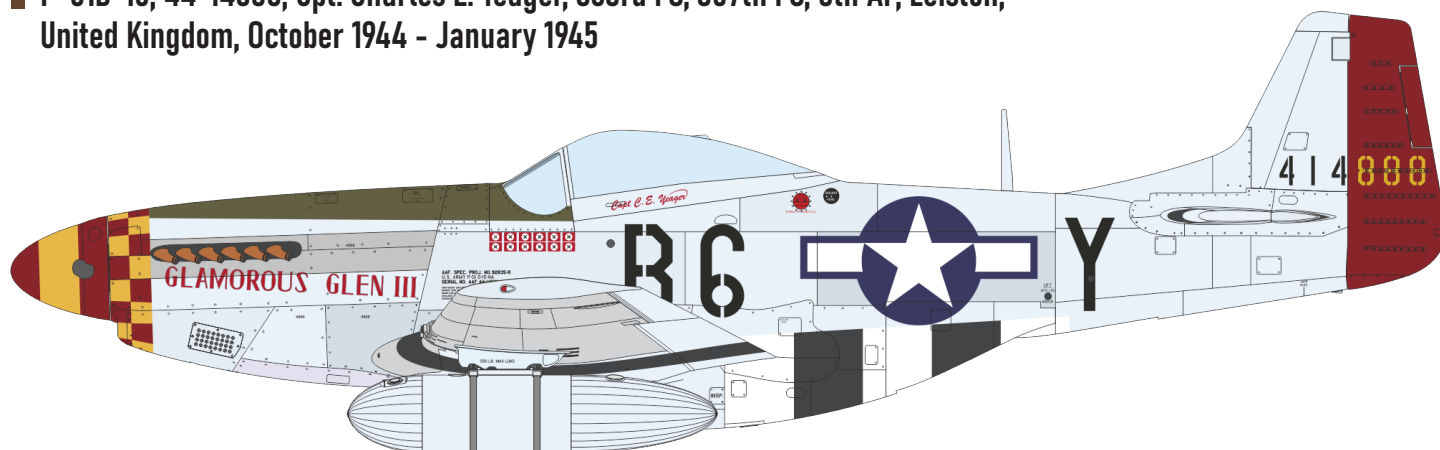
"Bud" Anderson was born on January 13, 1922 in Oakland, California. In January 1942 he joined the Army and till September 28, 1942 served as an Air Cadet. In November 1943 he was assigned to the 363rd FS, 357th FG. He finished his first tour of duty in June 1944 and returned to the United States for two months. In September 1944 he returned to his original unit. In the beginning of December 1944 he was promoted to Major and in January 1945 finished his second tour of duty.

In total he flew 116 combat missions and logged 1423 flight hours. His final score was 17 confirmed aerial victories. After the war he mostly flew as a test pilot and he retired from the Air Force on March 31, 1972. Mustang flown by Clarence "Bud" Anderson during his second tour was initially camouflaged on all upper surfaces, including the landing flaps interiors, in dark green paint, probably RAF Dark Green. The lower surfaces were painted in Medium Sea Grey. In the end of

1944 Bud had camouflage paint removed from his Mustang and flew it in the natural metal finish. "Bud" Anderson named his new Mustang the same as the previous ones, "Old Crow" and shot down in it four more German aircraft. After he finished his second tour of duty, his "Old Crow" was handed over to Lt. James Taylor from the 363rd FS and renamed "Pretty Pix". After the war the aircraft was transferred to Neubiberg air base in Germany where it ended up as a scrap metal.



■ P-51D-15, 44-14888, Cpt. Charles E. Yeager, 363rd FS, 357th FG, 8th AF, Leiston, United Kingdom, October 1944 - January 1945



Charles Elwood "Chuck" Yeager belongs to the most famous pilots of all times thanks to the fact that on October 14, 1947, flying an experimental Bell X-1 rocket powered aircraft, as a first human he flew at the speed of sound. Before that, during WWII, he had become a fighter ace. "Chuck" Yeager was born on February 13, 1923 in the little town of Hamlin in West Virginia. He joined the army shortly after graduating from the high school in September 1941 and in December 1942 he was accepted to the pilot training. In March of

the following year, he gained his wings and was attached to the 363rd FS, 357th FG equipped with Bell P-39 Airacobra. In England, the 357th FG, with its 363rd FS, was attached to the 8th Air Force and converted to P-51 Mustangs. Yeager flew three Mustangs, all named "Glamorous Glen" after his fiancée Glennis Dickhouse. Yeager flew his first combat mission in February 1944. On March 4 he scored his first victory against a Bf 109 but on the following day the luck turned its back on him. He was shot down near French Bordeaux. After he

successfully bailed out, he avoided capture with the help of the French Resistance and returned back to England via Spain. His final score at the end of war stood at 12 kills including a Me 262. He continued in the successful aviation career after the war. He commanded the 405th Fighter Wing in Vietnam and in 1970s worked as a Director of the Flight Safety of the USAF. He retired on February 25, 1975 having logged 10,131.6 flight hours on 361 (!) different types of aircraft. He passed away on December 8, 2020 at the age of 97.

Recommended: for P-51D 1/48

481000	P-51D (PE-Set)
644030	P-51D-10 LööK (Brassin)
644031	P-51D-15+ LööK (Brassin)
644052	P-51D-10 LööKplus (Brassin)
648486	P-51D exhaust stacks w/ fairing (Brassin)
648487	P-51D Hamilton Standard propeller (Brassin)
648494	P-51D wheels diamond tread (Brassin)
648495	P-51D undercarriage legs BRONZE (Brassin)
648503	P-51D wheels oval tread (Brassin)
648504	P-51D wheels cross tread (Brassin)
648505	P-51D wheels block tread (Brassin)
648511	P-51D wheels diamond tread 2 (Brassin)
648512	P-51D wheels rhomboid treat (Brassin)
648514	P-51D wheels grooved (Brassin)
648517	P-51D gun bays (Brassin)
648522	P-51D cockpit (Brassin)
648555	P-51D engine (Brassin)
648570	P-51D gun sights (Brassin)
648571	P-51D 75gal drop tanks (Brassin)
648572	P-51D 108gal drop tanks (Brassin)
648647	P-51D wheels block tread 2 (Brassin)
648742	P-51D wheel bay PRINT (Brassin)
3DL48003	P-51D-10 SPACE (3D Decal Set)
3DL48004	P-51D-15+ SPACE (3D Decal Set)

OVERTREES

#82102X

P-51D

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OVERLEPT

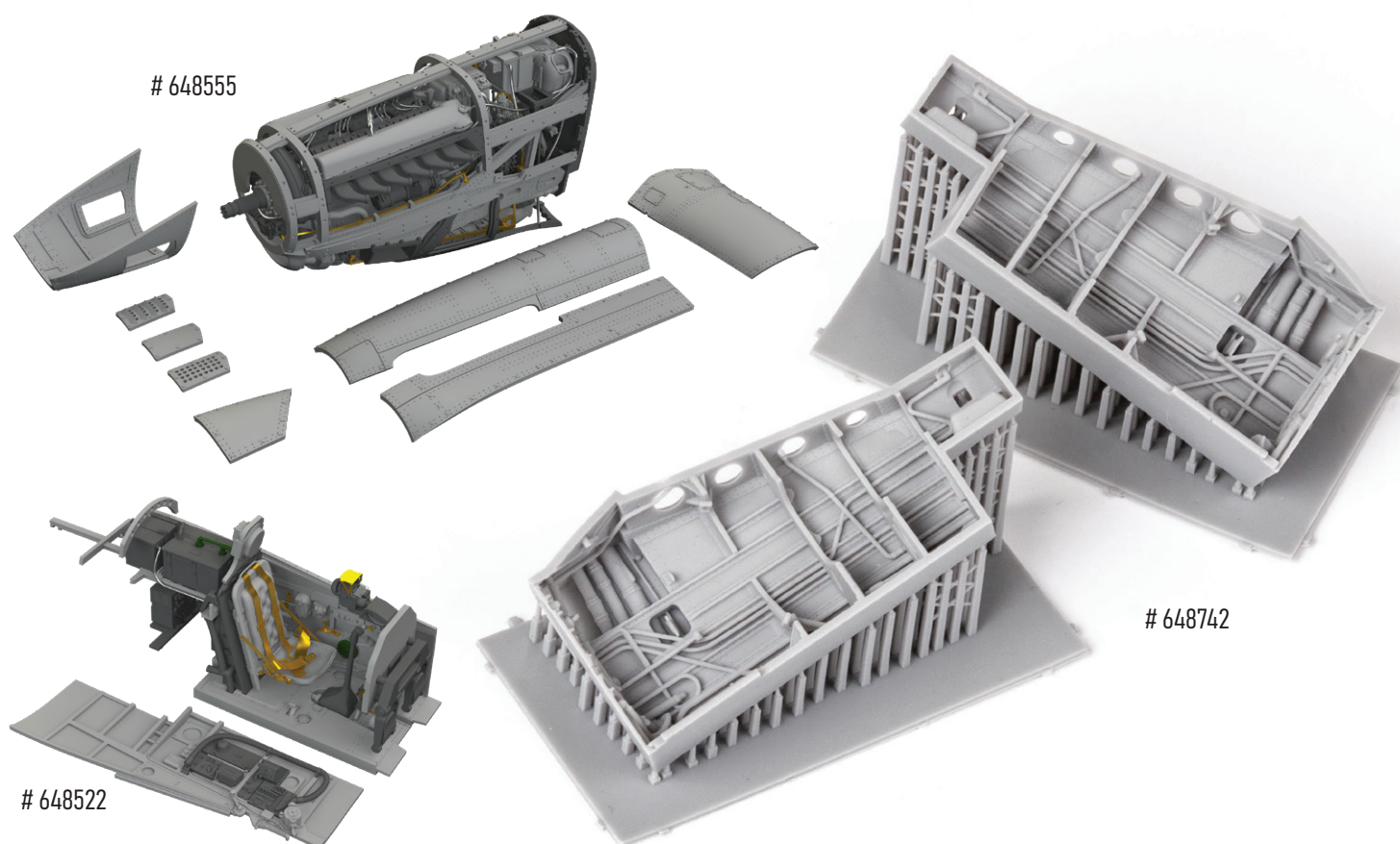
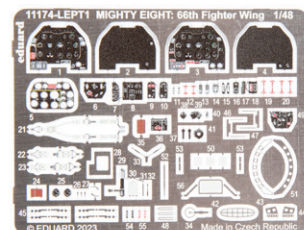
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MIGHTY EIGHTH:
66th Fighter Wing

PE-Set

1/48

[Product page](#)



Fw 190A-5

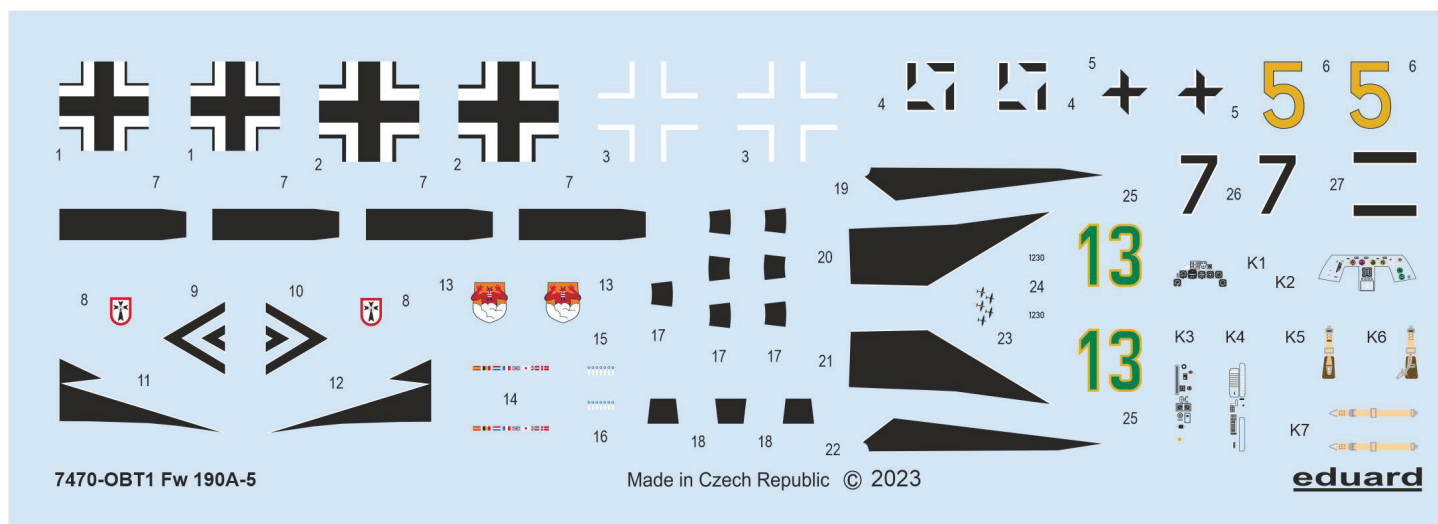
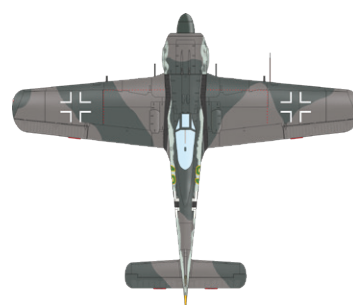
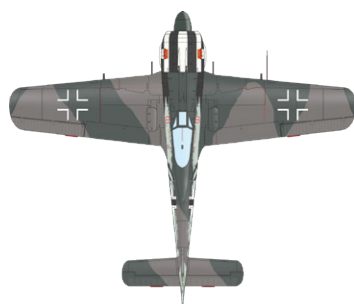
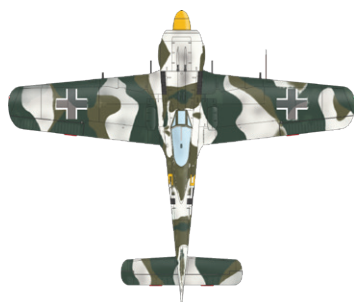
1/72

#7470

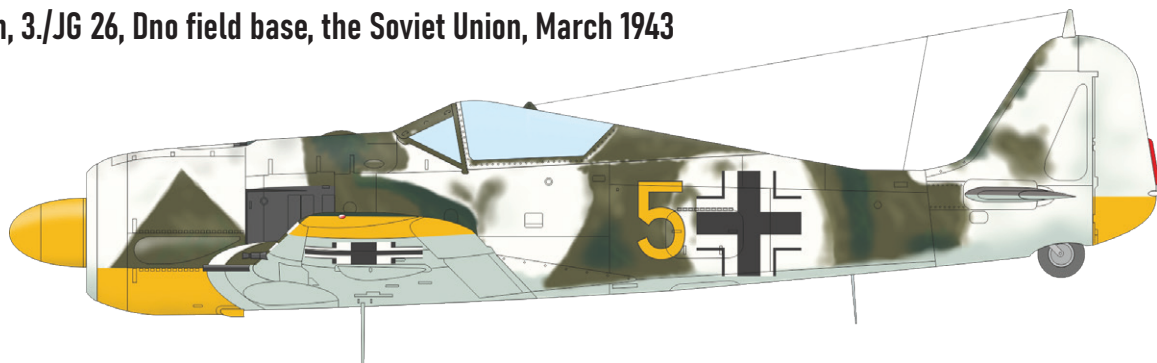
The Weekend edition kit of German WWII fighter plane Fw 190A-5 in 1/72 scale.

- plastic parts: Eduard
- marking options: 4
- decals: Eduard
- PE parts: no
- painting mask: no
- resin parts: no

Product page



■ Oblt. Rolf Hermichen, 3./JG 26, Dno field base, the Soviet Union, March 1943

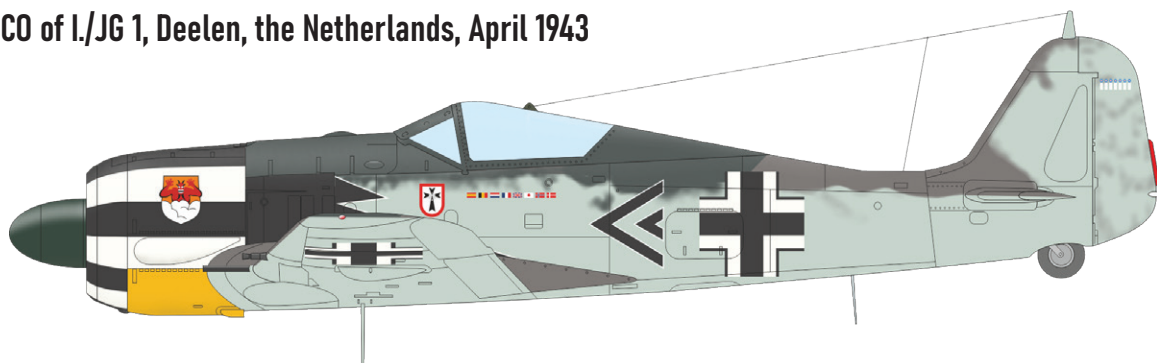


Rolf Hermichen achieved 66 kills during the WW II, the first 11 of them as a Bf 110 pilot during the battles of France and Britain. He was transferred to III./JG 26 in November 1941 and first served as an adjutant to Josef Priller, the CO of III. Gruppe. As early as May 1, 1942, Hermichen became Staffelkapitän (CO) of the 3. Staffel. When I./JG 26 moved to the Eastern Front in January 1943, he added eight more kills to his existing 21. Already as Hauptmann, on his return to the Western Front

he temporarily led III. Gruppe from June 15 to July 4, 1943 and became CO of I./JG 11 on October 16. There, as a part of the Defense of the Reich, he was very successful in combat against Allied bombers. In total, he had 25 (or 26) of them to his credit. His last success came on April 24, 1944, when he shot down a P-51D. He was shot down himself on May 12 and after withdrawal from operational duty, he served at Headquarters of 2. Jagd-Division. From October 1944 to January 1945, Hermichen served

as CO of II/JG 104. The Fw 190A-5 he was flying in the spring of 1943 had the original RLM 74 and 75 shades oversprayed by irregular spots of green shades, probably RLM 70 and 71, which were partly oversprayed by white color for winter operations. The white was already quite weathered in March. The original camouflage was probably apparent inside the crosses on the upper side of the wing. The shape and size of the green spots on the wing and right side of the fuselage is a reconstruction.

■ Maj. Fritz Losigkeit, CO of I./JG 1, Deelen, the Netherlands, April 1943

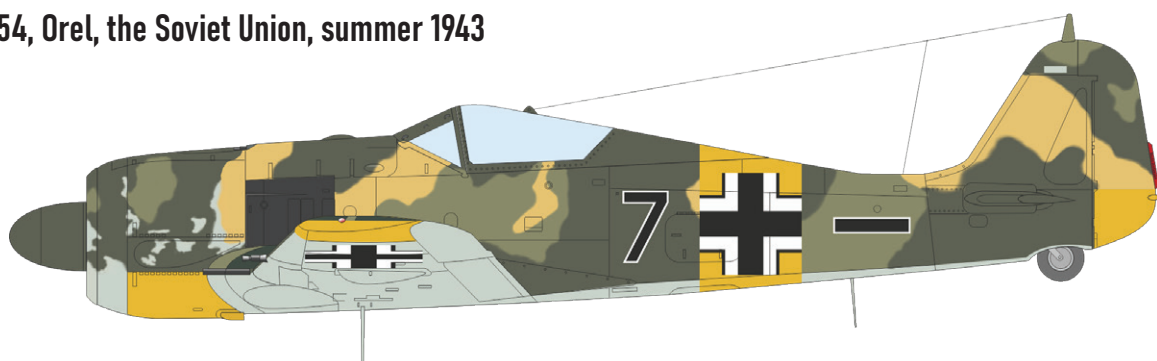


Fritz Losigkeit (1913–1994) was born in Berlin and starting from October 1936 served with JG 2 "Richthofen". He joined Legion Condor in Spain in March 1936 but was shot down and captured. In April 1939 he joined 2./JG 26 and later became CO of this unit. A shift in his career occurred in June 1941, when he became member of the diplomatic mission in Japan. After his return in March 1942 he took over the command of I./JG 26, but he did

not stay too long there, as he was sent to Eastern Front to lead III./JG 51 shortly afterwards. In April 1944 he became Kommodore of JG 51 and a year later he took over the command of JG 77. Losigkeit scored 68 victories in approximately 750 missions flown and was awarded Knight's Cross. An interesting feature of the marking of his Fw 190 was the stripe of the flags under the canopy representing his combat deployments and

foreign affairs assignments. Emblem of IV/JG 1 and victory marks on rudder are not confirmed by photos. After the war Losigkeit was working for CIA-controlled organization Gehlen, later he became secretary of Free Democratic Party (FDP). Camouflage consists of RLM 74, 75 and 76 colors with spinner in RLM 70.

■ Lt. Emil Lang, 5./JG 54, Orel, the Soviet Union, summer 1943

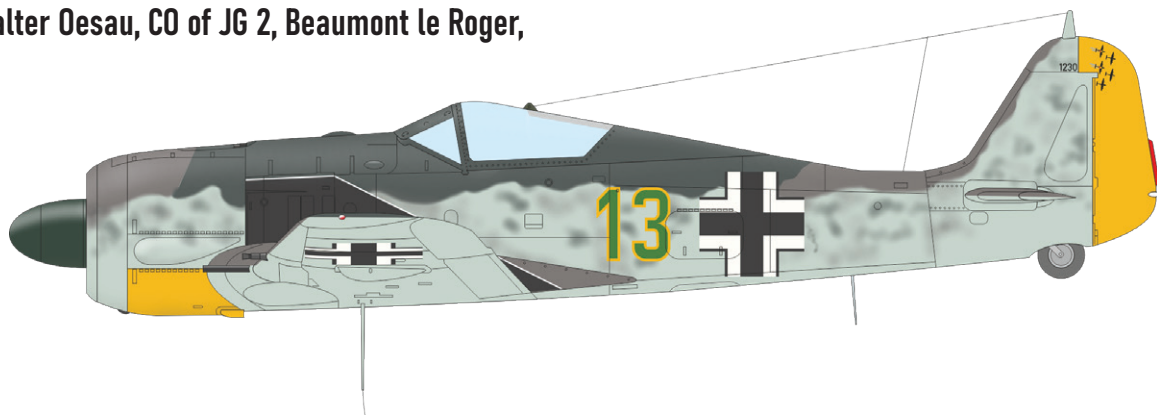


Lt. Emil "Bully" Lang managed to shoot down 173 enemy aircraft over the course of more than 400 combat missions. Of these, 144 were achieved in the Eastern Front. Lang, pre-war athlete and Lufthansa pilot, proved to be a real expert in combat flying. His immense success rate could nicely be illustrated with downing 72 enemy aircraft within three weeks of December 1943. At that time, he was 34 and thus one

of the oldest Luftwaffe pilots. His lucky days ended on September 3, 1944. At the time, he was a commander of II./JG 26 and was shot down during combat with Spitfires Mk. XII of No. 41 Squadron RAF over Belgian territory. He fell victim to F/Lt. Terry Spencer. This Fw 190A-5 was flown by Lt. Lang during the time he was commander of 5./JG 54. The upper surfaces of Lang's Fw 190A-5 were camouflaged by irregular fields

of two shades of a green and a sand color. The darker of greens was probably RLM 70, while the other two shades were non-standard colors. Undersurfaces were painted in RLM 76 and the aircraft sported yellow markings of the Eastern Front: lower engine cowl, bottom wingtips and rudder and also wide band around the rear fuselage. Other aircraft of JG 54 were finished in the same manner.

■ WNr. 1230, Obstlt. Walter Oesau, CO of JG 2, Beaumont le Roger, France, June 1943



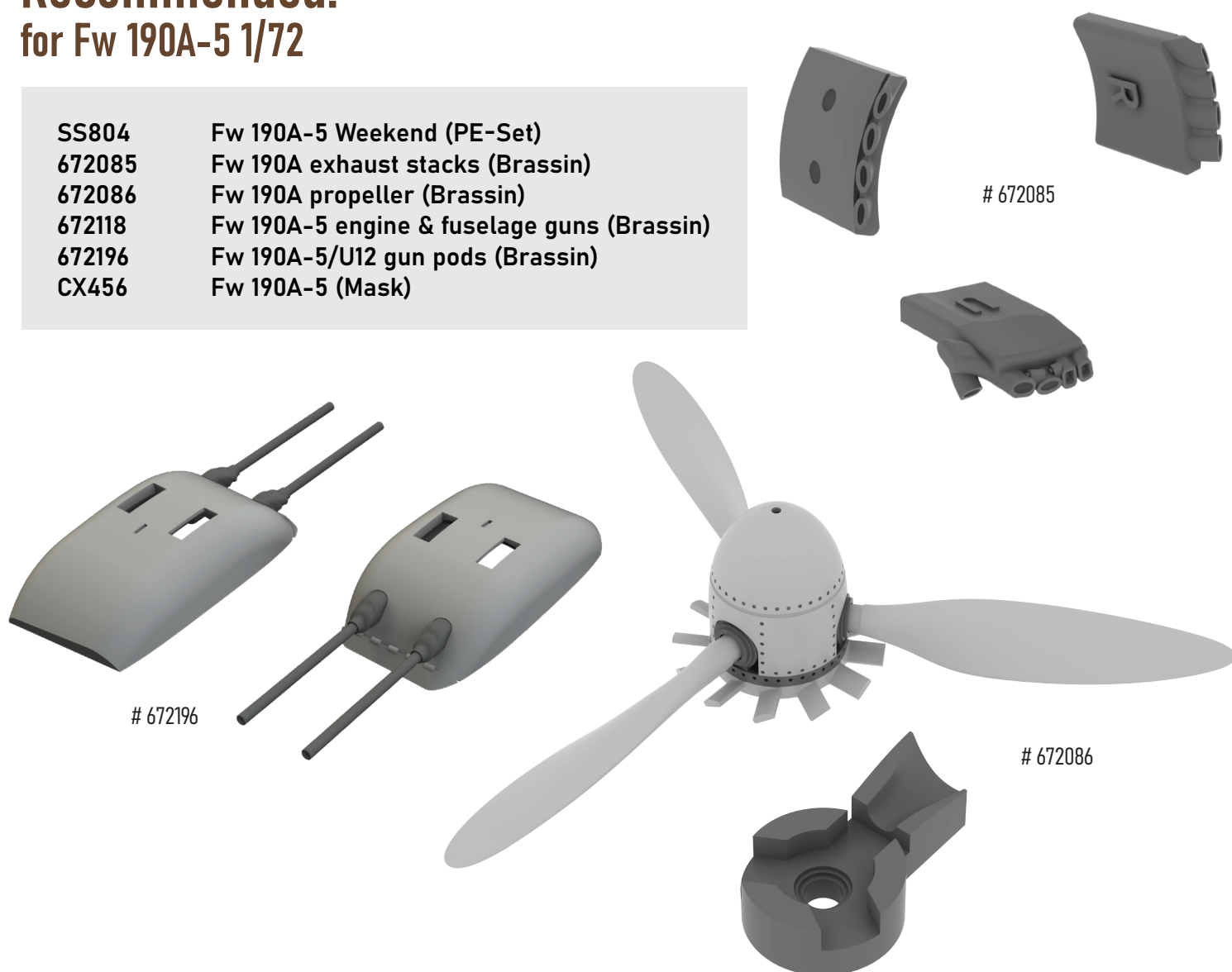
Walter "Gulle" Oesau joined JG 2 "Richthofen" before the war and in April 1938 was transferred to Legion Condor in Spain. In August 1940, already as CO of 7./JG 51, he was awarded Knight's Cross after gaining 20 victories in WWII. He briefly led III./JG 51 and in November was appointed CO of III./JG 3. On July 15, 1941, his victory tally had reached 80 and at the end of July 1941, he took

command of JG 2 in France. Oesau recorded his 100th victory on October 26, 1941 and was appointed Kommodore of JG 1 in November 1943, following the death of Oberst Hans Philipp. On May 11, 1944, Oesau was shot down and killed by P-38s in the cockpit of Bf 109G-6/AS (WNr. 20601) "Green 13" near St Vith. "Gulle" Oesau scored 127 victories in over 300 combat missions. Nine of

them in Spain, 74 in the West and 44 over the Eastern Front. This Fw 190A-5 was manufactured by Focke-Wulf in Marienburg in the first half of 1943. Camouflage consisted of RLM 74, 75 and 76 color shades with spinner painted RLM 70. The rudder sported symbols of five victories (101st to 105th) against four-engined bombers.

Recommended: for Fw 190A-5 1/72

SS804	Fw 190A-5 Weekend (PE-Set)
672085	Fw 190A exhaust stacks (Brassin)
672086	Fw 190A propeller (Brassin)
672118	Fw 190A-5 engine & fuselage guns (Brassin)
672196	Fw 190A-5/U12 gun pods (Brassin)
CX456	Fw 190A-5 (Mask)



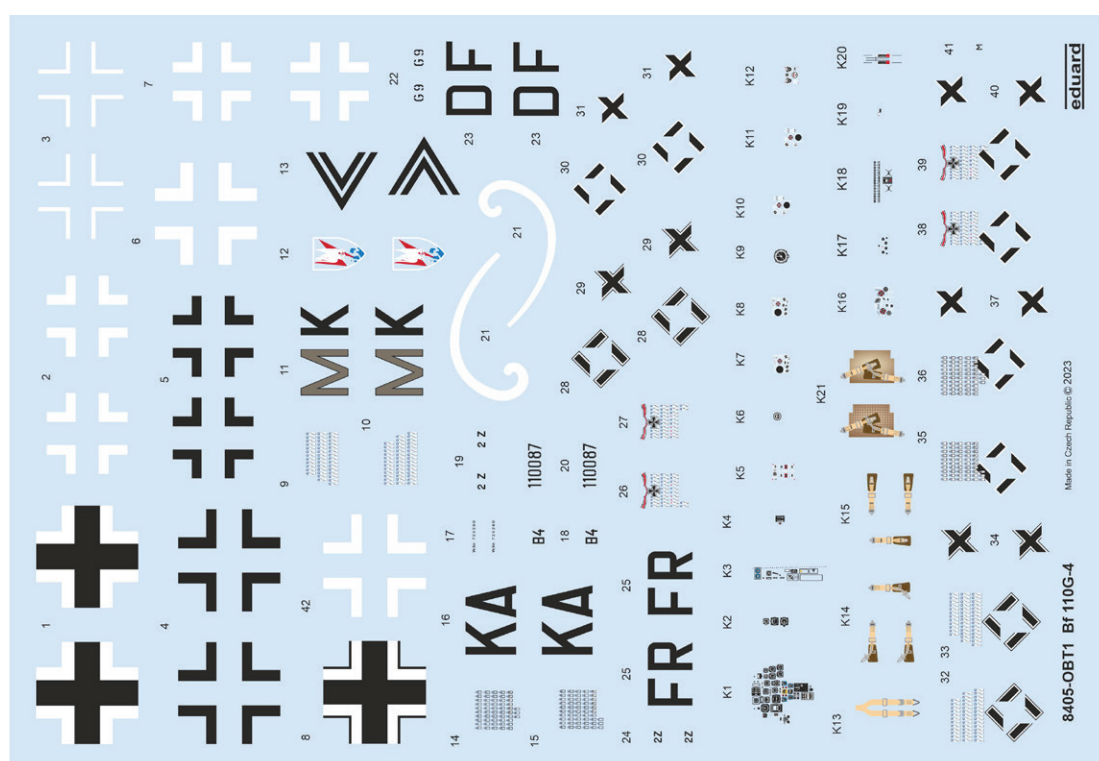
Bf 110G-4

1/48

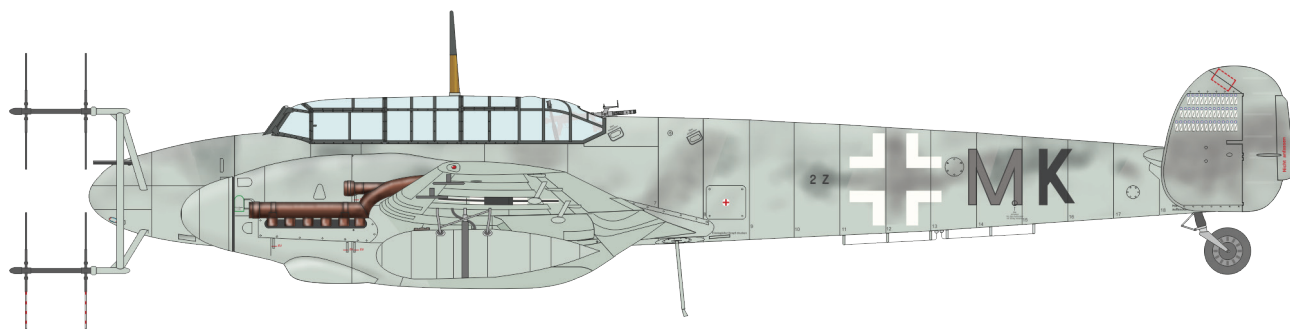
#8405

The Weekend edition kit of German WWII twin-engine heavy fighter aircraft Bf 110G-4 in 1/48 scale. This version was used in night fighter role with three crew.

- plastic parts: Eduard
- marking options: 4
- decals: Eduard
- PE parts: no
- painting mask: no
- resin parts: no

[Product page](#)


■ Oblt. Martin Becker, 2./NJG 6, Florennes, Belgium, May 1944

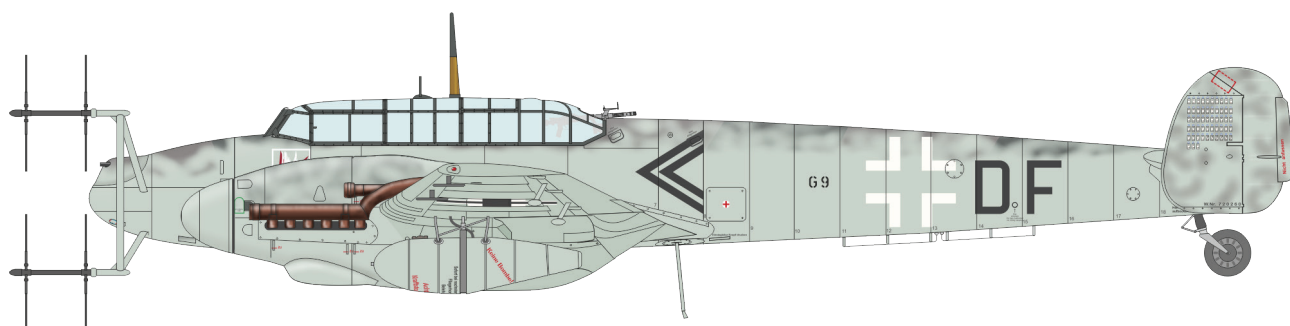


With 85 kills Martin Becker was the tenth most successful night fighter pilot of the Luftwaffe. He was special for achieving multiple kills of British four-engine bombers during a single mission, scoring nine (!) four-engine bombers on March 14, 1945, although three of them were achieved by his radio operator Ofw. Karl-Ludwig Johanssen, after Becker's forward firing cannons either jammed or were out of ammo. A native of Wiesbaden, where Becker was born on April 12, 1916, he

joined the army in 1936 and was trained as an aerial observer. In this role he flew in the Battle of France, but shortly after he started his pilot training at the Merseburg flight school. Becker received basic and advanced training for night fighters and was assigned to 11./NJG 4, which was transformed into 2./NJG 6 on April 1, 1943. Johanssen served as Becker's radio operator from March 1944 and became one of the few ROs to be awarded the Knight's Cross. Becker scored

his first victory on September 23, 1943, by the following month he was already Staffelführer of 2./NJG 6 and by December 21 he had achieved ace status. His Bf 109G-4 of unknown serial number bore the spray paint of RLM 76, the silhouette of the aircraft was darkened by irregular spots of RLM 75. His aircraft was armed MG 151/20 cannons.

■ WNr. 720260, Oblt. Heinz-Wolfgang Schnauffer, CO of IV./NJG 1, Sint Truiden, Belgium, April 1944

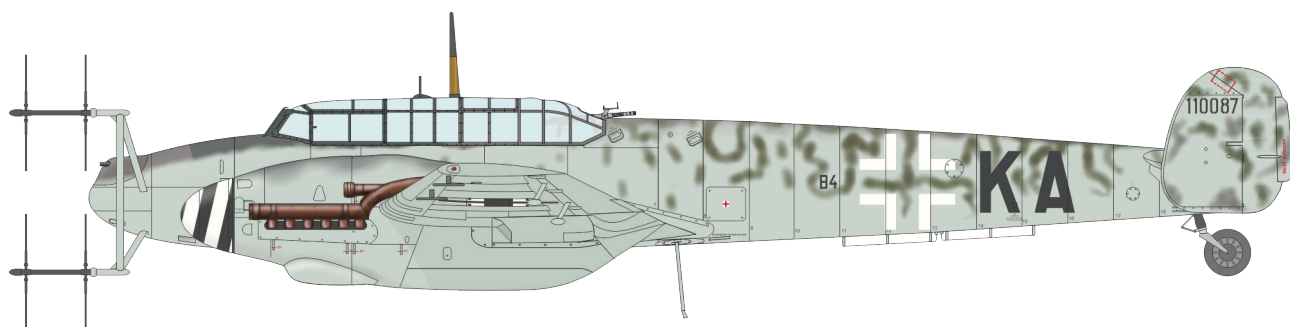


Heinz-Wolfgang Schnauffer, the most successful night fighter ace of all times, recipient of the Knight's Cross with Oak Leaves, Swords and Diamonds, flew from the beginning of his military aviation career as a night fighter. In total he shot down 121 enemy aircraft, predominantly four-engine British bombers. During the whole war he was wounded only once and none of his crew members was

ever wounded in combat. Schnauffer survived the war and at the end of hostilities he decided to concentrate on the family wine business. He died on June 15, 1950, two days after the car crash in which he collided with a truck in Cestas near Bordeaux in France. Schnauffer, nicknamed "The Night Ghost of St. Trond", flew this Bf 110G-4 during the spring months of 1944 when he assumed command of

IV. Gruppe Nachtjagdgeschwader 1. The aircraft original camouflage of RLM 74 and RLM 75 on the upper surfaces partially showed through the overcoat of RLM 76. The lower and side surfaces remained in the original coat of RLM 76, the starboard wing undersurfaces were painted black. The bottom position weapons were deleted on this aircraft.

■ WNr. 110 087, 4./NJG 3, Kjevik, Norway, 1945

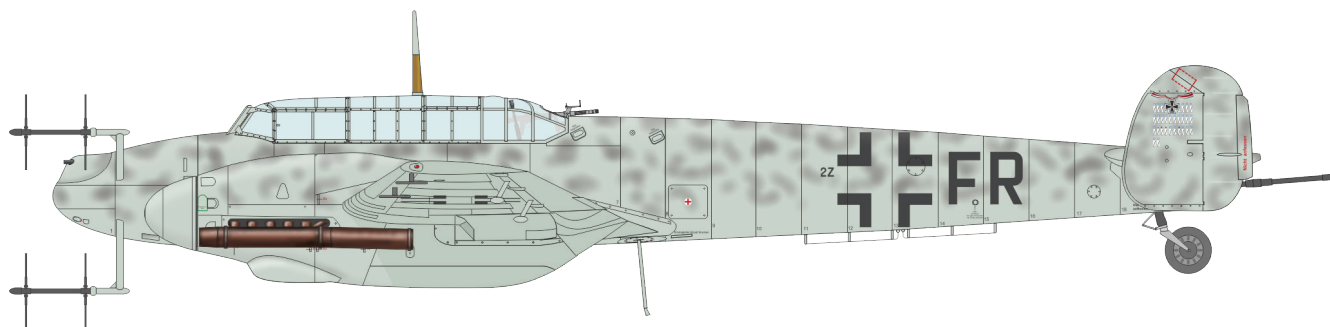


The 4./NJG 3 unit was formed in March 1945, out of Nachtjagdstaffel Norwegen, a unit that operated independently from Norway. The purpose of the unit was to intercept allied aircraft over Scandinavia. Besides the Bf 110G, the unit also flew the Ju 88G and He 219. Its last function was on May 8, 1945, evacuating German unit officers from the surrounding areas. Aircraft B4+KA

probably did not take part in this final action, because the end of the war found the aircraft still at Kjevik, in Norway. The aircraft carried FuG 220 SN-2b with vertical dipoles, and with an older type of mounting. Originally, the aircraft carried a camouflage scheme of RLM 74 and RLM 75 fields on upper surfaces, and RLM 76 on the undersurfaces, but the upper surfaces were later

oversprayed with RLM 76 (apart of the nose) and darkened by "snakes" of RLM 71. Starboard wing undersurfaces and engine cowl were oversprayed in black. This aircraft is recorded as crewed by Fw. Kurt Keilig (pilot), Fw. Kurt Schroter (radio operator) and Uffz. Karl Stamminger (mechanic).

Hptm. Wilhelm Johnen, CO of III./NJG 6, Neubiberg, Germany, 1945



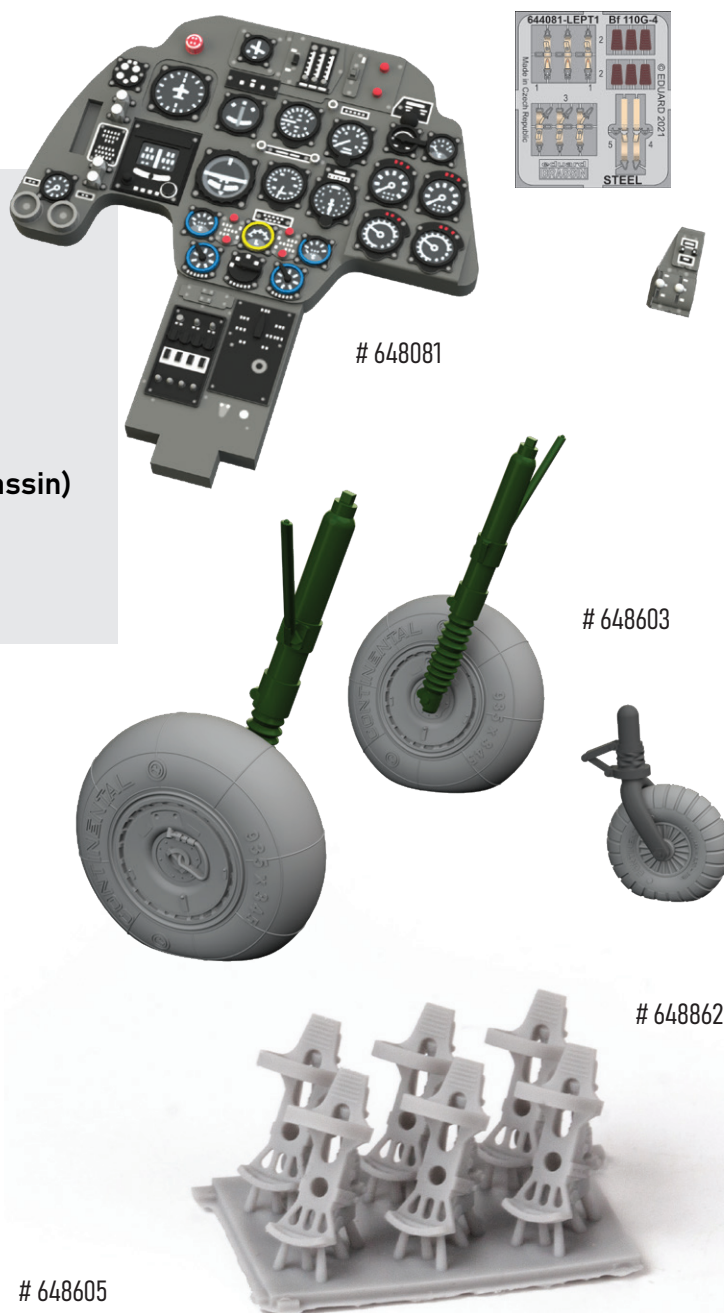
Messerschmitt Bf 110G-4 coded 2Z+FR from 7./NJG 6 was one of the aircraft the Allies found at the Neubiberg airbase in the spring of 1945. Even though according to its codes it belonged to 7. Staffel it was actually a personal aircraft of Wilhelm Johnen, III./NJG 6 commanding officer. This airplane is much less known than the

other Johnen's aircraft coded C9+EN in which he performed an emergency landing due to the damaged engine in the night of April 27-28, 1944. Bf 110G-4 2Z+FR was his last aircraft from the later production, equipped with the FuG 220 SN-2D antennae with dipoles fixed at 45 degrees, Eberspächer type exhausts and Schräge Musik

cannons. The whole aircraft was oversprayed in RLM 76, upper surfaces were darkened by small patches of RLM 75. According to photos, the aircraft lacked weapons in the bottom of the nose.

Recommended: for Bf 110G-4 1/48

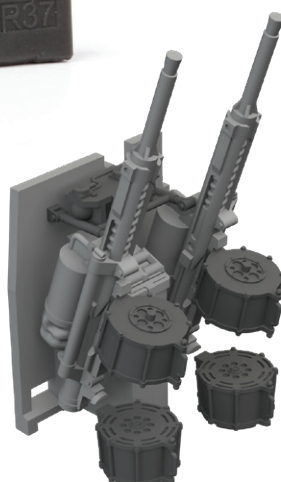
FE1368	Bf 110G-4 Weekend (PE-Set)
644081	Bf 110G-4 LööK (Brassin)
644092	Bf 110G-4 LööKplus (Brassin)
648603	Bf 110G wheels (Brassin)
648604	Bf 110G-4 gun muzzles (Brassin)
648605	Bf 110G-4 Schräge Musik (Brassin)
648606	Bf 110G-4 exhaust stacks (Brassin)
648778	Luftwaffe rudder pedals PRINT (Brassin)
648862	Bf 110G radio equipment (Brassin)
EX754	Bf 110G-4 TFace (Mask)
EX963	Bf 110G-4 Weekend (Mask)



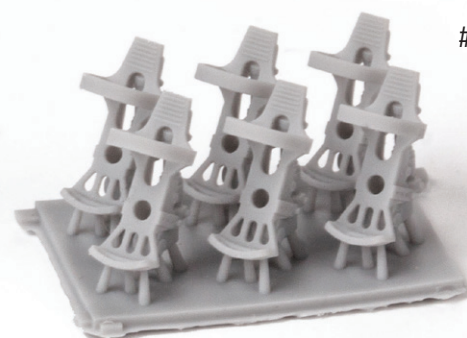
648862



648604



648605



648778

Bf 109F-2

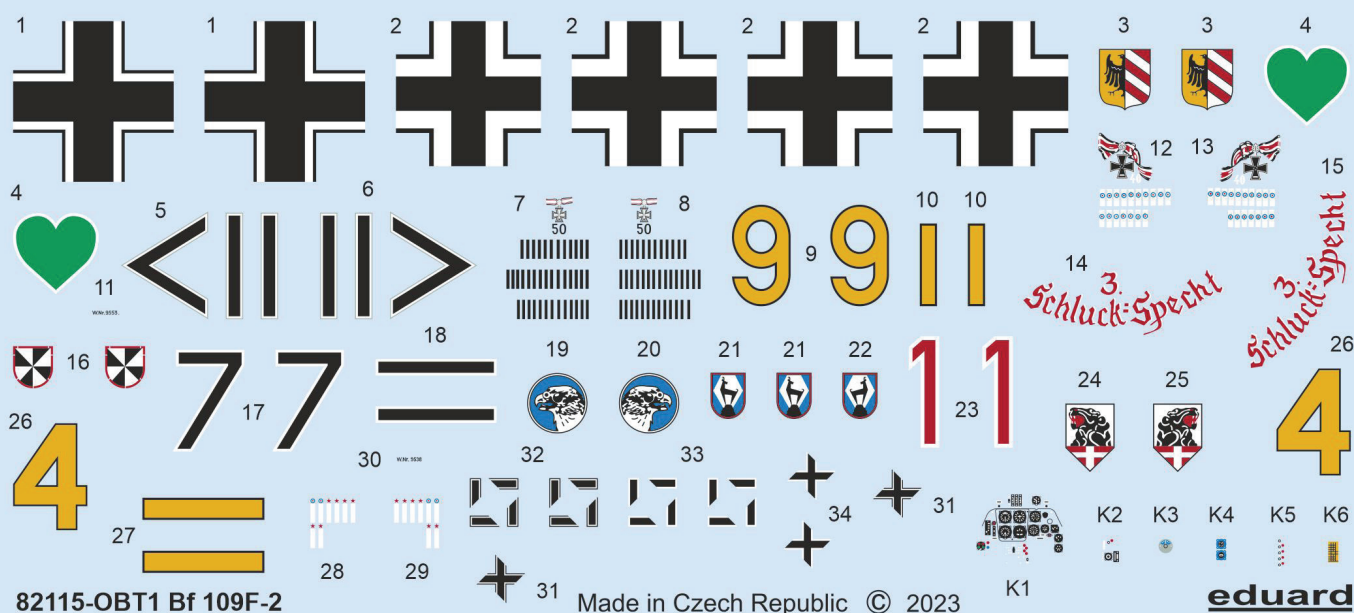
1/48

#82115

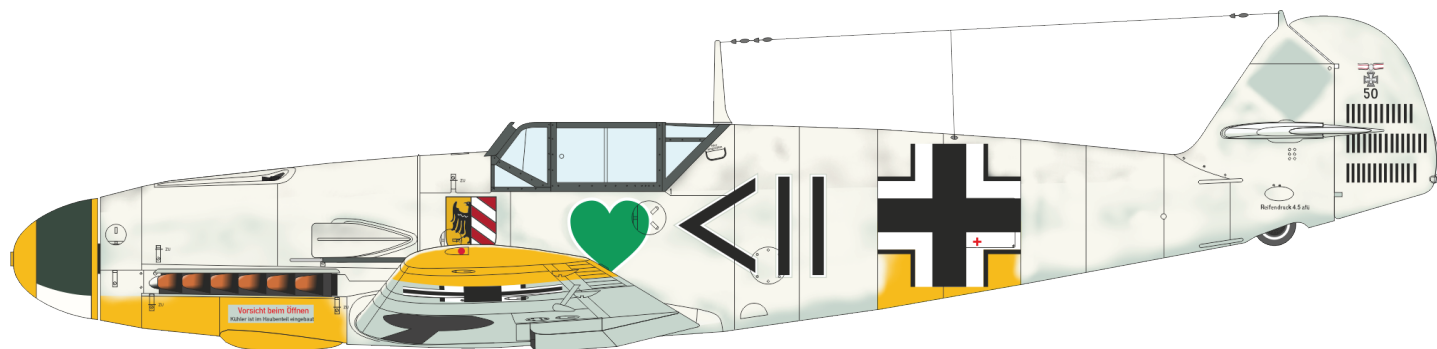
The ProfiPACK edition of German fighter aircraft
Bf 109F-2 in 1/48 scale.

- plastic parts: Eduard
- marking options: 5
- decals: Eduard
- PE parts: yes, pre-painted
- painting mask: yes
- resin parts: no

Product page



■ Bf 109F-2, Hptm. Hans Philipp, CO of I./JG 54, Krasnogvardeysk, the Soviet Union, March 1942

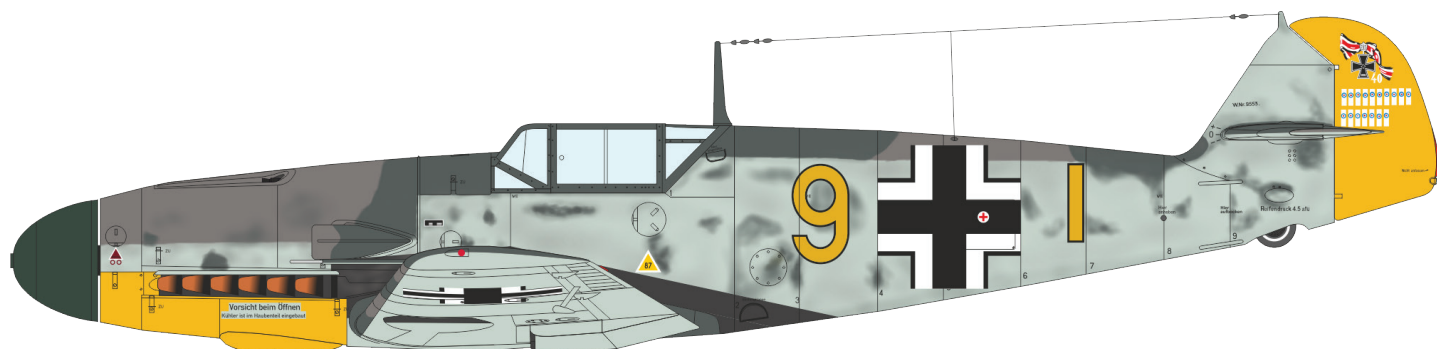


Hans "Fips" Philipp, an ace with 206 kills to his credit over the course of some 500 sorties, was born on March 17, 1917, in Meissen. He joined the Luftwaffe in 1936. At the beginning of the Second World War, he served with I./JG 76, redesignated II./JG 54 in July 1940. As a member of this unit, he participated in the fighting over Britain and the Balkans. He

also took part in Operation Barbarossa and was appointed CO of JG 1 in April 1943. For his combat success he was awarded the Knight's Cross with Oak Leaves and Swords. Philipp was shot down on October 8, 1943, and did not survive his attempt to bail out. The aircraft flown by Hans Philipp was camouflaged with white color over the upper and

side surfaces to better suit the conditions of the winter of 1943 in the vicinity of Leningrad. The Gruppe Commander marking was carried on the fuselage, as were the II. Gruppe and JG 54 (Green Heart) identifiers. Both sides of the rudder carried kill marks. The landing gear covers were removed due to their tendency to pile up snow.

■ Bf 109F-2, WNr. 9553, Oblt. Siegfried Schnell, CO of 9./JG 2, Théville, France, November 1941

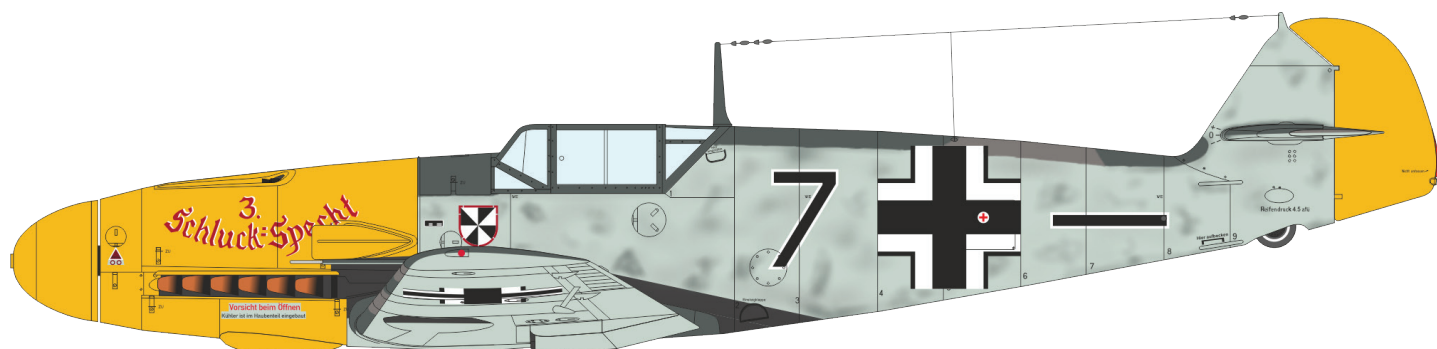


Siegfried "Wumm" Schnell, a native of Zeilenzig in Brandenburg (Sulecin, Poland today) joined the ranks of the Luftwaffe in 1936 and at the beginning of the Second World War he served with 4./JG 2. He achieved his first victory in combat over France on May 14, 1940, more followed over Britain and against English and American pilots over

Western Europe. After being assigned to JG 54, he first served with its III. Gruppe and was appointed CO of IV. Gruppe on February 1, 1944. While serving in this position, he was shot down over Narva by a Soviet fighter on February 25, 1944, and died. Schnell was awarded the Knight's Cross with Oak Leaves on July 9, 1941 and downed

93 enemies in the course of Second World War. His aircraft was camouflaged in the standard Luftwaffe fighter scheme using RLM 74/75/76. Both sides of the fin were decorated with the Knight's Cross with Oak Leaves and victory marks.

■ Bf 109F-2, Lt. Horst Buddenhagen, 5./JG 3, Darmstadt, Germany, April 1941

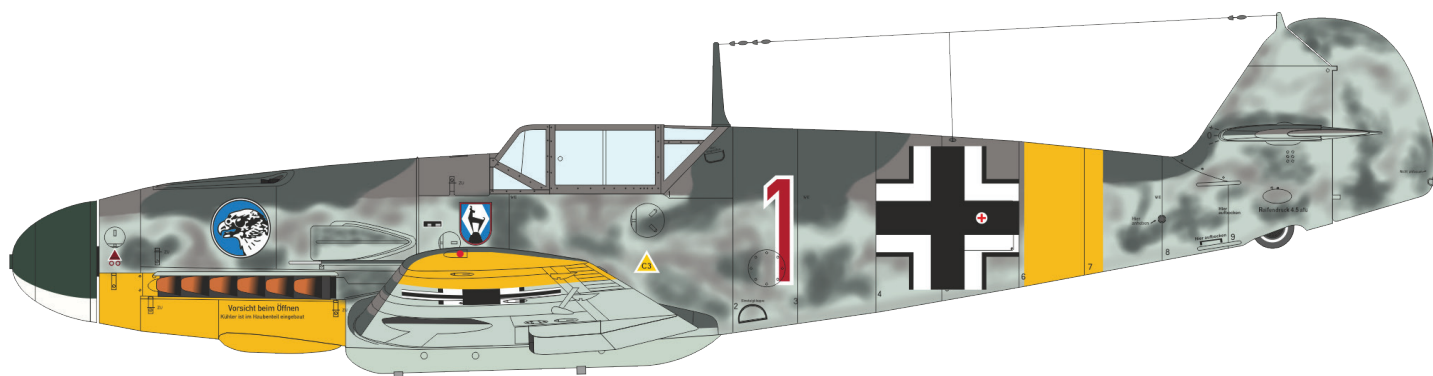


In the middle of February 1941, II./JG 3 was sent from the French coast back to Germany for some rest and to re-equip with the Bf 109F. In April, the new Bf 109F-2 were received at Darmstadt sporting the standard RLM 74/75/76 camouflage scheme to which the ground crew added yellow

rudders and engine cowls. Lt. Buddenhagen's aircraft also received the inscription Schluck=Specht 3. At the end of April 1941, II. Gruppe moved to France and after a month at Monchy-Breton was included into units that were assigned to take part in Operation Barbarossa,

the attack on the Soviet Union. Aircraft of the 5. Staffel were given bomb racks for the occasion. Lt. Buddenhagen was killed by ground fire on a bombing mission on June 25, 1941.

■ Bf 109F-2/b, Oblt. Wilhelm Hachfeld, 2./JG 51, Kiev, the Soviet Union, Summer 1941

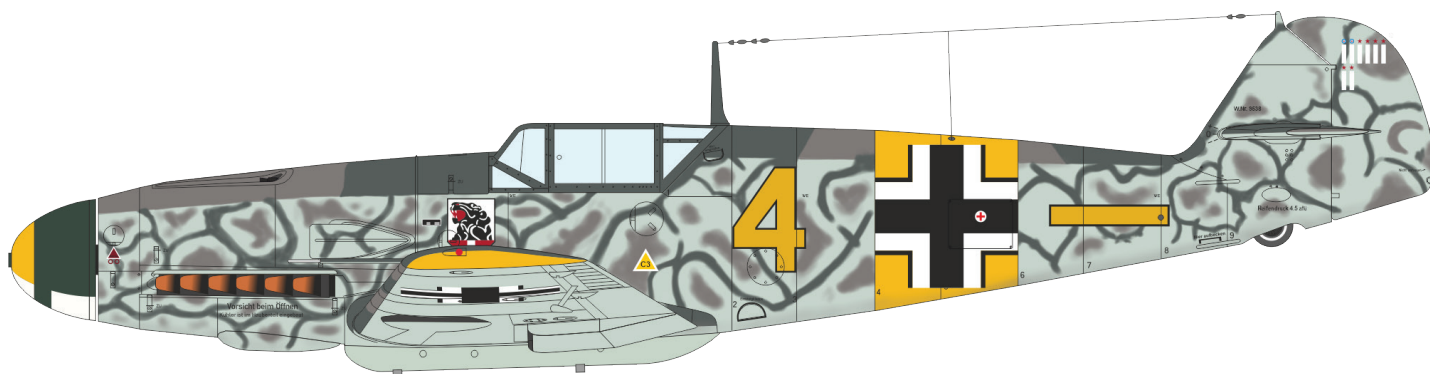


During fighting over the plains of the Soviet Union, the Luftwaffe leadership planned use of Bf 109F-2s as fighter bombers to attack ground targets. The entire Jagdgeschwader 51, led by Werner Mölders, was tasked with support of Panzergruppe 2 over the central section of the front from the start of Operation Barbarossa.

Future Knight's Cross holder Wilhelm Hachfeld, born on September 20, 1914, in Dessau, was appointed the CO of 2. Staffel on October 8, 1940. Bomben Willi, as he was known, led the unit until August 25, 1941, when he took over the entire I. Gruppe JG 51 and served in that capacity until the end of April 1942. In May 1942, he became the

CO of III./ZG 2, in who's service he fell in Tunisia on December 2, 1942. The aircraft, equipped with ETC50/VIII d was camouflaged in RLM 74/75/76 and, as an aircraft serving in the Eastern Front, was sporting yellow wing tips and fuselage band.

■ Bf 109F-2, WNr. 9538, Lt. Hans Beißwenger, 6./JG 54, Ostrov, Soviet Union, July 1941



Hans "Beißer" Beißwenger was first assigned to an anti-aircraft artillery unit after entering the Wehrmacht in 1937. A year later he started pilot training program in 1938 and after its successful completion he became instructor. In the winter of 1940, he was assigned to 6./JG 54, and while serving with this unit he shot down a Yugoslav Hurricane on

April 7, 1941. Other victories were achieved against Soviet pilots and he eventually accumulated 152 kills. On March 6, 1943, his Bf 109G-2 was the victim of an aerial ramming conducted by Ivan Kholodov of the 32nd GIAP. Beißwenger died, while Kholodov bailed out. The "Yellow 4" was camouflaged in the standard Luftwaffe RLM 74/75/76 scheme, and the

sides received an additional squiggle pattern of RLM 75 bordered with irregular lines of RLM 74. Some sources say that the squiggles were in RLM 02 and the linework in RLM 71. The yellow wingtips and fuselage bands were the markings of the aircraft operating on the Eastern Front.

Recommended: for Bf 109F-2 1/48

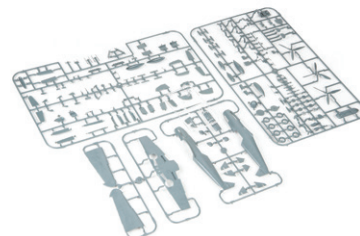
644010	Bf 109F LööK (Brassin)
648282	Bf 109F wheels (Brassin)
648288	Bf 109F propeller LATE (Brassin)
648289	Bf 109F propeller EARLY (Brassin)
648291	Bf 109F landing flaps (Brassin)
648300	Bf 109F engine & fuselage guns (Brassin)
648308	Bf 109F undercarriage legs BRONZE (Brassin)
D48026	Bf 109F stencils (Decal Set)
D48043	Bf 109F-2 national insignia (Decal Set)
EX588	Bf 109F TFace (Mask)

648308



OVERTREES

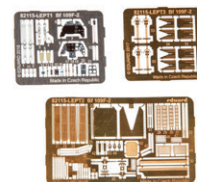
#82115X
Bf 109F-2
1/48



[Product page](#)

OVERLEPT

#82115-LEPT
Bf 109F-2
PE-Set 1/48



[Product page](#)

634038

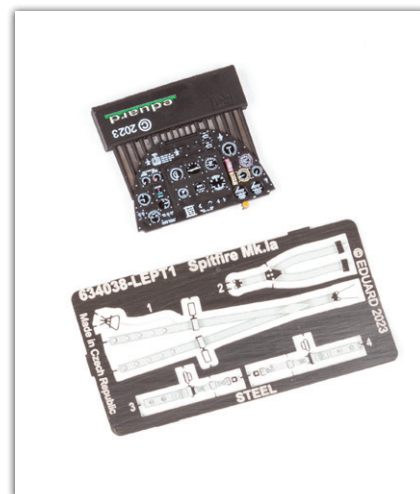
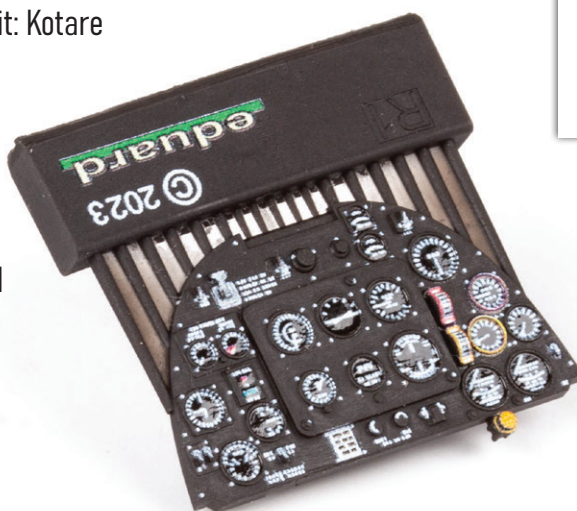
Spitfire Mk.Ia LööK

1/32 Kotare

LööK set - Brassin pre-painted dashboard and STEEL seatbelts for Spitfire Mk.Ia in 1/32 scale. Easy to assemble, replaces plastic parts. Recommended kit: Kotare

Set contains:

- resin: 1 part
- 3D print: 1 part
- decals: no
- photo-etched details: yes, pre-painted
- painting mask: no

[Product page](#)


LööK

644217

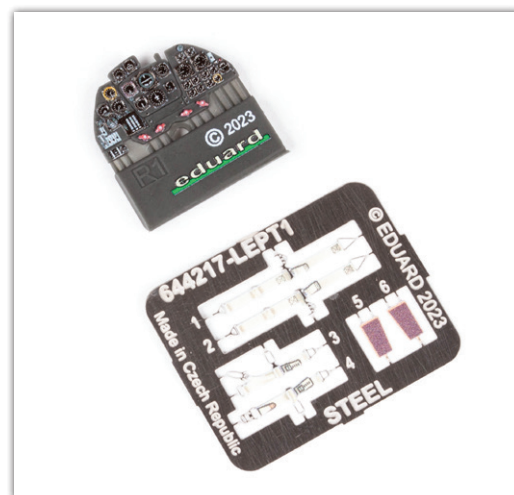
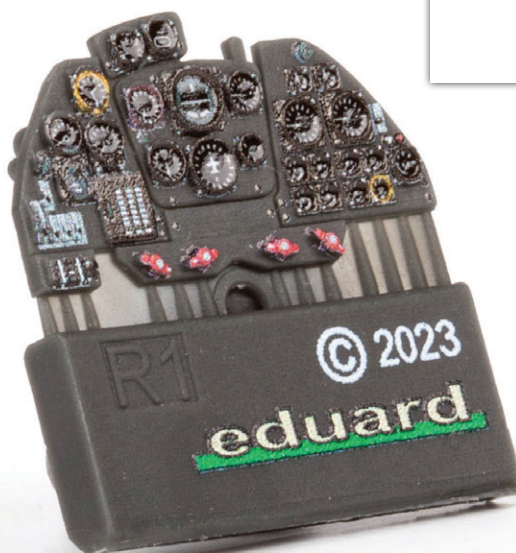
Do 335A LööK

1/48 Tamiya

LööK set - Brassin pre-painted dashboard and STEEL seatbelts for Do 335A in 1/48 scale. Easy to assemble, replaces plastic parts. Recommended kit: Tamiya

Set contains:

- resin: 1 part
- decals: no
- photo-etched details: yes, pre-painted
- painting mask: no

[Product page](#)


LööK

634036

Spitfire Mk.IXc LööKplus

1/24 Airfix

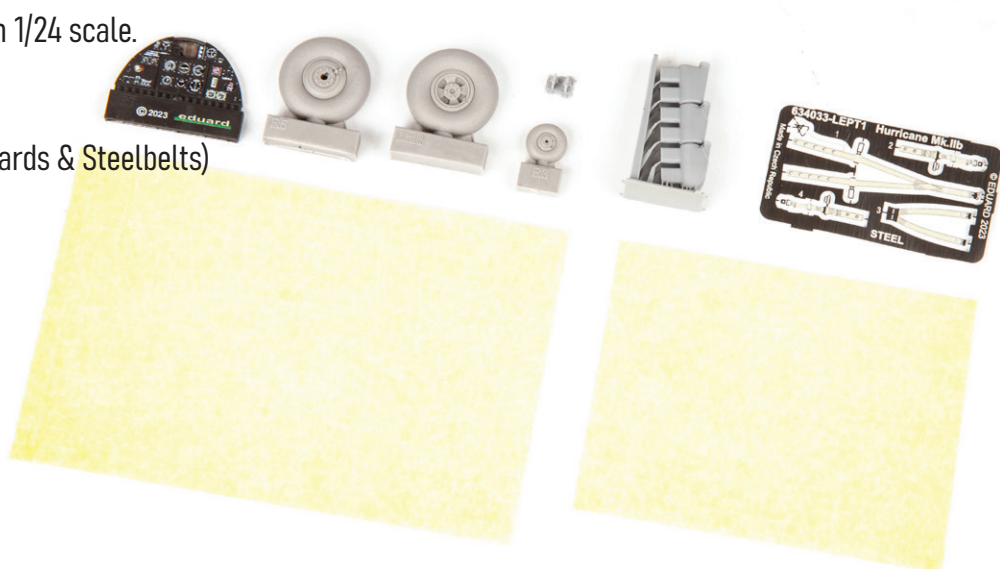
Collection of 4 sets for Spitfire Mk.IXc in 1/24 scale.

Recommended kit: Airfix

- LööK set (pre-painted Brassin dashboards & Steelbelts)
- TFace painting mask
- undercarriage wheels
- exhaust stacks

Product page

LööKt



644218

Mi-8MT LööKplus

1/48 Zvezda

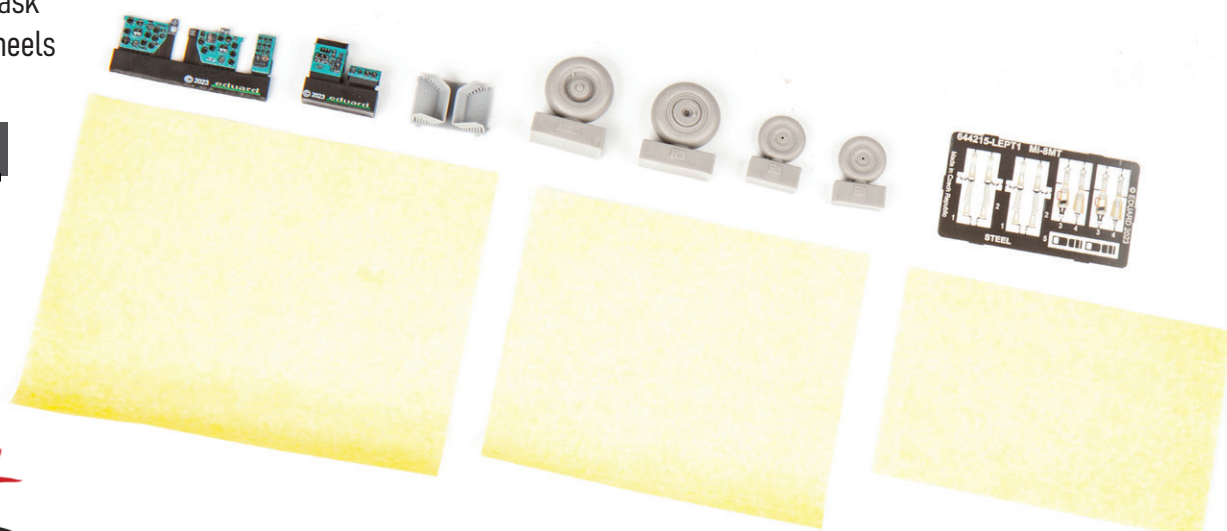
Collection of 3 sets for Mi-8MT in 1/48 scale.

Recommended kit: Zvezda

- LööK set (pre-painted Brassin dashboards & Steelbelts)
- TFace painting mask
- undercarriage wheels

Product page

LööKt



644219

PV-1 LööKplus

1/48 Academy/Revell

Collection of 3 sets for PV-1 in 1/48 scale.

Recommended kit: Academy / Revell

- LööK set (pre-painted Brassin dashboards & Steelbelts)
- TFace painting mask
- undercarriage wheels

[Product page](#)


632194

F-16 exhaust nozzle P&W F100 PRINT

1/32 Tamiya

Brassin set - the exhaust nozzle for P&W F100 engine powered F-16 in 1/32 scale. Made by direct 3D printing. Recommended kit: Tamiya

Set contains:

- 3D print: 4 parts
- decals: no
- photo-etched details: no
- painting mask: no

[Product page](#)


632195

Spitfire Mk.Ia wheels

1/32 Kotare

Brassin set - the undercarriage wheels for Spitfire Mk.Ia in 1/32 scale. The set consists of the main wheels and tail wheel. Easy to assemble, replaces plastic parts. Recommended kit: Kotare

Set contains:

- resin: 3 parts
- decals: no
- photo-etched details: no
- painting mask: yes

[Product page](#)



632196

Spitfire Mk.Ia exhaust stacks PRINT

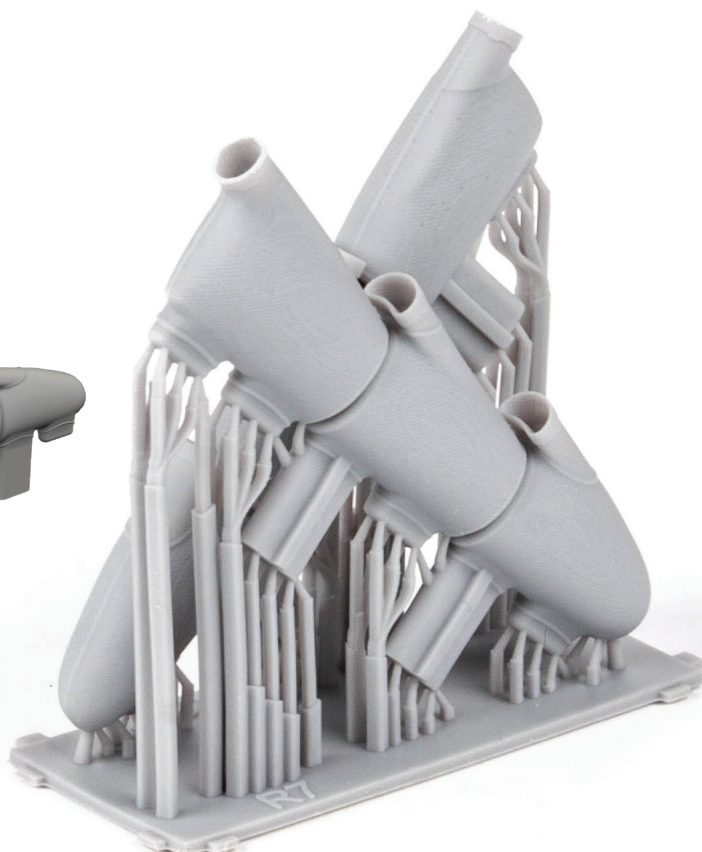
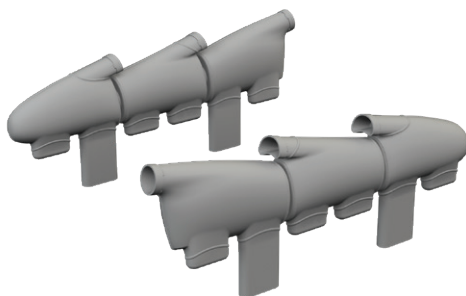
1/32 Kotare

Brassin set - the exhaust stacks for Spitfire Mk.Ia in 1/32 scale. Easy to assemble, replaces plastic parts. Made by direct 3D printing. Recommended kit: Kotare

Set contains:

- 3D print: 2 parts
- decals: no
- photo-etched details: no
- painting mask: no

[Product page](#)



648866

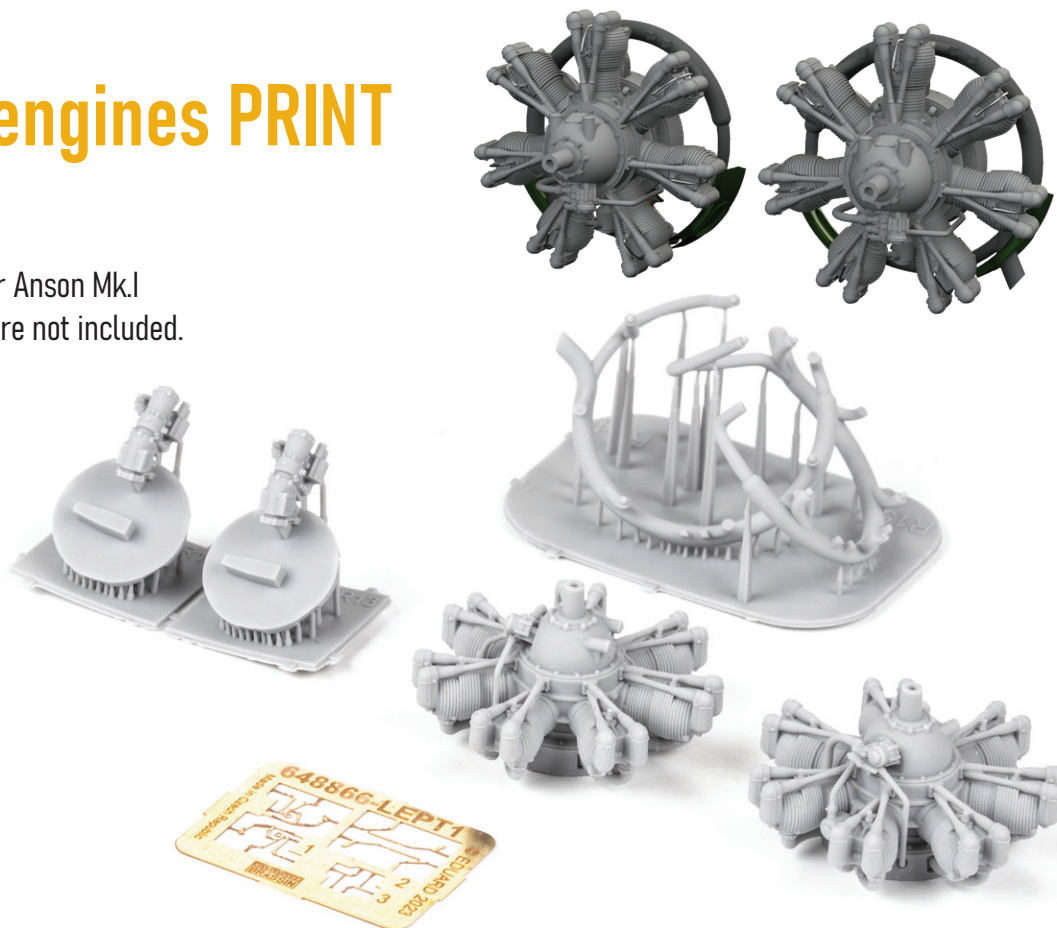
Anson Mk.I engines PRINT

1/48 Airfix

Brassin set - two engines for Anson Mk.I
in 1/48 scale. The cowlings are not included.
Made by direct 3D printing.
Recommended kit: Airfix

Set contains:

- 3D print: 6 parts
- decals: no
- photo-etched details: yes
- painting mask: no

[Product page](#)


648868

Mi-8MT wheels

1/48 Trumpeter

Brassin set - the undercarriage wheels for Mi-8MT
in 1/48 scale. The set consists of the main wheels and
nose wheels. Easy to assemble, replaces plastic parts.
Recommended kit: Trumpeter

Set contains:

- resin: 4 parts
- decals: no
- photo-etched details: no
- painting mask: yes

[Product page](#)


648872

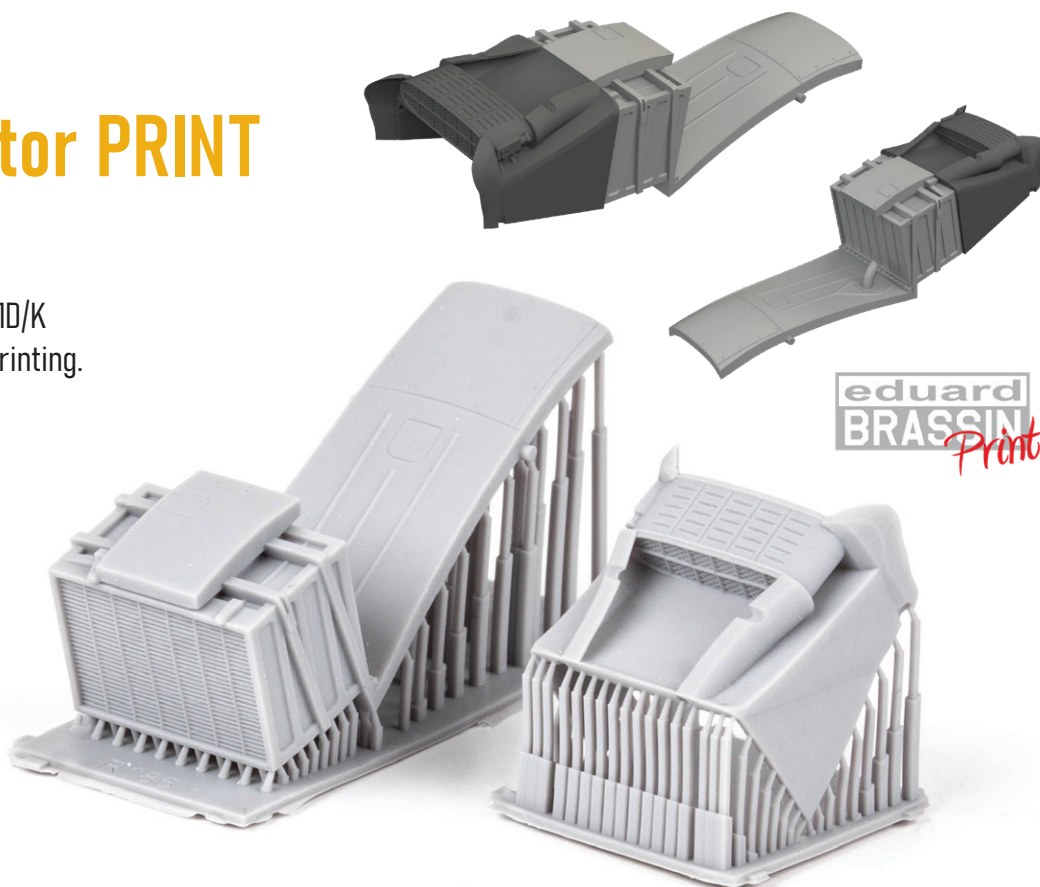
P-51D/K radiator PRINT

1/48 Eduard

Brassin set - the radiator for P-51D/K
in 1/48 scale. Made by direct 3D printing.
Recommended kit: Eduard

Set contains:

- 3D print: 2 parts
- decals: no
- photo-etched details: no
- painting mask: no

[Product page](#)

648876

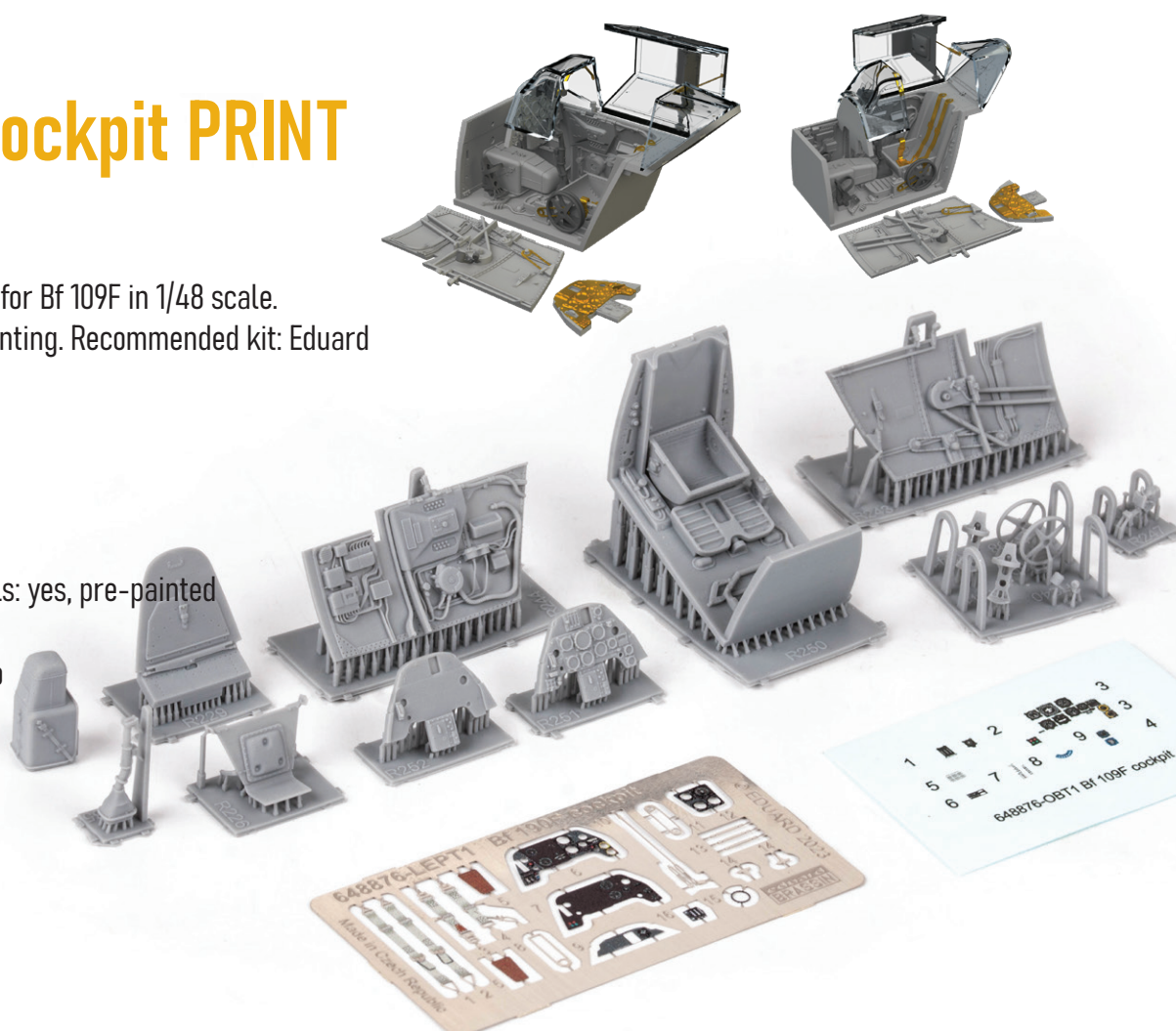
Bf 109F cockpit PRINT

1/48 Eduard

Brassin set - cockpit for Bf 109F in 1/48 scale.
Made by direct 3D printing. Recommended kit: Eduard

Set contains:

- 3D print: 16 parts
- resin: 1 part
- decals: yes
- photo-etched details: yes, pre-painted
- painting mask: no
- SPACE 3D decals: no

[Product page](#)

eduard
BRASSIN

648877

F-35B ejection seat PRINT

1/48 Italeri

Brassin set - ejection seat for F-35B in 1/48 scale.
Made by direct 3D printing. Easy to assemble,
replaces plastic parts. Recommended kit: Italeri

Set contains:

- 3D print: 9 parts
- decals: yes
- photo-etched details: yes, pre-painted
- painting mask: no

[Product page](#)



648878

Do 335A exhaust stacks PRINT

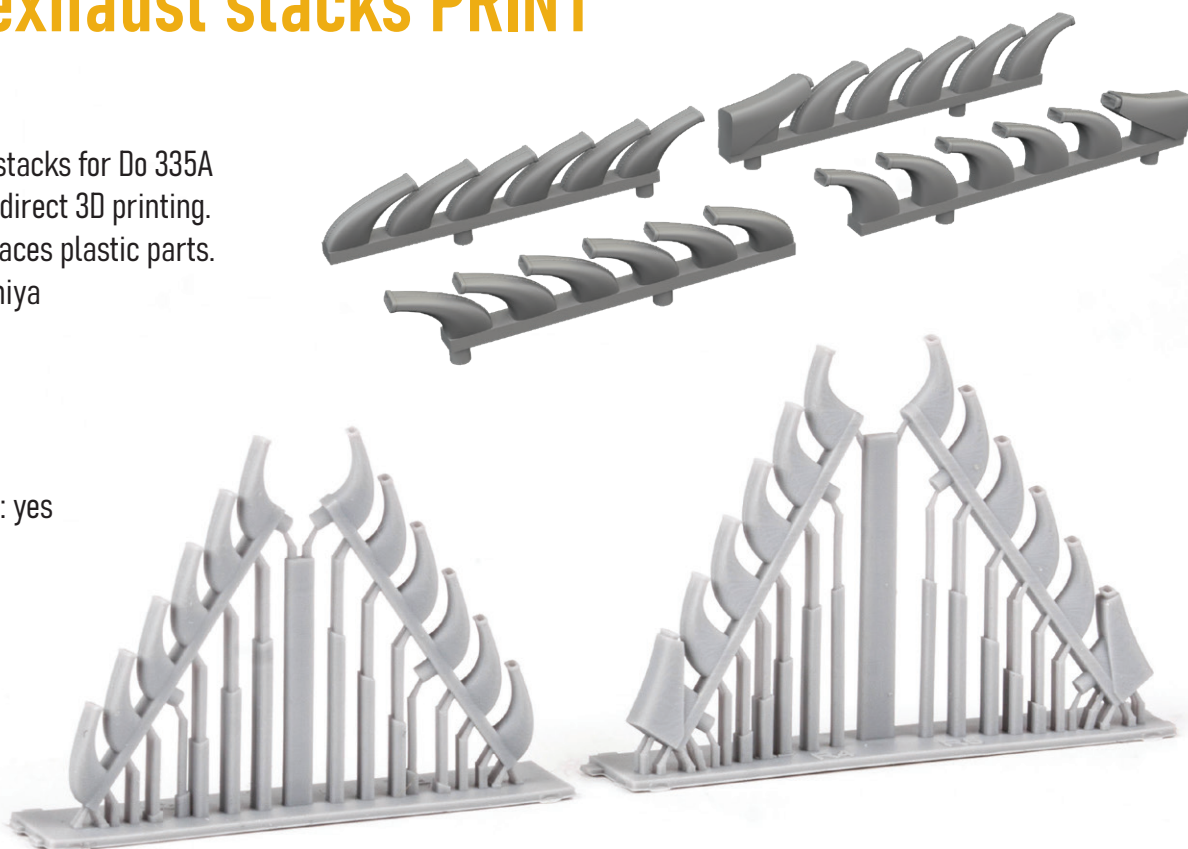
1/48 Tamiya

Brassin set - exhaust stacks for Do 335A
in 1/48 scale. Made by direct 3D printing.
Easy to assemble, replaces plastic parts.
Recommended kit: Tamiya

Set contains:

- 3D print: 4 parts
- decals: no
- photo-etched details: yes
- painting mask: no

[Product page](#)



648879

Do 335A wheels

1/48 Tamiya

Brassin set - the undercarriage wheels for Do 335A in 1/48 scale. The set consists of the main wheels and a nose wheel. Easy to assemble, replaces plastic parts. Recommended kit: Tamiya

Set contains:

- resin: 3 parts
- decals: no
- photo-etched details: no
- painting mask: yes

[Product page](#)



672318

Bf 109F radio compartment PRINT

1/72 Eduard

Brassin set - radio compartment for Bf 109F in 1/72 scale. Made by direct 3D printing. Recommended kit: Eduard

Set contains:

- 3D print: 4 parts
- decals: no
- photo-etched details: yes
- painting mask: no

[Product page](#)



672321

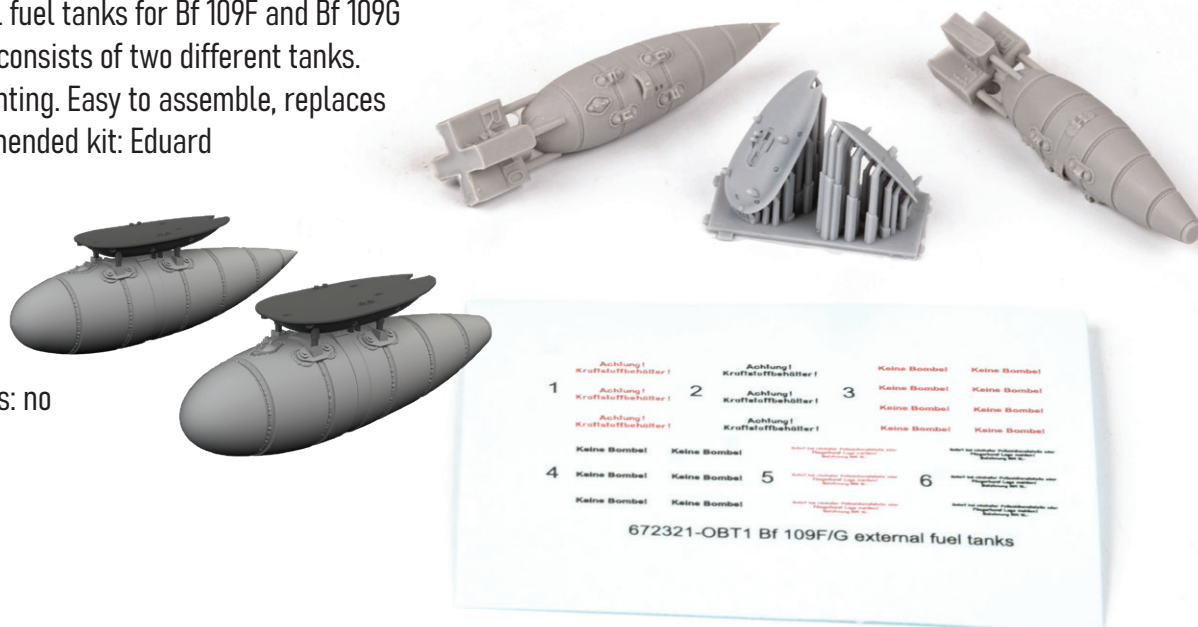
Bf 109F/G external fuel tanks

1/72 Eduard

Brassin set - external fuel tanks for Bf 109F and Bf 109G in 1/72 scale. The set consists of two different tanks. Made by direct 3D printing. Easy to assemble, replaces plastic parts. Recommended kit: Eduard

Set contains:

- 3D print: 2 parts
- resin: 2 parts
- decals: yes
- photo-etched details: no
- painting mask: no


[Product page](#)

672322

Bf 109F wheel bays rounded PRINT

1/72 Eduard

Brassin set - rounded wheel bays for Bf 109F in 1/72 scale. Made by direct 3D printing. Recommended kit: Eduard

Set contains:

- 3D print: 2 parts
- decals: no
- photo-etched details: no
- painting mask: no


[Product page](#)

672323

Bf 109F/G wheels bays angular PRINT

1/72 Eduard

Brassin set - angular wheel bays for Bf 109F in 1/72 scale. Made by direct 3D printing. Recommended kit: Eduard

Set contains:

- 3D print: 2 parts
- decals: no
- photo-etched details: no
- painting mask: no

[Product page](#)



672324

Bf 109 SC250 bomb

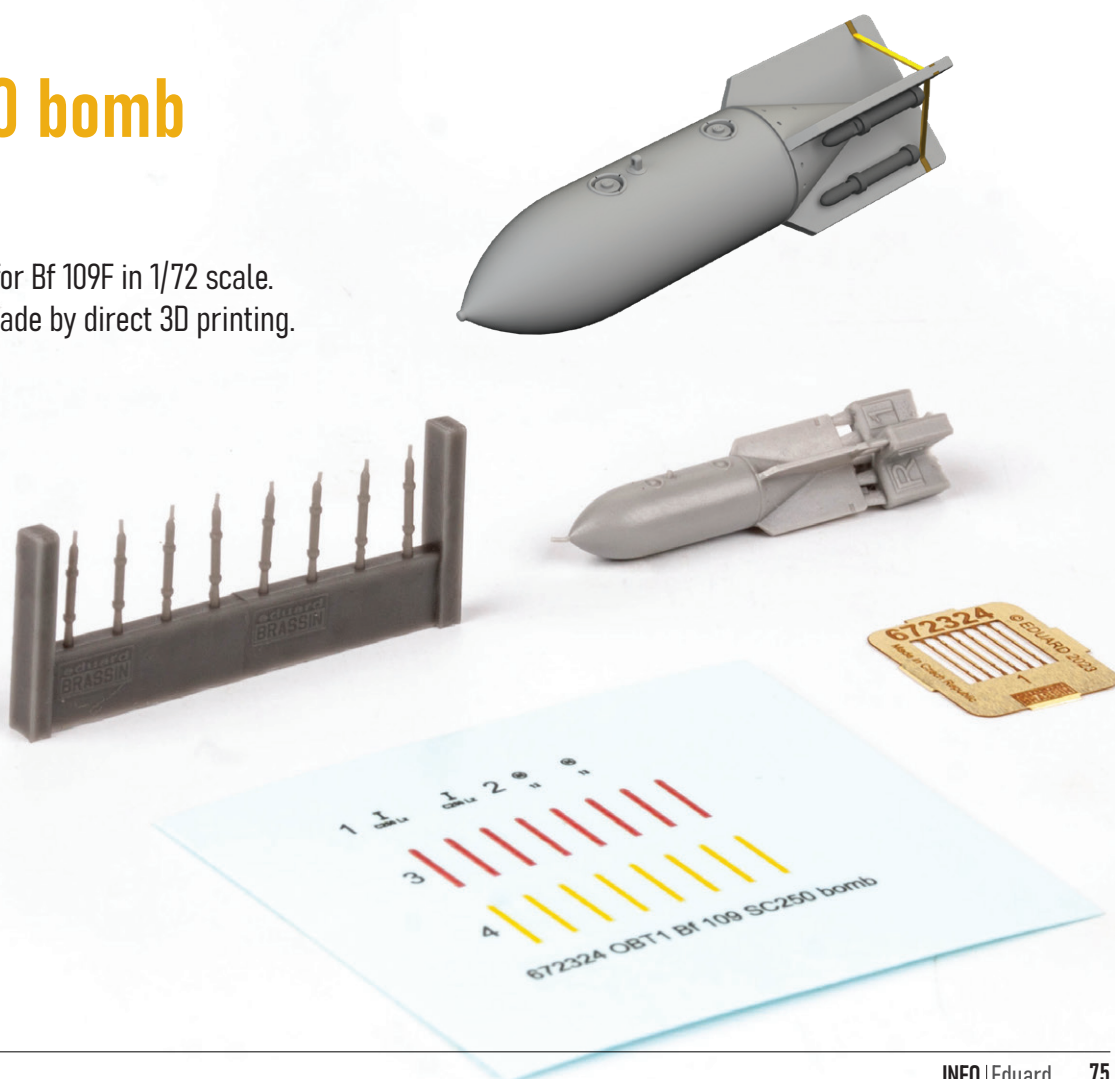
1/72 Eduard

Brassin set - SC 250 bomb for Bf 109F in 1/72 scale. The set consist of 1 bomb. Made by direct 3D printing. Recommended kit: Eduard

Set contains:

- resin: 5 parts
- decals: yes
- photo-etched details: yes
- painting mask: no

[Product page](#)



672325

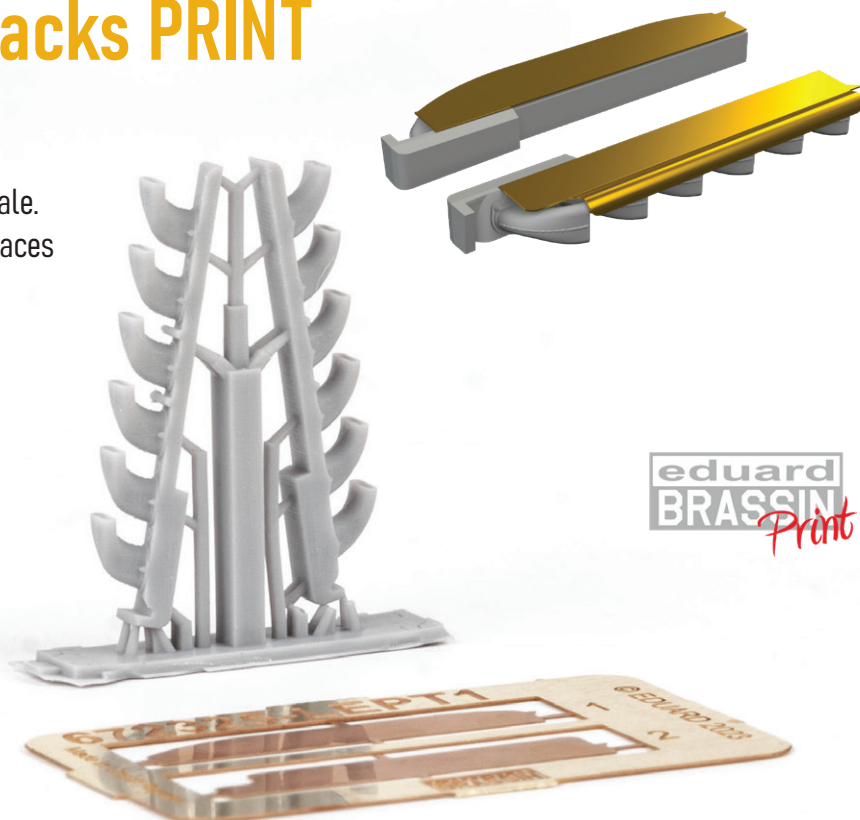
Bf 109F/G exhaust stacks PRINT**1/72 Eduard**

Brassin set - exhaust stacks for Bf 109F in 1/72 scale.
Made by direct 3D printing. Easy to assemble, replaces plastic parts. Recommended kit: Eduard

Set contains:

- 3D print: 2 parts
- decals: no
- photo-etched details: yes
- painting mask: no

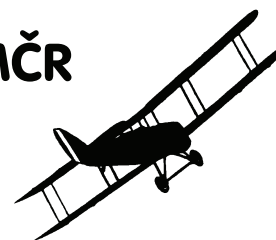
Product page

eduard
BRASSIN
Print

Mistrovství ČR seniorů v plastickém modelářství pro rok 2023

Bodovací soutěž dle pravidel KSPIM SMČR

9. září 2023



propozice na stránkách IPMSCZE.cz nebo Modelforum.cz

budova Krajské vědecké knihovny Liberec, Rumjancevova 1362/1, velký sál

ARTWORK PRINTS



Fw 108A-5
Hitler Youth School, 10.000 ft. over Berlin, 10.000 ft. over Berlin, 10.000 ft. over Berlin
© Eduard Art
Eduard Art, 2011
www.eduard.com

7470-ART

UV stable printing
on white
vinyl 160g/m2.

Packed in hard
envelope.



Bf 109G-6
Hitler Youth School, 10.000 ft. over Berlin, 10.000 ft. over Berlin, 10.000 ft. over Berlin
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8405-ART



Ki-102
Hitler Youth School, 10.000 ft. over Berlin, 10.000 ft. over Berlin, 10.000 ft. over Berlin
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82219-ART

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SIN648107

A6M2-N Rufe

1/48 Eduard

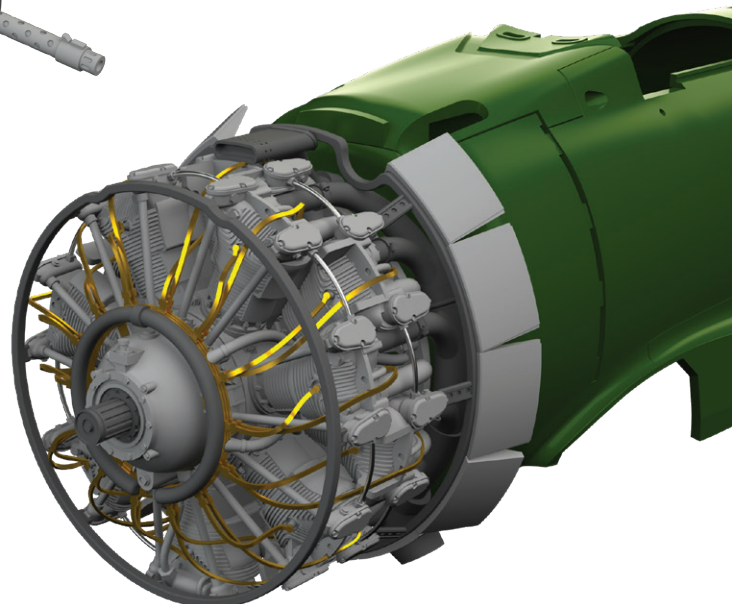
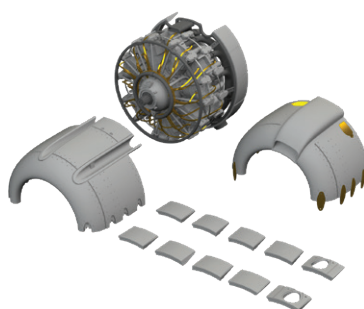
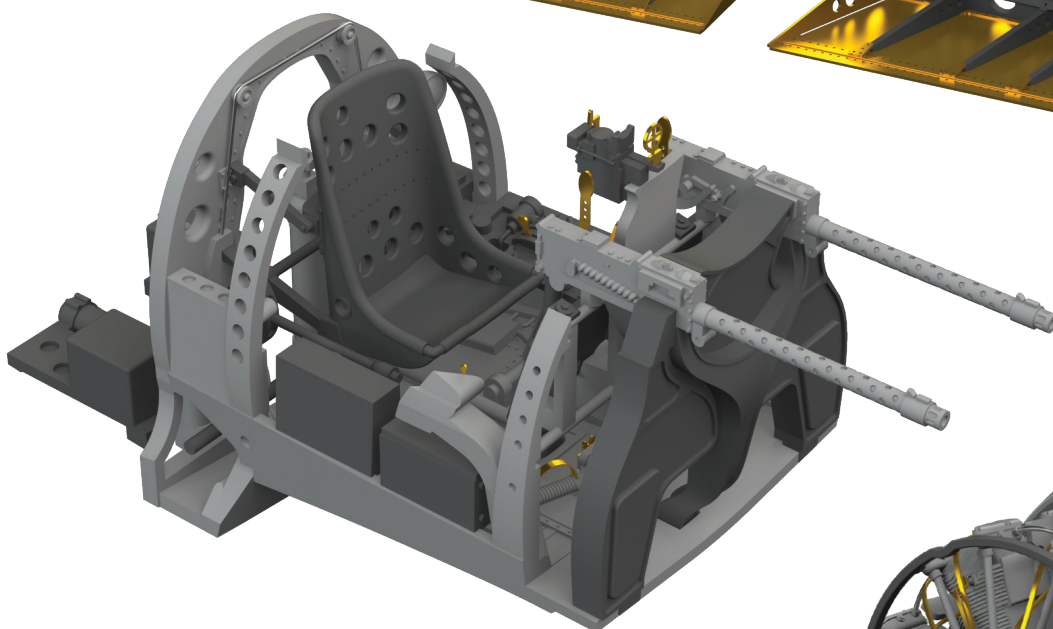
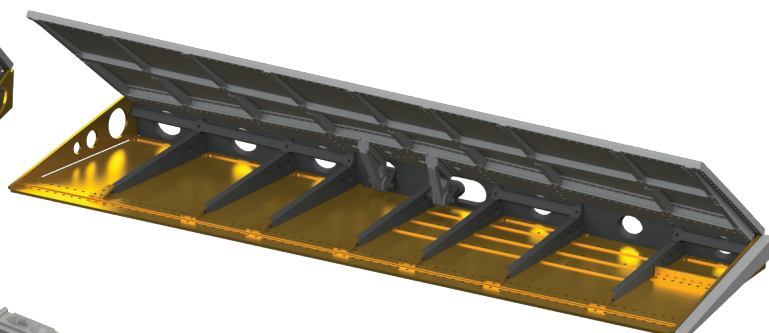
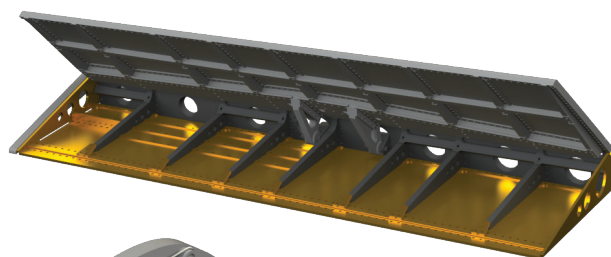
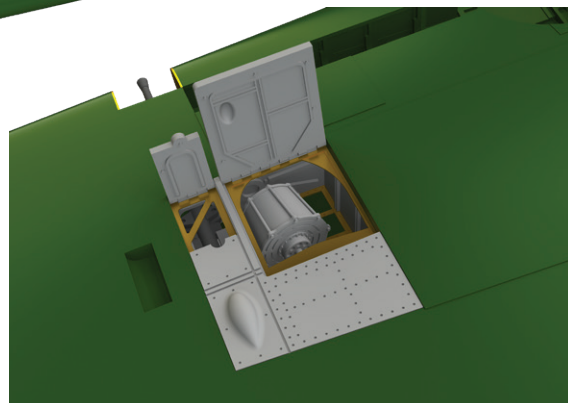
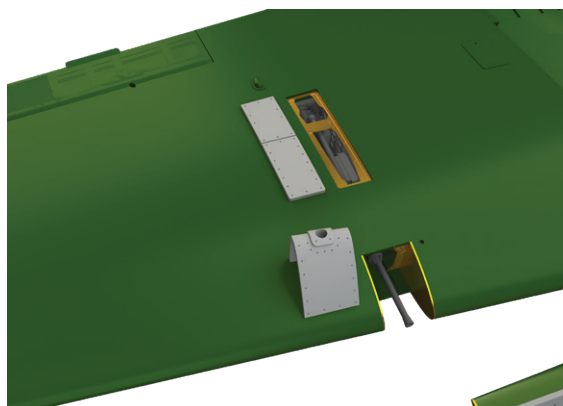
Collection of 4 sets for A6M2-N in 1/48 scale.

Recommended kit: Eduard

- engine
- gun bays
- landing flaps
- cockpit

All sets included in this BIG SIN are available separately, but with every BIG SIN set you save up to 30 %.

Product page



SIN67220

Bf 110E

1/72 Eduard

Collection of 5 sets for Bf 110E in 1/72 scale.

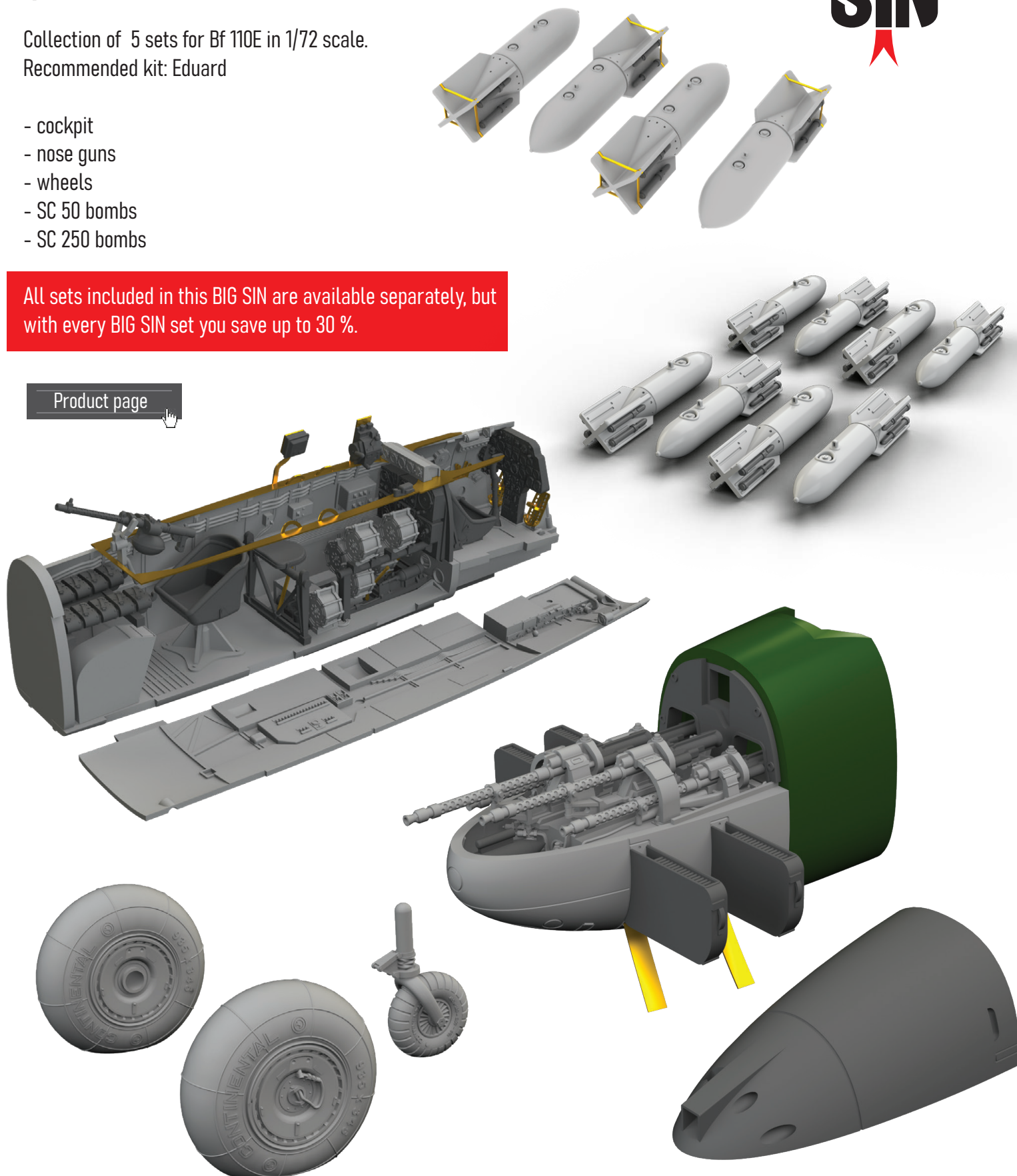
Recommended kit: Eduard

- cockpit
- nose guns
- wheels
- SC 50 bombs
- SC 250 bombs



All sets included in this BIG SIN are available separately, but with every BIG SIN set you save up to 30 %.

Product page



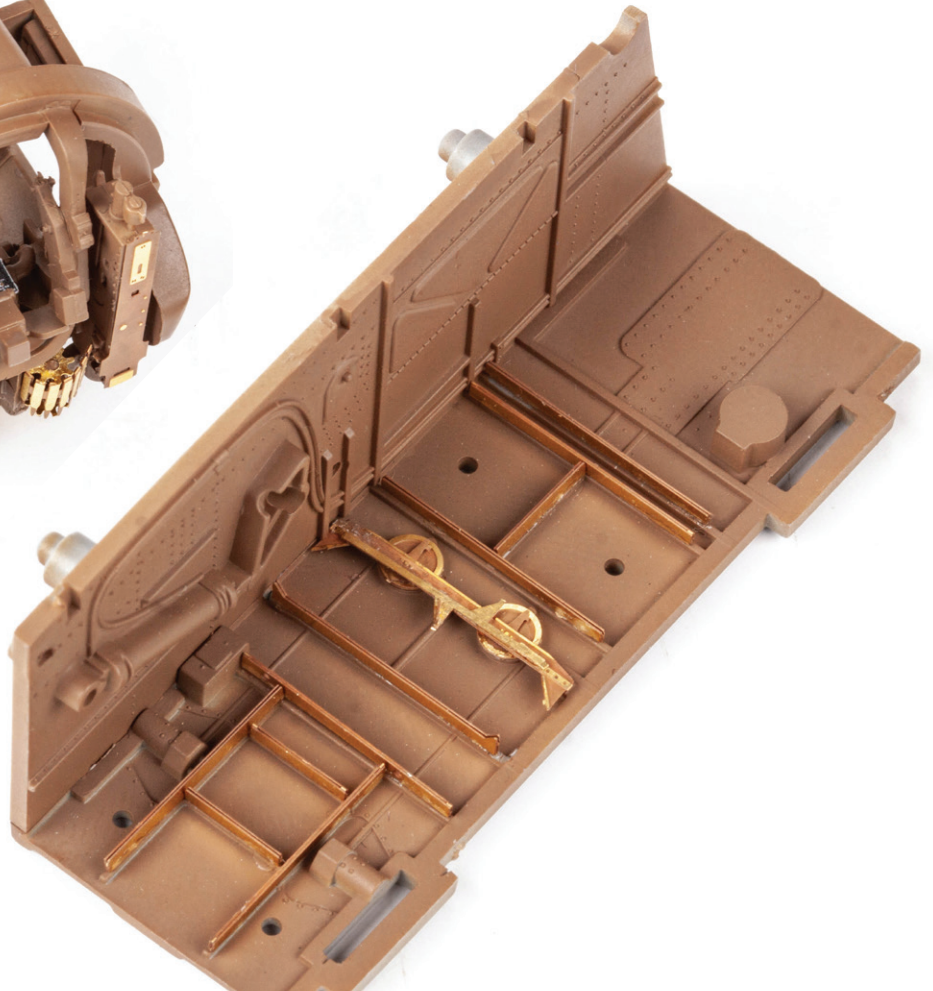
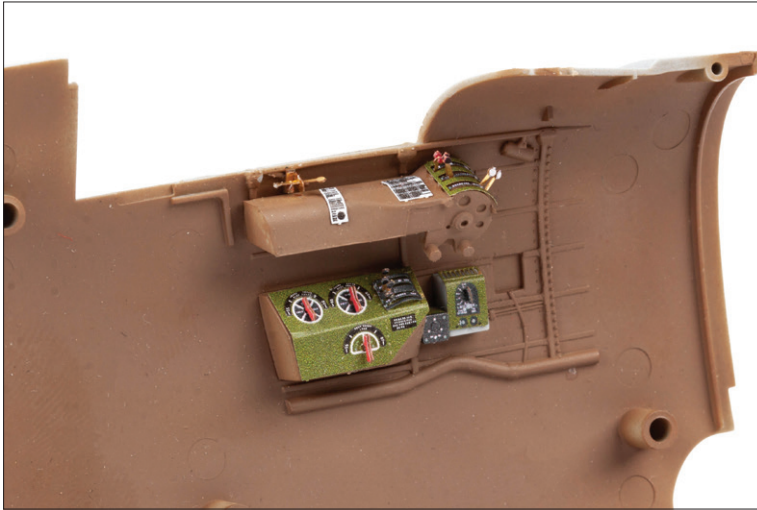
A-20

1/32 HKM

A-20

33355

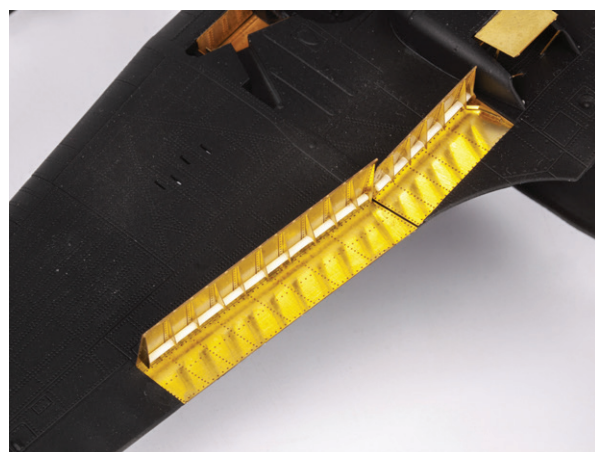




Hurricane Mk.I landing flaps

1/48 Hobby Boss

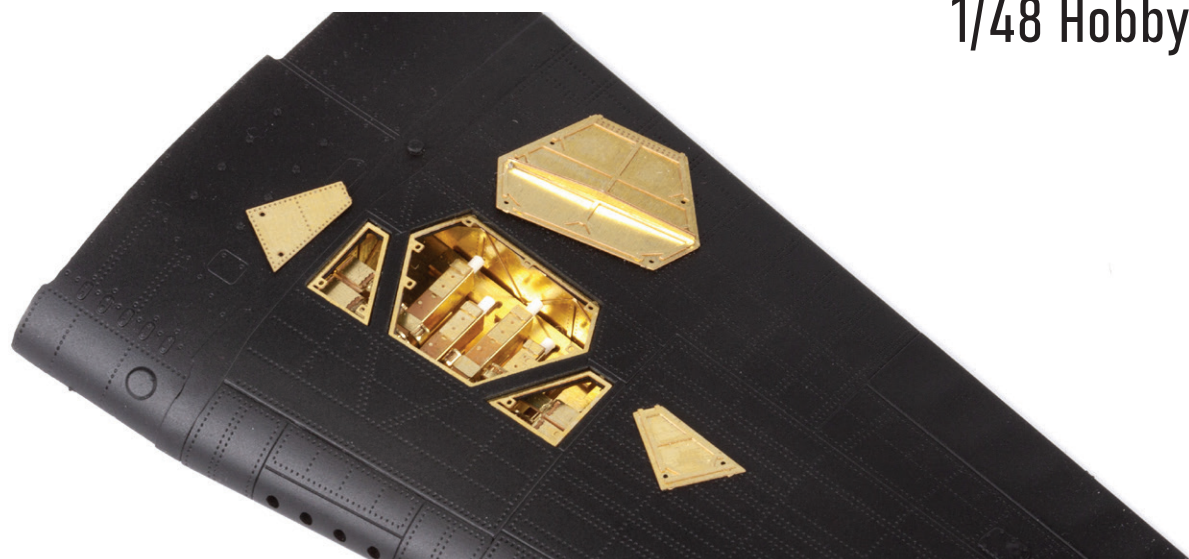
481113



Hurricane Mk.I gun bays

1/48 Hobby Boss

481114



Hurricane Mk.I seatbelts STEEL

FE1367



Hurricane Mk.I

1/48 Hobby Boss

491364



Hurricane Mk.I

FE1364



Do 335A bomb bay

1/48 Tamiya

481115



MiG-17F

1/48 Ammo

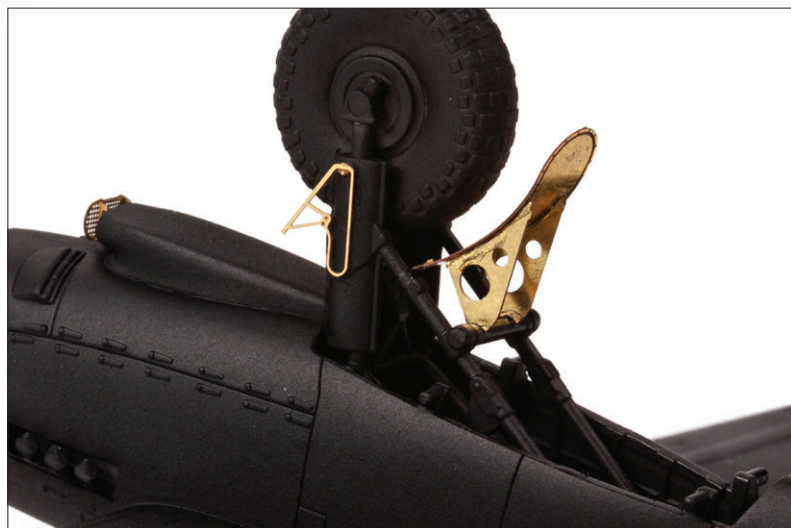
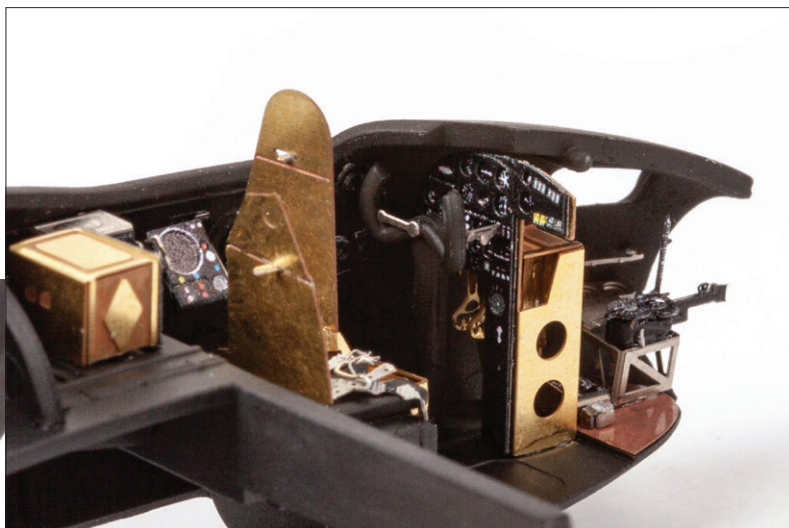
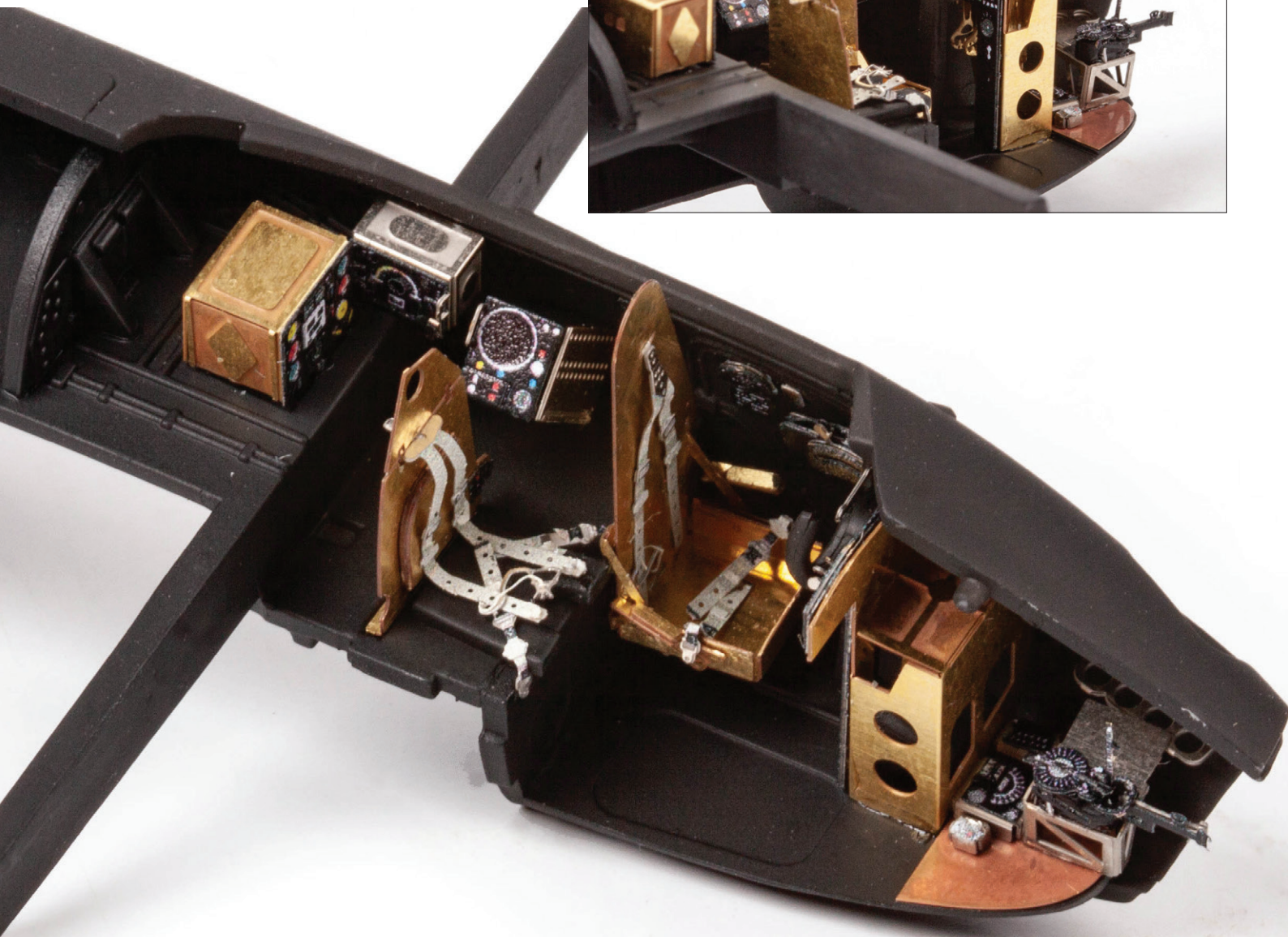
491366



Mosquito PR.XVI

1/72 Airfix

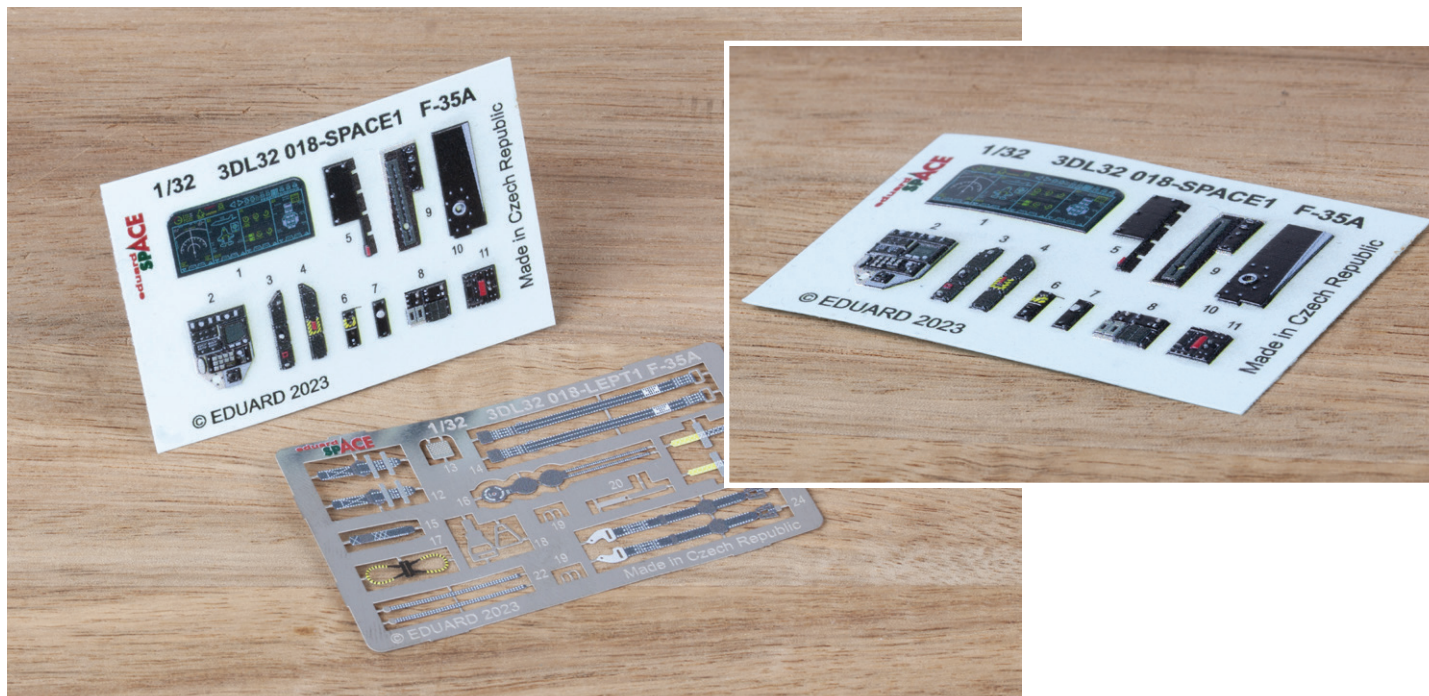
73803



3DL32018 **F-35A SPACE** 1/32 Trumpeter

[Product page](#)

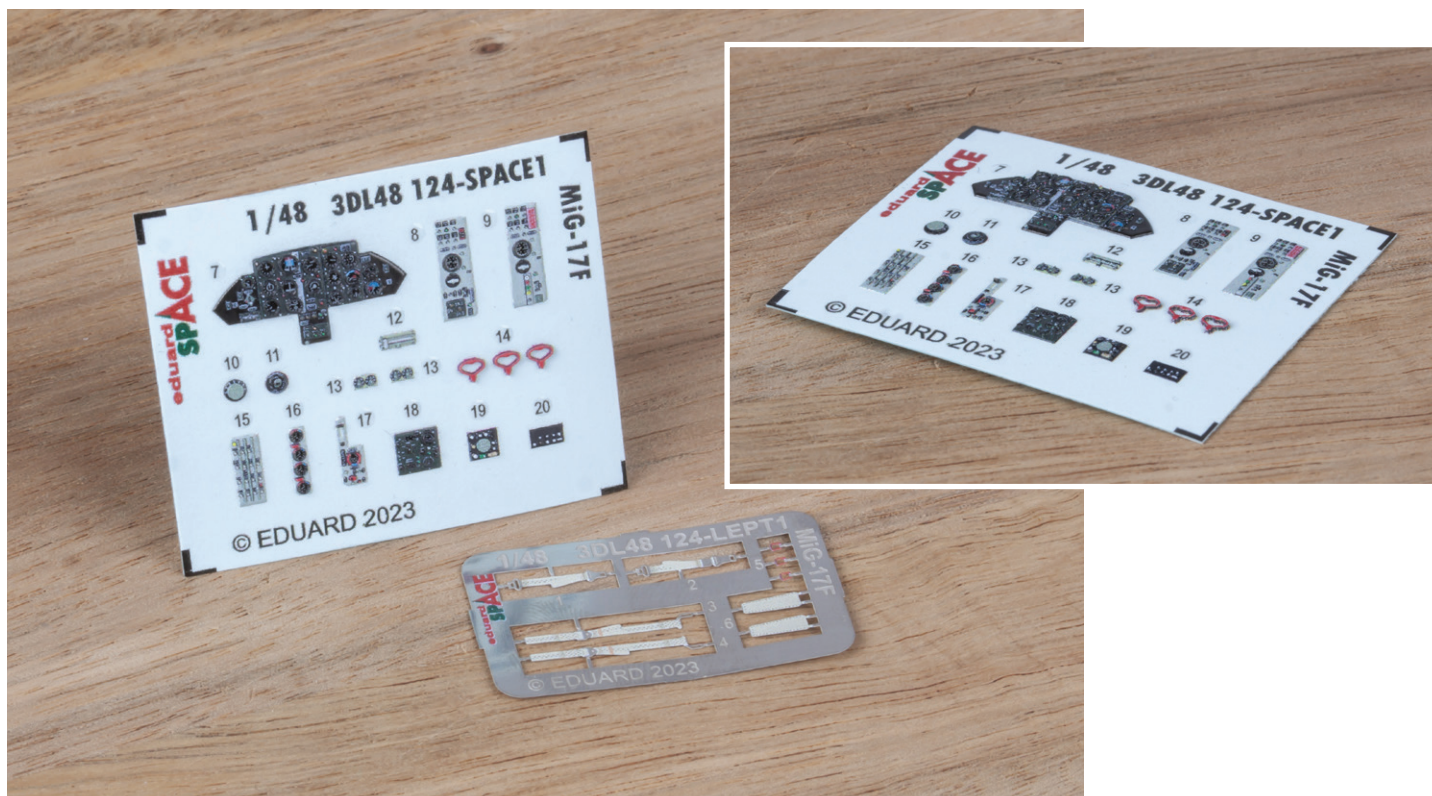
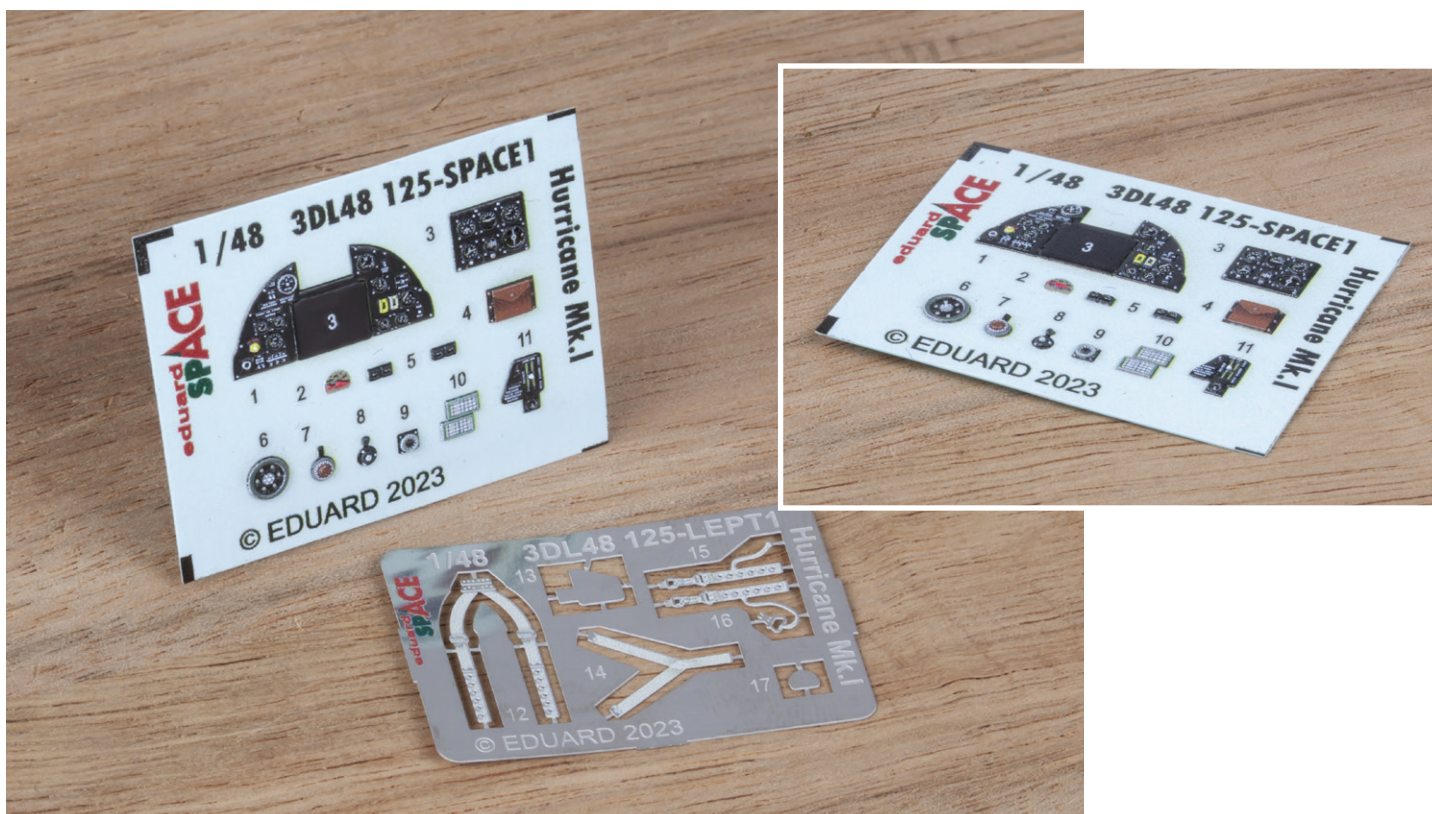
*EASY
APPLICATION*



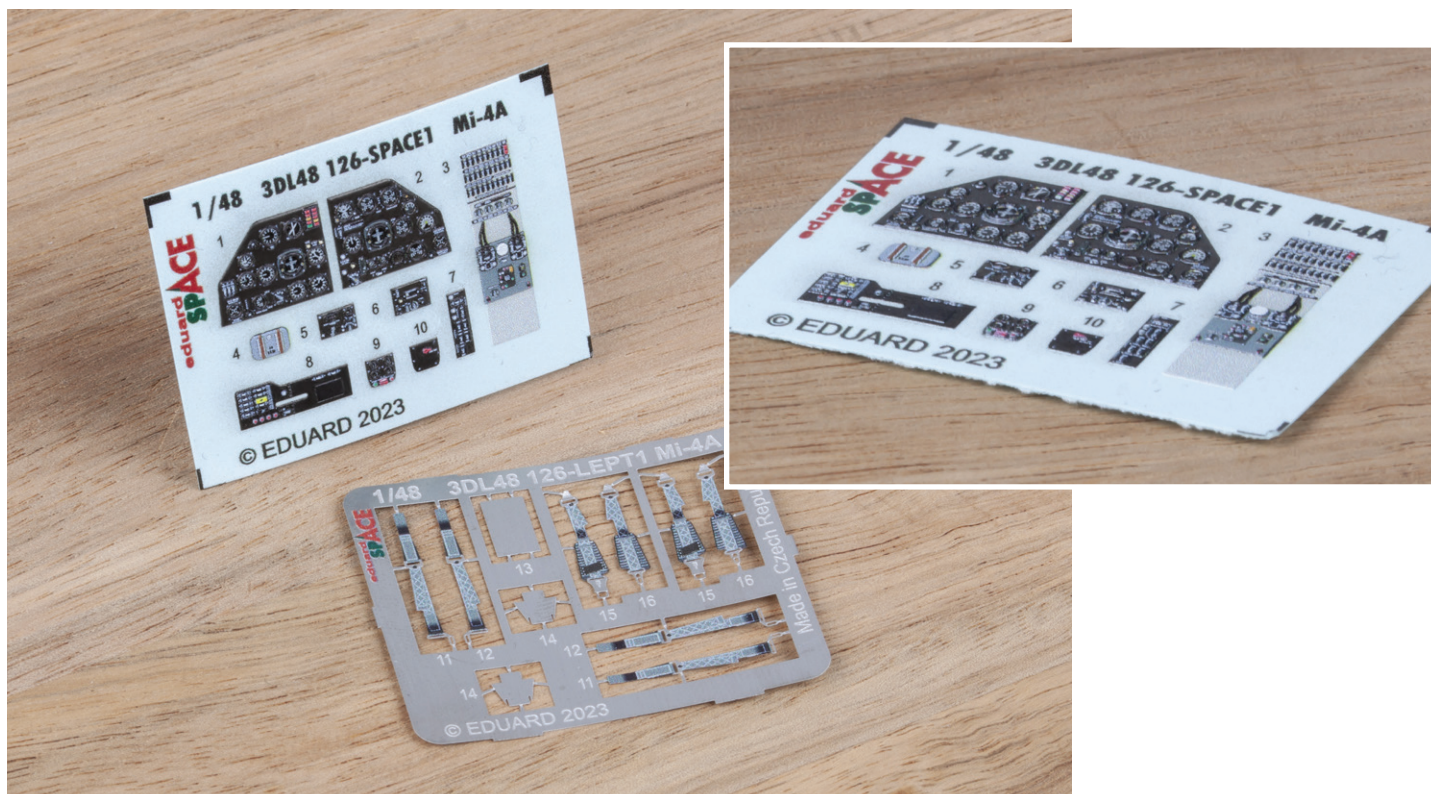
3DL32019 **A-20G SPACE** 1/32 HKM

[Product page](#)

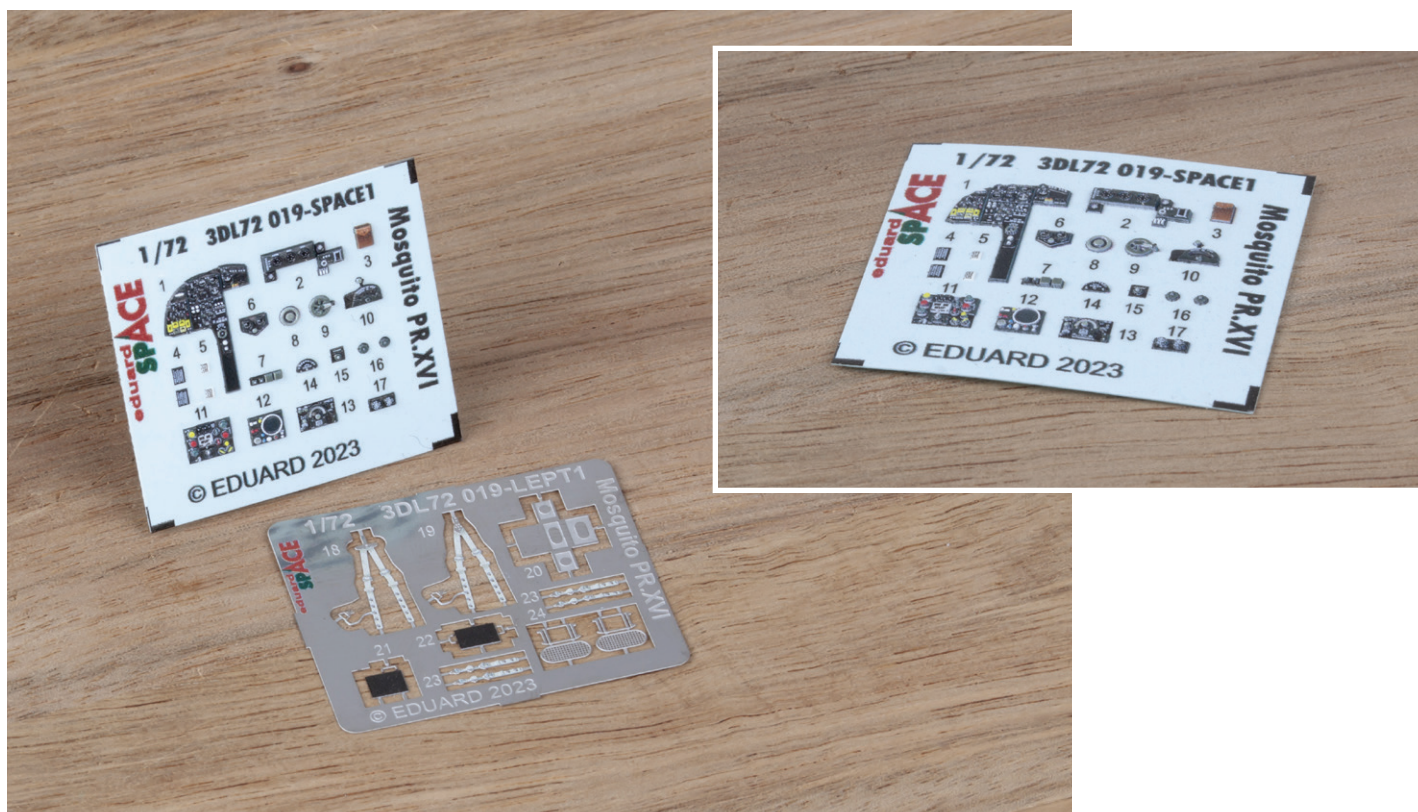


3DL48124 **MiG-17F SPACE** 1/48 AMMO[Product page](#)3DL48125 **Hurricane Mk.I SPACE** 1/48 Hobby Boss[Product page](#)

3DL48126 **Mi-4A SPACE** 1/48 Trumpeter

[Product page](#)


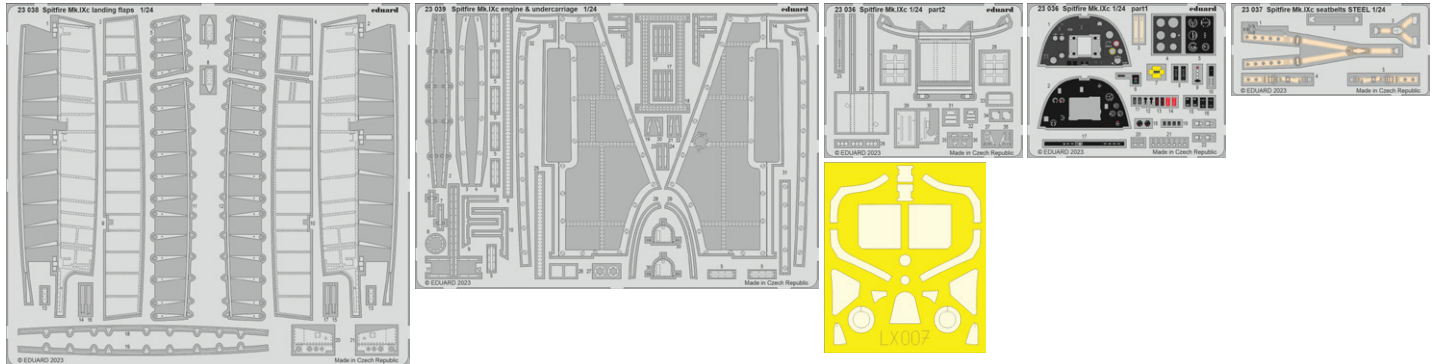
3DL72019 **Mosquito PR.XVI SPACE** 1/72 Airfix

[Product page](#)


BIG2405 Spitfire Mk.IXc 1/24 Airfix

- 23036 Spitfire Mk.IXc
- 23037 Spitfire Mk.IXc seatbelts STEEL
- 23038 Spitfire Mk.IXc landing flaps
- 23039 Spitfire Mk.IXc engine & undercarriage
- LY007 Spitfire Mk.IXc

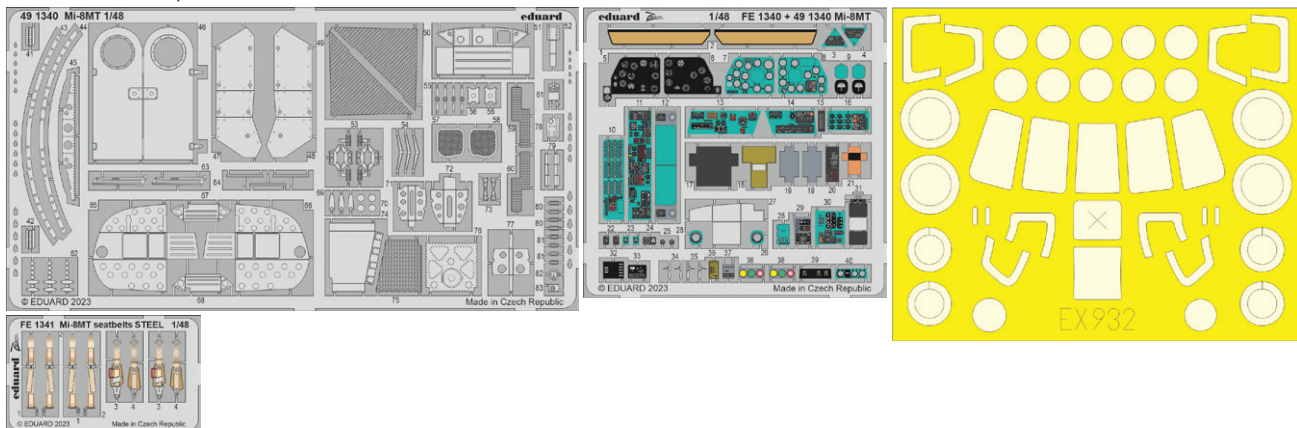
Product page



BIG49370 Mi-8MT 1/48 Zvezda

- 491340 Mi-8MT 1/48
- FE1341 Mi-8MT seatbelts STEEL 1/48
- EX932 Mi-8MT 1/48

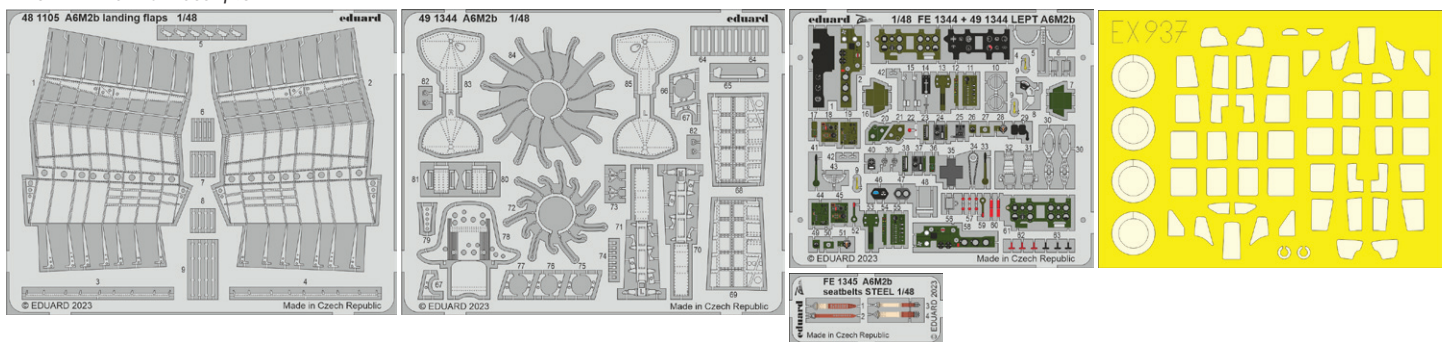
Product page



BIG49371 A6M2b 1/48 Academy

- 481105 A6M2b landing flaps 1/48
- 491344 A6M2b 1/48
- FE1345 A6M2b seatbelts STEEL 1/48
- EX937 A6M2b TFace 1/48

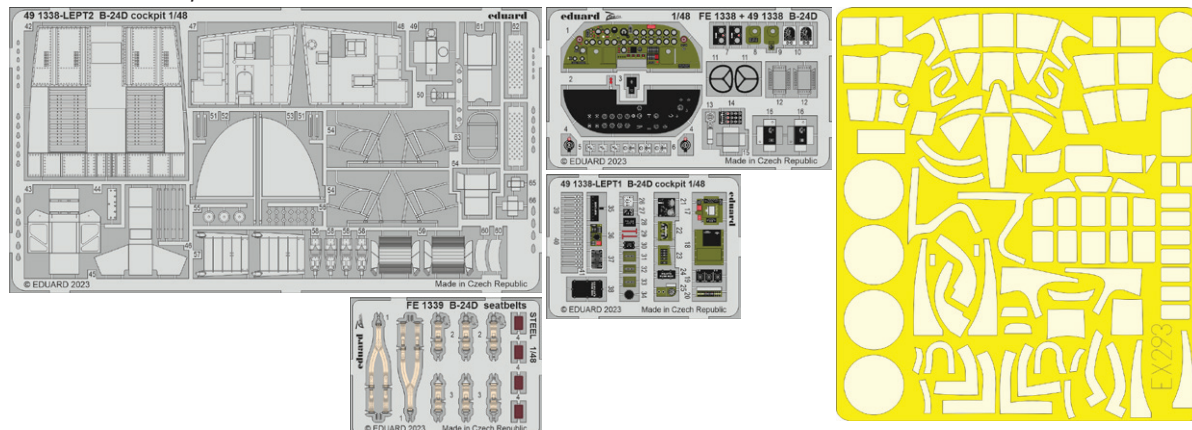
Product page



BIG49372 B-24D PART I 1/48 Revell

[Product page](#)

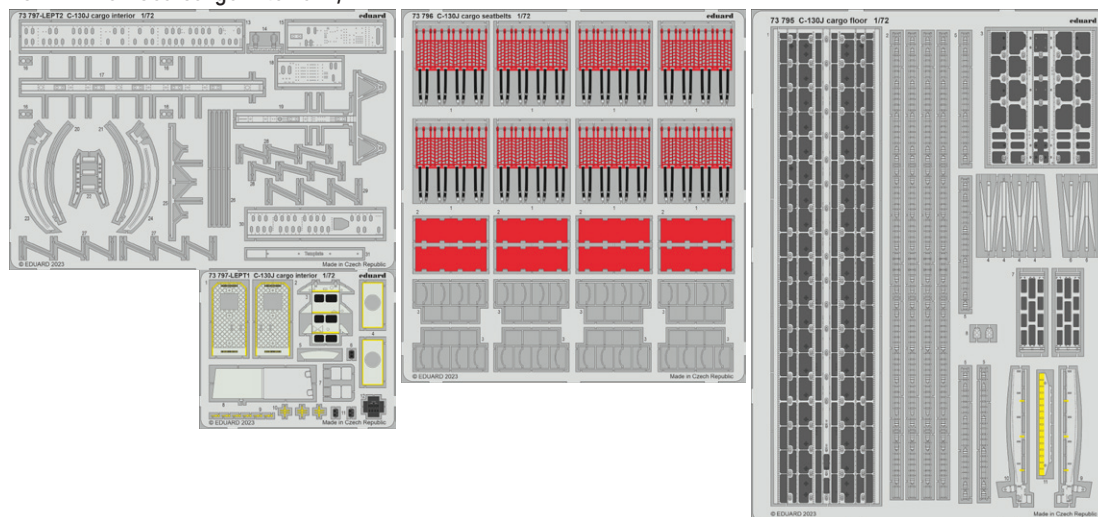
- 491338 B-24D cockpit 1/48
- FE1339 B-24D seatbelts STEEL 1/48
- EX293 B-24D 1/48



BIG72174 C-130J PART II 1/72 Zvezda

[Product page](#)

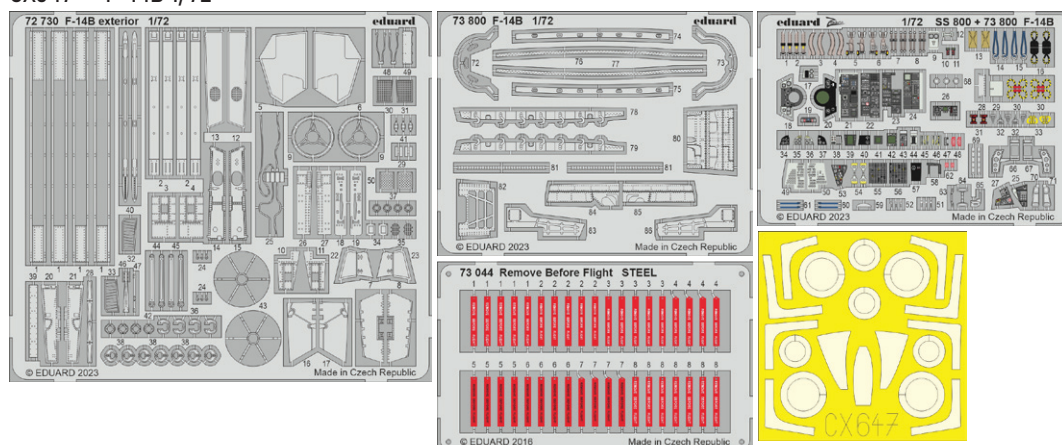
- 73795 C-130J cargo floor 1/72
- 73796 C-130J cargo seatbelts 1/72
- 73797 C-130J cargo interior 1/72



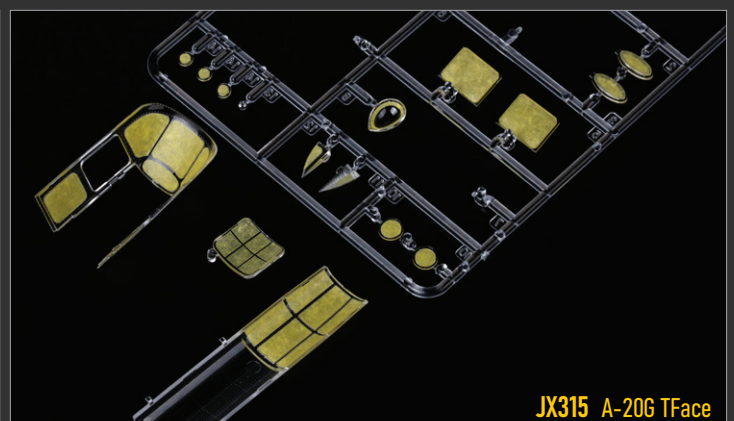
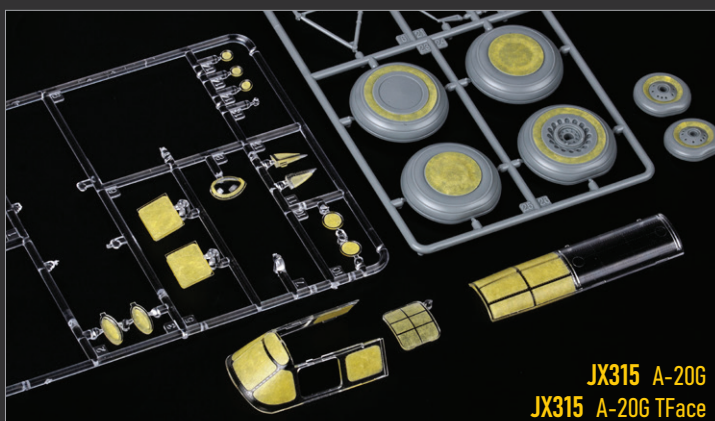
BIG72175 F-14B 1/72 Academy

[Product page](#)

- 73044 Remove Before Flight STEEL
- 72730 F-14B exterior 1/72
- 73800 F-14B 1/72
- CX647 F-14B 1/72



JX313 F-35A
 1/32 Trumpeter
JX314 F-35A TFace
 1/32 Trumpeter
JX315 A-20G
 1/32 HKM
JX316 A-20G TFace
 1/32 HKM
EX953 P-51D surface panels
 1/48 Eduard
EX954 P-51D national insignia
 1/48 Eduard
EX955 A6M2 Model 21 national insignia
 1/48 Eduard
EX956 F-4E surface panels
 1/48 Meng
EX957 MiG-17F
 1/48 Ammo
EX958 MiG-17F TFace
 1/48 Ammo
EX959 Hurricane Mk.I TFace
 1/48 Hobby Boss
EX960 Mi-4A
 1/48 Trumpeter
EX961 Mi-4A TFace
 1/48 Trumpeter
EX962 F-4E wheel bays
 1/48 Meng
EX963 Bf 110G-4 Weekend
 1/48 Eduard
CX649 Mosquito PR.XVI
 1/72 Airfix





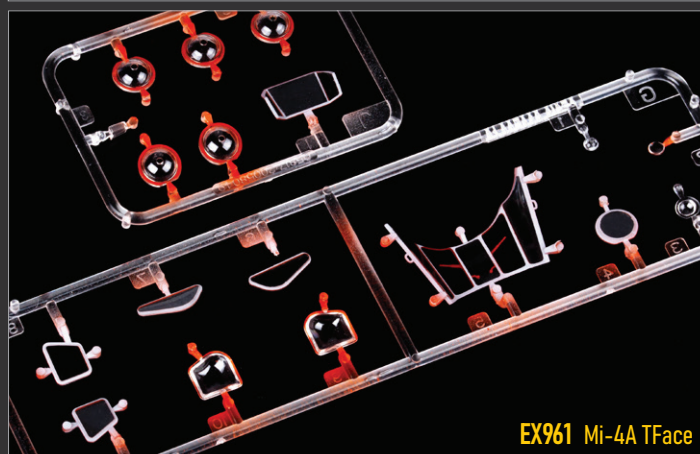
EX960 Mi-4A
EX961 Mi-4A TFace



EX961 Mi-4A TFace



EX960 Mi-4A
EX961 Mi-4A TFace



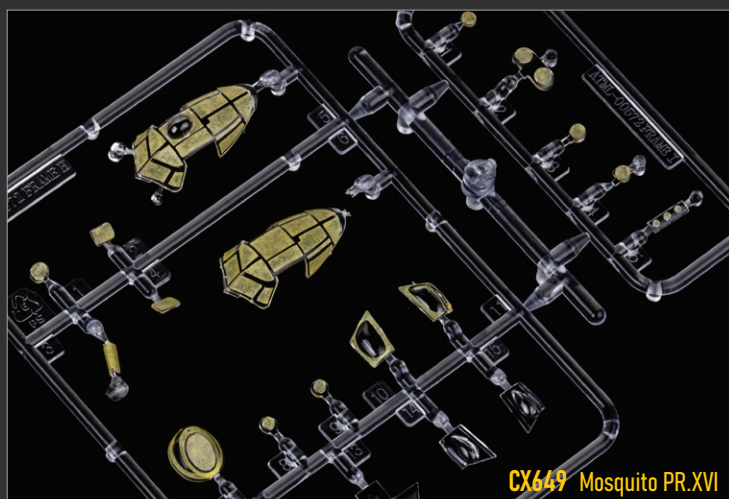
EX961 Mi-4A TFace



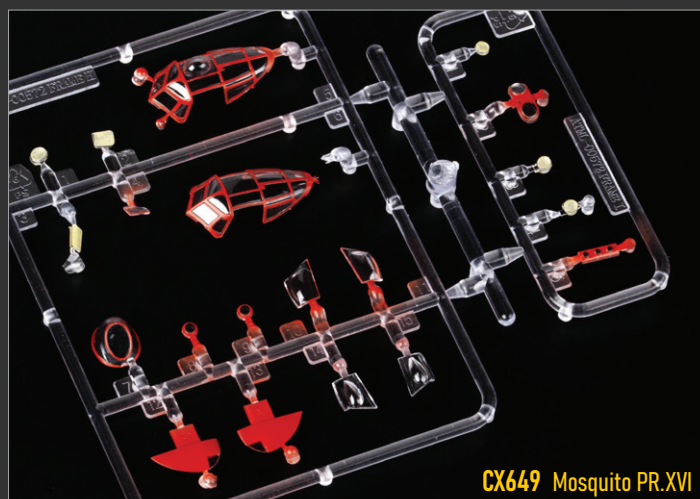
EX950 Hurricane Mk.I TFace



EX950 Hurricane Mk.I TFace



CX649 Mosquito PR.XVI



CX649 Mosquito PR.XVI

New masks by Eduard



Mask sets and equipment needed for spraying.

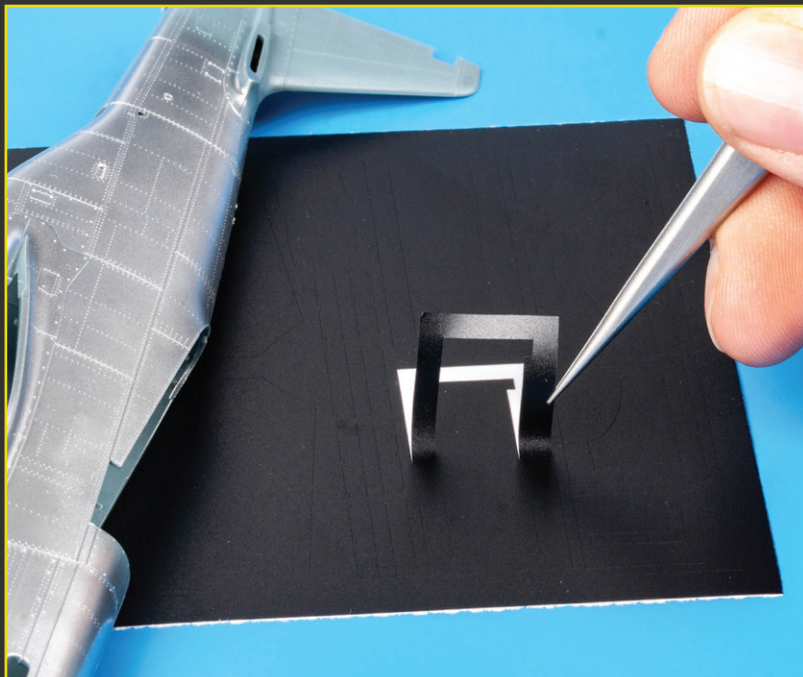
Starting in July, we are introducing new types of masking sets, which are designed to make the spraying of some of the more difficult or specific parts of the models easier. They are introduced in two series with the first one designed for spraying distinctive surface panels, like the now released set designed to mask out different

shades of metal panels on the P-51 Mustang. The second series of the new masks is intended for spraying the insignia or other markings suitable for spraying using masks. In this case, let's take the example of the just-released sets of insignia for the Zero and P-51 Mustang. Other sets of masks will follow. For example,

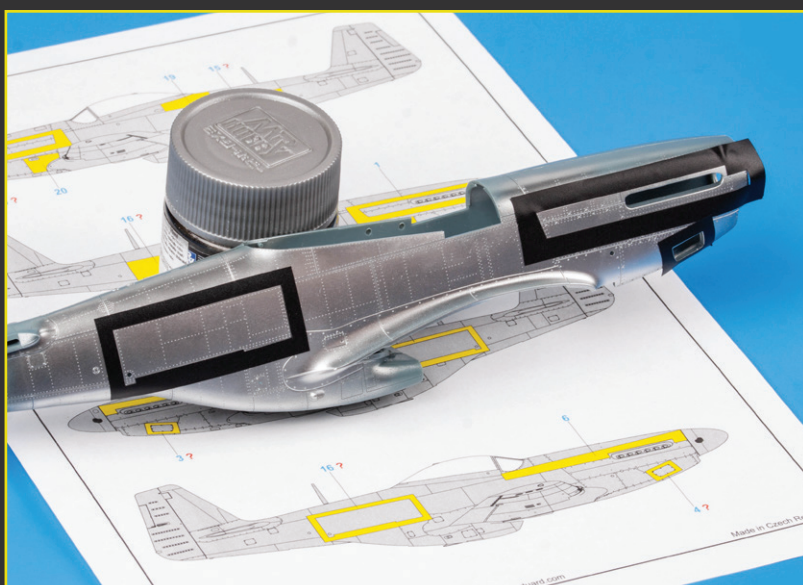
masks to facilitate the spraying of Meng's F-4E Phantom's landing gear bays and airbrakes are due to August 2023. We believe the new masks will save many modelers time in preparations of the model for spraying. They are easy to use, as the following photo report shows.



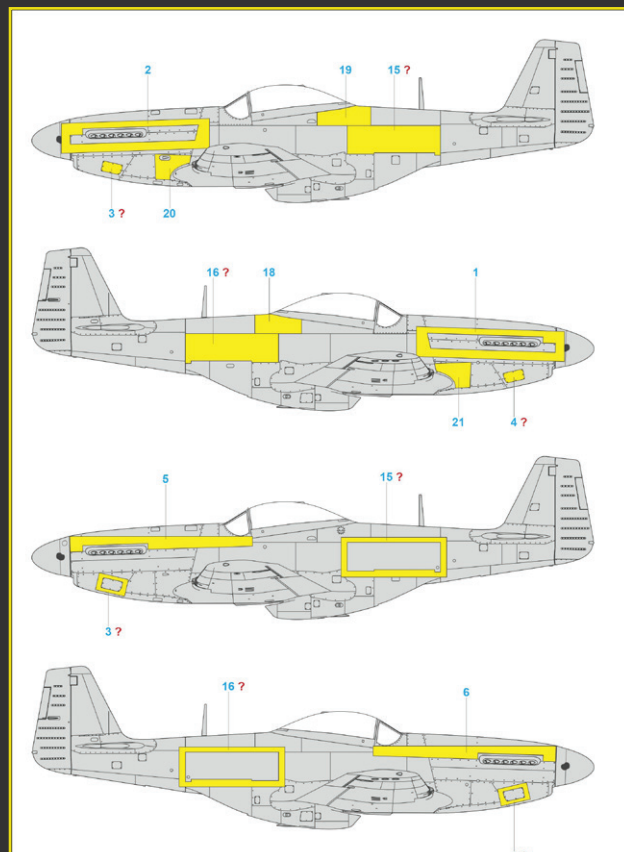
Application of the first metallic layer of Gunze SM201.



These mask sets are cut into black masking film. I recommend removing the individual segments with sharp tweezers. Before applying the masks, I also recommend taping the removed segments several times on a clean palm to reduce mask adhesion and so the risk of paint stripping during removal.



Mask the individual panels on the model according to the instructions. The panels to be differentiated can either be masked directly or, on the contrary, their surroundings can be covered and the differentiating shade sprayed on the panels.



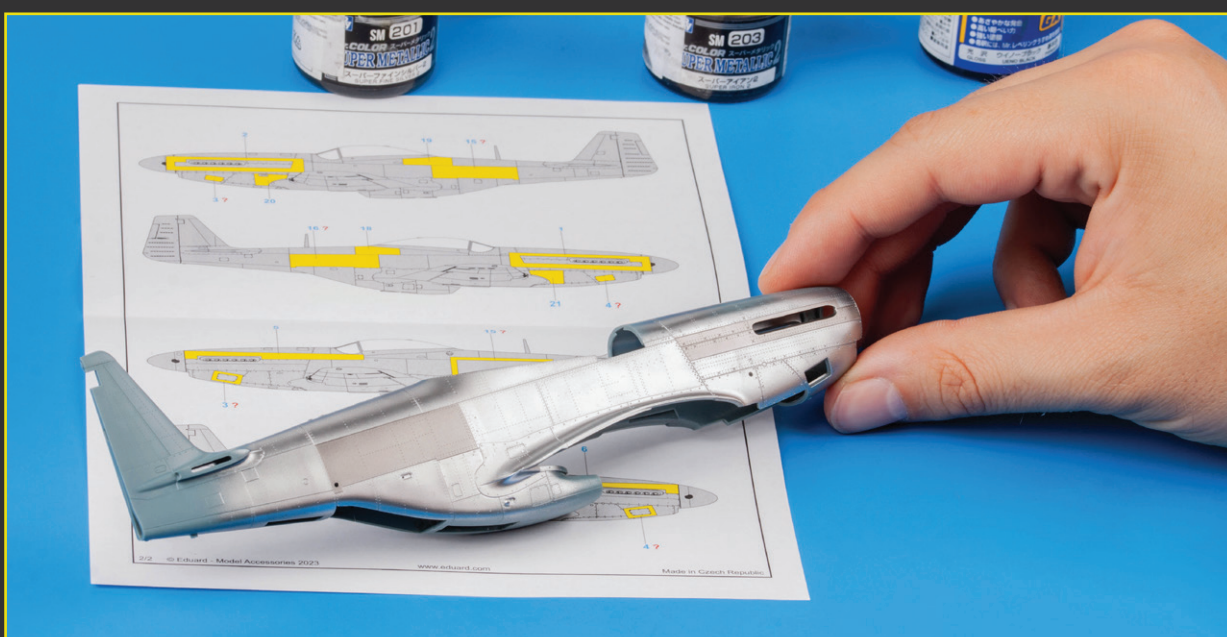
Application of the second metallic tint with Gunze SM203 with a drop of black gloss Gunze GX02.

Appearance of the differentiated panels.



The masks need to be carefully pulled off with pointed tweezers to avoid damage to the paint.

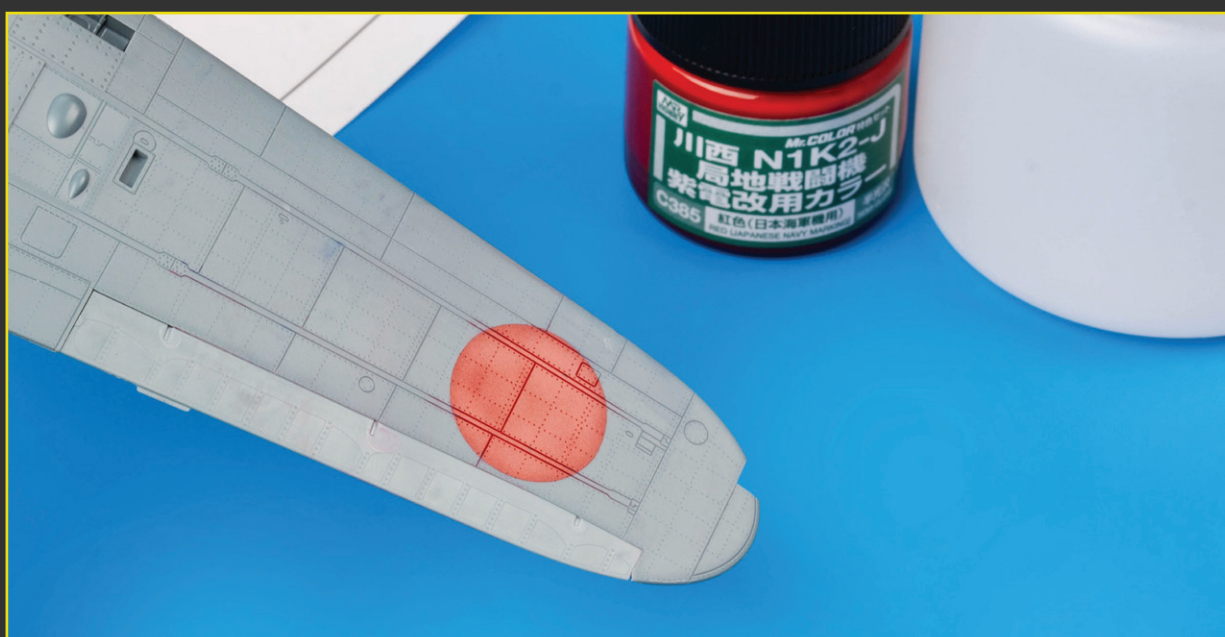
Result after unmasking.





Positioning of the Hinomaru spray mask according to the instructions.

Spraying with Gunze C385 red paint from the set CS668.



Result after unmasking.

KITS

82219	A6M2-N Rufe	1/48	ProfiPACK
11174	MIGHTY EIGHTH: 66th Fighter Wing	1/48	Limited
7470	Fw 190A-5	1/72	Weekend
8405	Bf 110G-4	1/48	Weekend
82115	Bf 109F-2 reedice	1/48	ProfiPACK

PE-SETS

321011	F-35A	1/32	Trumpeter
321012	A-20G	1/32	HKM
481113	Hurricane Mk.I landing flaps	1/48	Hobby Boss
481114	Hurricane Mk.I gun bays	1/48	Hobby Boss
481115	Do 335A bomb bay	1/48	Tamiya
481116	Mi-4A cargo floor	1/48	Trumpeter
481117	F-4E reinforcement straps & formation lights	1/48	Meng
491362	Mi-4A	1/48	Trumpeter
491364	Hurricane Mk.I	1/48	Hobby Boss
491366	MiG-17F	1/48	Ammo
73803	Mosquito PR.XVI	1/72	Airfix

ZOOMS

33353	F-35A	1/32	Trumpeter
33354	F-35A seatbelts STEEL	1/32	Trumpeter
33355	A-20G	1/32	HKM
33356	A-20G seatbelts STEEL	1/32	HKM
FE1362	Mi-4A	1/48	Trumpeter
FE1363	Mi-4A seatbelts STEEL	1/48	Trumpeter
FE1364	Hurricane Mk.I	1/48	Hobby Boss
FE1365	Hurricane Mk.I seatbelts STEEL	1/48	Hobby Boss
FE1366	MiG-17F	1/48	Ammo
FE1367	MiG-17F seatbelts STEEL	1/48	Ammo
FE1368	Bf 110G-4 Weekend	1/48	Eduard
SS803	Mosquito PR.XVI	1/72	Airfix
SS804	Fw 190A-5 Weekend	1/72	Eduard

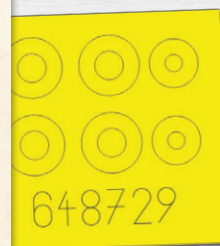
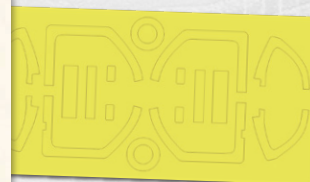
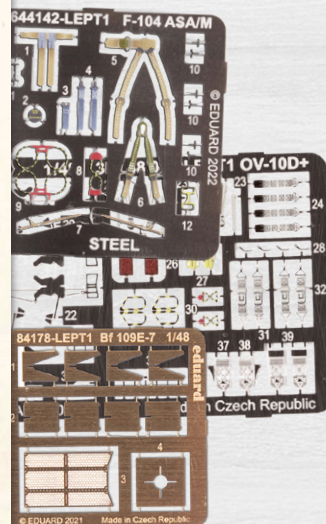
MASKS

JX313	F-35A	1/32	Trumpeter
JX314	F-35A TFace	1/32	Trumpeter
JX315	A-20G	1/32	HKM
JX316	A-20G TFace	1/32	HKM
EX953	P-51D surface panels	1/48	Eduard
EX954	P-51D national insignia	1/48	Eduard
EX955	A6M2 Model 21 national insignia	1/48	Eduard
EX956	F-4E surface panels	1/48	Meng
EX957	MiG-17F	1/48	Ammo
EX958	MiG-17F TFace	1/48	Ammo
EX959	Hurricane Mk.I TFace	1/48	Hobby Boss
EX960	Mi-4A	1/48	Trumpeter
EX961	Mi-4A TFace	1/48	Trumpeter
EX962	F-4E wheel bays	1/48	Meng
EX963	Bf 110G-4 Weekend	1/48	Eduard
CX649	Mosquito PR.XVI	1/72	Airfix

LIMITED

ProfiPACK
edition

WEEKEND
edition



BIG ED

BIG2405	Spitfire Mk.IXc	1/24	Airfix
BIG49370	Mi-8MT	1/48	Zvezda
BIG49371	A6M2b	1/48	Academy
BIG49372	B-24D PART I	1/48	Revell
BIG72174	C-130J PART II	1/72	Zvezda
BIG72175	F-14B	1/72	Academy

BRASSIN

634038	Spitfire Mk.Ia LööK	1/32	Kotare
644217	Do 335A LööK	1/48	Tamiya
632194	F-16 exhaust nozzle P&W F100 PRINT	1/32	Tamiya
632195	Spitfire Mk.Ia wheels	1/32	Kotare
632196	Spitfire Mk.Ia exhaust stacks PRINT	1/32	Kotare
648866	Anson Mk.I engines PRINT	1/48	Airfix
648868	Mi-8MT wheels	1/48	Trumpeter
648872	P-51D/K radiator PRINT	1/48	Eduard
648876	Bf 109F cockpit PRINT	1/48	Eduard
648877	F-35B ejection seat PRINT	1/48	Italeri
648878	Do 335A exhaust stacks PRINT	1/48	Tamiya
648879	Do 335A wheels	1/48	Tamiya
672318	Bf 109F radio compartment PRINT	1/72	Eduard
672321	Bf 109F/G external fuel tanks	1/72	Eduard
672322	Bf 109F wheel bays rounded PRINT	1/72	Eduard
672323	Bf 109F/G wheel bays angular PRINT	1/72	Eduard
672324	Bf 109 SC250 bomb	1/72	Eduard
672325	Bf 109F/G exhaust stacks PRINT	1/72	Eduard

LööKPLUS

634036	Spitfire Mk.IXc LööKplus	1/24	Airfix
644218	Mi-8MT LööKplus	1/48	Zvezda
644219	PV-1 LööKplus	1/48	Academy/Revell

BIG SIN

SIN648107	A6M2-N Rufe	1/48	Eduard
SIN67220	Bf 110E	1/72	Eduard

SPACE

3DL32018	F-35A SPACE	1/32	Trumpeter
3DL32019	A-20G SPACE	1/32	HKM
3DL48124	MiG-17F SPACE	1/48	Ammo
3DL48125	Hurricane Mk.I SPACE	1/48	Hobby Boss
3DL48126	Mi-4A SPACE	1/48	Trumpeter
3DL72019	Mosquito PR.XVI SPACE	1/72	Airfix

BIG-ED

eduard
BRASSINeduard
BRASSIN
Print

LööK

LööK+

BIG
SINeduard
SPACE

WEATHERING COLORS

YAKUMO

These Yakumo Colors—Mr. Weathering Color and Mr. Weathering Paste-based weathering colors—were supervised by the world-famous modeler, Mr. Mig Jimenez. The mud and dirt colors are made with pigments that have been collected from all over the world.



WWII WESTERN FRONT

CAT.NO.: WY01

WY01 is a weathering paint set for German vehicles in the WWII Western Front. Thin each color with the separately-sold **Mr. Weathering Colour Thinner** (WCT101/102); or **MIG015 thinner** (YAKUMO thinner).

From a modeler's perspective, Europe was the setting of many of the most interesting battles of the war, including Normandy, the Battle of the Bulge, Hungary, the Warsaw Uprising and the fall of Berlin. On these fronts the Germans used several standardized camouflage patterns, but each was always based on green and brown camouflage colours over a dark yellow base (C039 dark yellow, C041 red-brown and C070 dark green). Dust in summer and dry mud were the most common effects seen in German vehicles. In addition to the two products used to represent these effects, the perfect wash tone is also included, and another for streaked dirt stains. For the most complete finish, combine with SET D-BASICS.

[Product page](#)

MIG
001

DARK WASH

Apply the wash with a fine brush to details, in panel lines, and around hatches to enhance contrast and volume. Remove the excess with a clean brush moistened with YAKUMO thinner. Let it dry 24 hours.

MIG
003

DRY MUD

You can apply the mud with a thick brush to the underside of the vehicle, the tracks, and the suspension. You can also apply splashed earth effect with the mud product by the flicking a thick brush loaded with product using a toothpick. This will create mud splatter effects. Make a few tests on an old model or a piece of paper before trying it on the model. Let it dry 24 hours.

MIG
002

DARK STREAKING GRIME

Stroke well. Draw vertical lines on vertical or sloped surfaces with irregular shapes and different intensity, then blend with a flat brush and YAKUMO thinner to soften. Let it dry 24 hours.

MIG
004

EUROPE DUST

Pigment colour to simulate dust effects, particularly on the horizontal areas and around surface details. Apply the pigment dry with a brush and then moisten the surface with thinner. Once dry, it can be moistened again and touched up to achieve the desired effect.

MIG
002





WWII EASTERN FRONT

CAT.NO.: WY02

WY02 is a weathering paint set for winter camouflaged vehicles in WWII Eastern Front. Thin each color with the separately-sold **Mr. Weathering Colour Thinner** (WCT101/102); or **MIG015 thinner** (YAKUMO thinner).

The Germans camouflaged their vehicles in the harsh Russian winters with white paint to blend it with the snowy landscape. A white vehicle needs a very special treatment of aging and dirt to be realistic and credible. This special set for German winter vehicles includes the necessary products to achieve a realistic appearance in a winter environment such as the battles of Moscow, Stalingrad, or the siege of Leningrad. This set is specially designed for white camouflage applied on German panzer grey colour (Panzer Grey - C040 German Grey, C513 „Dunkelgrau“, C514 „Grau“ etc). For the most complete finish, combine with SET D-BASICS.

[Product page](#)

MIG 005  **WINTER WASH**
see MIG 001 for description

MIG 006  **WINTER STREAKING GRIME**
see MIG 002 for description

MIG 007  **MIG-007 - FRESH DARK MUD**
see MIG 003 for description

MIG 008  **MIG-008 - DRY EARTH**
see MIG 004 for description



WWII AFRIKA KORPS

CAT.NO.: WY03

WY03 is a weathering paint set for model vehicles in the WWII Afrika Korps. It can add realistic sand stains from the harsh weather conditions of Africa to your scale model. Thin each color with the separately-sold **Mr. Weathering Colour Thinner** (WCT101/102); or **MIG015 thinner** (YAKUMO thinner).

The landscapes of Tunisia or Libya were very harsh and hostile environments for the vehicles of the German Afrika Korps (DAK). The scorching sun and heat faded the colours quickly while the dust was ubiquitous. The Germans over painted their grey vehicles with various shades of sand colour (i.e. C039 Dark Yellow) to make them less visible on the open desert plains. The product included in this set allow you to apply washes, dirt effect, and large accumulations of dust to give your model realistic look. For more complete finish, combine with SET D-BASICS.

[Product page](#)

MIG 009  **SAND FILTER**
Apply the filter over the entire surface of model uniformly for a transparent and subtle effect, without letting the product accumulate in recesses and panel lines. Allow the filter to dry for 24 hours.

MIG 010  **DESERT WASH**
Apply the wash with a fine brush to details, in panel lines, and around hatches to enhance contrast and volume. Remove the excess with a clean brush moistened with YAKUMO thinner. Let it dry 24 hours.

MIG 011  **GRAY STREAKING GRIME**
see MIG 003 for description

MIG 012  **MIG-008 - DRY EARTH**
see MIG 004 for description



BASICS

CAT.NO.: WY04

WY04 is a weathering paint set that can be used on various military models including tanks. This set of paints can replicate basic oil stains, chipped paint, and rust. Thin each color with the separately-sold **Mr. Weathering Colour Thinner** (WCT101/102); or **MIG015 thinner** (YAKUMO thinner).

Most German military vehicles showed certain universal weathering effects, no matter the setting or time of the year. Tanks or half-tracks usually showed chipped paint, rust effects, or large areas of fuel stains soaked into caked dust or dirt over top. These are the weathering effects that bring more life and realism to the model, and that is the reason why you must pay special attention when adding them. This universal set will allow you to create extremely realistic effects on your models, no matter the location or time of the year in which they are set. The colours and effects are accurate for the cold Russian winter, the Normandy campaign or the barren landscapes of the North Africa. Always use this set in combination with one of the YAKUMO sets for military vehicles in a specific setting.

[Product page](#)

MIG 013 FUEL & OIL

Apply this product to the sides of model in the shape of vertical lines, or add small drops over a surface treated with MIG014 pigment. This effect can be diluted with YAKUMO thinner to create a softer and more natural effect. Use this effect sparingly and apply the effect in scale. Let it dry 12 hours.

MIG 014 EARTH & GRIME

A pigment tone to simulate accumulated dirt, or to create a base onto which you can apply fuel stains. Apply the pigment dry with a brush to the designed areas. It can also be used to emphasize shadows or dirt effect on nooks and crannies.

MIG 015 CHIPPING

The perfect colour to represent chipped paint effects on your models, as long as the surface you are depicting was made out of iron or steel in the real vehicle. Use a brush with a fine tip to paint the chips on the zones most exposed to wear and tear. You can also apply the chipping with a piece of sponge or packing foam. Let it dry 10 minutes. Can be cleaned with water.

MIG 016 MIG-008 - DRY EARTH

Eventually all vehicles rust in specific areas due to rain, snow and dew. Apply the product in small quantities around small details such as screw heads, brackets or other fixtures, as well as on vertical or sloped surfaces in the form of faded lines. Use the effect sparingly and apply the effect in scale.



MODELÁŘSKÁ SOUTĚŽNÍ VÝSTAVA

DOBŘÍŠSKÁ ŠELMA



SOBOTA 19. SRPNA 2023 OD 10:00 DO 15:00
SPORTOVNÍ HALA, ŠKOLNÍ 36, DOBŘÍŠ – BOČNÍ VCHOD



PLASTIKOVÉ A PAPIROVÉ MODELY OD MODELÁŘŮ Z CELÉ ČR • PRODEJCI MODELŮ A MODELÁŘSKÝCH POTŘEB
DOPOLEDNE DOPROVODNÁ VÝSTAVA AUTO A MOTO VETERÁNŮ • OBČERSTVENÍ • VSTUPNÉ DOBROVOLNÉ



• Online přihlašování modelů:
dobris.ipmscz.eu

• Přejímka modelů:

19. srpna od 8:00 do 10:00

• Startovné: děti zdarma, dospělí 100 Kč

• Otevřeno pro veřejnost: 10:00 – 15:00



Více informací: www.facebook.com/dobrismodel/ • www.dobrismodel.cz • modelari.dobris@gmail.com • tel. 728 074 851

BF 109F-2 & BF 109F-4

WUNDERSCHÖNE NEUE MASCHINEN

- Pt.I -

1:72



Product page

#2142

MARKING OPTION B

built by **Robert Szwarc**



Bf 109F-2, WNr. 8085, Lt. Jürgen Harder, Stab III./JG 53, Sobolewo, Germany, June 1941

Jürgen Harder, brother of the better known Harro Harder, achieved his first kill on June 22, 1941, the day Operation Barbarossa began. He joined the Luftwaffe in 1939 and served in 7./JG 53 from early 1941, then became a staff officer in III. Gruppe. In April 1942 he took command of 7./JG 53 in Africa and in February 1944 became commander of I./JG 53 in Italy. Until the end of the war he claimed further 63 kills both on the Eastern and Western

fronts. On February 1, 1945, he was decorated with the Knight's Cross with the Oak Leaves. His luck ran out on February 17, 1945, when, due to the engine failure of his Messerschmitt Bf 109G-14, he crashed to death nearby the town of Strausberg. Harder's WNr. 8085 later served with 4./JG 51, Jagdgruppe West, underwent an overhaul and its version designation was changed to F-4. It was destroyed on December 2, 1943, in Southern

France when it was allocated to Jagdgruppe Süd, commanded by Heinz Bär. In its cockpit, Uffz. Alexis Prinz zu Bentheim und Steinfurt was shot down in combat with American airmen.



1/48

#82139

built by Jan Baranec

Fw 190F-8



Accessories used:

- 648714 Panzerschreck 1 for Fw 190F PRINT (Brassin)
- 648736 Fw 190A landing flaps PRINT (Brassin)
- 648824 Fw 190F-8 cockpit PRINT (Brassin)

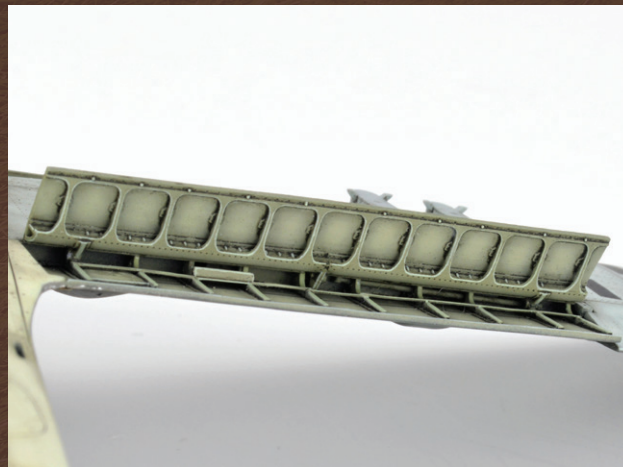
Panzerschreck 1 for Fw 190F PRINT #648714

[Product page](#)

Fw 190A landing flaps PRINT

#648736

[Product page](#)



5./SG 77, Cottbus, Germany, early March 1945

This aircraft was photographed at Cottbus airport in early 1945. It bore a standard camouflage scheme consisting of the RLM 74 and 75 colors on the upper surfaces. The lower surfaces were

sprayed in RLM 76, which was complemented on the fuselage bottom by a green-blue shade of the RLM 76. The black horizontal stripe indicates the aircraft belonged to 5. Staffel SG 77. The

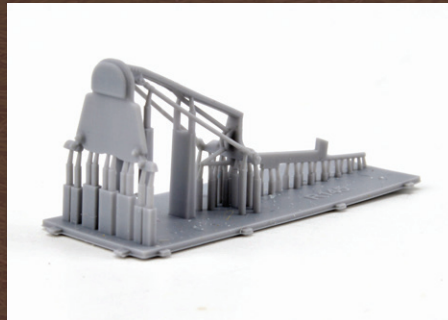
significance of the red flash on the engine cowling is unknown.





Fw 190F-8 cockpit PRINT #648824

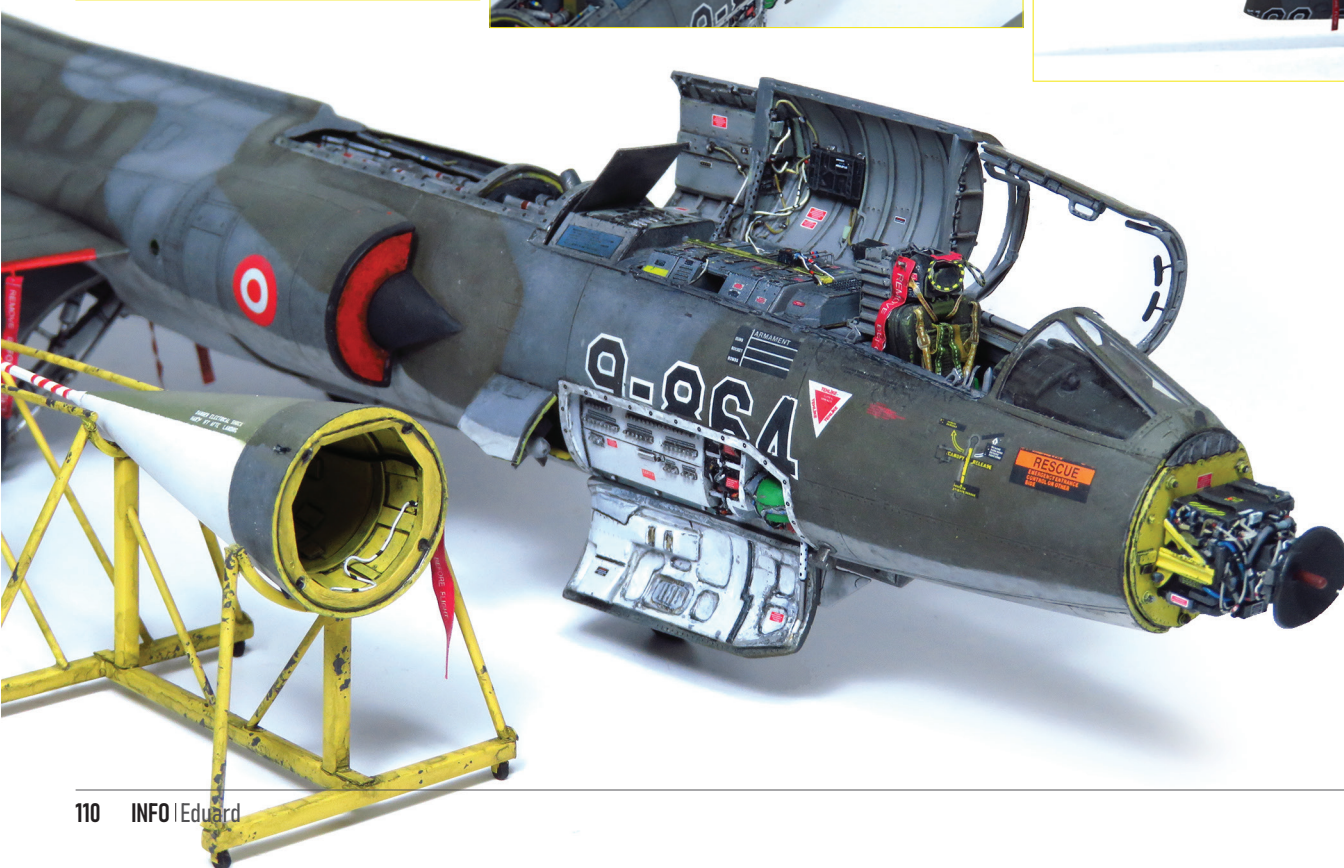
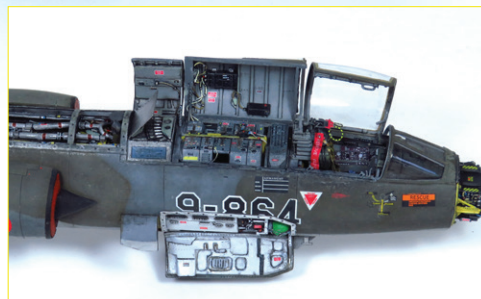
[Product page](#)



F-104G late KINETIC 1/48



#BIG49238

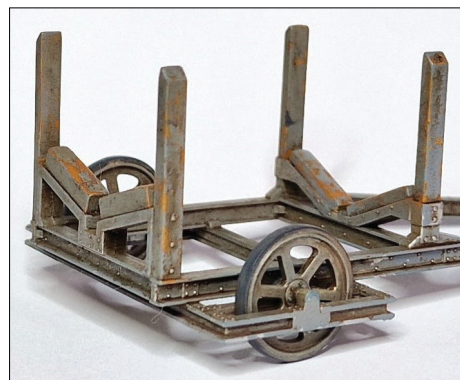
built by **Ugur Kenel**

#11171

MARKING OPTION F

built by **Paolo Portuesi***Rufe*

Product page



Kōkūtai 802, Emidj Island, Jaluit Atoll, Marshall Islands, October 1943

This late production aircraft was finished in a factory applied dark green paint. After relocation to the Marshall Islands area in March 1943, Kōkūtai 802 under the command of Lt.(jg) Yamazaki was primarily engaged in anti-submarine patrols and the pursuit of four-engine bombers. Long-range reconnaissance was carried out by another part of this unit, which was armed with H8K Emily flying boats. In September 1943, the designation

of its aircraft was changed to Y4 in connection with the transition to the subordination of the 22nd Kōkū Sentai (Air Flotilla). The identification markings on the tail surfaces of Rufe seaplanes changed from red to white during service in the Marshall Islands. In October, fighter unit of Kōkūtai 802 was integrated into Kōkūtai 902, and in November, the fighter unit clashed with US Navy aircraft during a raid on Truk.



MI-24V

1/48 ZVEZDA



built by **Christian Gerard**

Accessories used:

- ER48001 Mi-24V positive rivets & surface details (3D Decal Set)
- 481019 Mi-24 exterior (PE-Set)
- 648575 B8V20 rocket launcher (Brassin)
- D48054 Mi-24V/Mi-35 in Czech AF service (Decal Set)
- D48060 Mi-24V stencils Czech (Decal Set)

ER48001 Mi-24V positive rivets & surface details (3D Decal Set)



D48054 Mi-24V/Mi-35 in Czech AF service (Decal Set)



Mi-24V 0834, 2. letka, 11.vpr, CIAF Hradec Králové July 17th, 1993



D48060 Mi-24V stencils Czech (Decal Set)

ER48001 Mi-24V positive rivets & surface details (3D Decal Set)



481019 Mi-24 exterior (PE-Set)



648575 B8V20 rocket launcher (Brassin)

BIG ED (August)

BIG33152	CH-54A 1/35 ICM
BIG49373	B-24D PART II 1/48 Revell
BIG49374	Mi-17 1/48 AMK
BIG49375	F-86D 1/48 Revell
BIG49376	PV-1 PART I 1/48 Academy

BRASSIN (August)

634039	A-20G LööK 1/32 HKM
644220	Hurricane Mk.I LööK 1/48 Hobby Boss
644222	FM-2 LööK 1/48 Eduard
644223	MiG-17F LööK 1/48 AMMO
632197	A-20G wheels 1/32 HKM
635033	Sd.Kfz. 251/1 Ausf. C radio equipment PRINT 1/35 Academy
635034	WWII German fire extinguishers PRINT 1/35
648875	Bf 109F cockpit w/ early seat PRINT 1/48 Eduard
648880	Bf 109F wheel bays rounded PRINT 1/48 Eduard
648881	Bf 109F wheel bays angular PRINT 1/48 Eduard
648882	F-4E wheels 1/48 Meng
648883	A6M3 gun bays short barrel PRINT 1/48 Eduard
648886	FM-2 undercarriage legs BRONZE 1/48 Eduard
648887	FM-2 wheels 1/48 Eduard
648888	FM-2 seat PRINT 1/48 Eduard
648889	FM-2 folding wings PRINT 1/48 Eduard
648890	FM-2 gun barrels PRINT 1/48 Eduard
648891	F-104A/C airbrakes PRINT 1/48 Kinetic/Eduard
648892	F-104A/C exhaust nozzle PRINT 1/48 Kinetic/Eduard
648895	FM-2 cockpit PRINT 1/48 Eduard
672317	Bf 109F undercarriage legs BRONZE 1/72 Eduard
672326	Bf 109F/G/K gun pods PRINT 1/72 Eduard
672329	Bf 109 balance weights PRINT 1/72 Eduard
672330	MiG-29 wheels 1/72 Great Wall Hobby

LööKPlus (August)

634040	Spitfire Mk.Ia LööKplus 1/32 Kotare
644221	Do 335A LööKplus 1/48 Tamiya

BIGSIN (August)

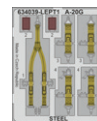
SIN648108	F-35A 1/48 Tamiya
SIN648109	F-4E armament 1/48 Meng

634039

A-20G LööK

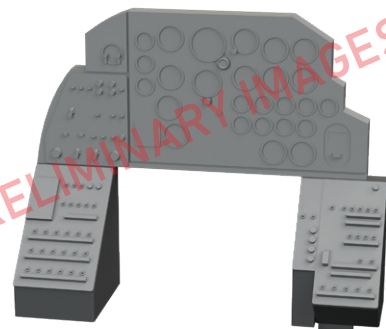
1/32 HKM

LööK set - Brassin pre-painted dashboard and STEEL seatbelts for A-20G in 1/32 scale. Easy to assemble, replaces plastic parts. Recommended kit: HKM

LööK

Set contains:

- resin: 3 parts
- 3D print: 2 parts
- decals: no
- photo-etched details: yes, pre-painted
- painting mask: no

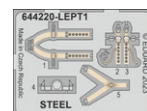


644220

Hurricane Mk.I LööK

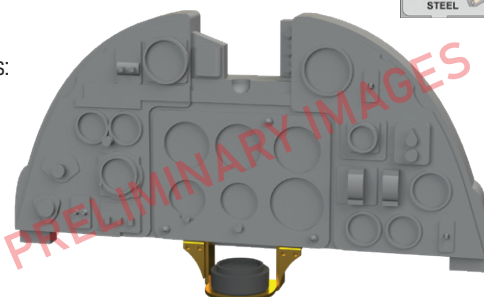
1/48 Hobby Boss

LööK set - Brassin pre-painted dashboard and STEEL seatbelts for Hurricane Mk.I in 1/48 scale. Easy to assemble, replaces plastic parts. Recommended kit: Hobby Boss

LööK

Set contains:

- resin: 2 parts
- decals: no
- photo-etched details: yes, pre-painted
- painting mask: no

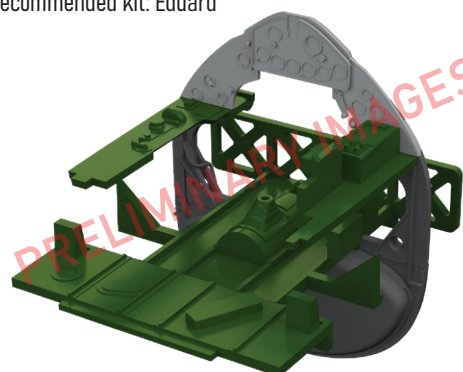


644222

FM-2 LööK

1/48 Eduard

LööK set - Brassin pre-painted dashboard and STEEL seatbelts for FM-2 in 1/48 scale. Easy to assemble, replaces plastic parts. Recommended kit: Eduard

LööK

Set contains:

- resin: 1 part
- 3D print: 1 part
- decals: no
- photo-etched details: yes, pre-painted
- painting mask: no

644223

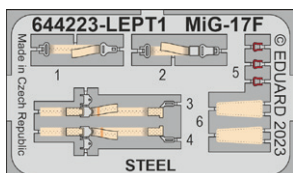
MiG-17F LööK

1/48 AMMO

LööK set - Brassin pre-painted dashboard and STEEL seatbelts for MiG-17F in 1/48 scale. Easy to assemble, replaces plastic parts. Recommended kit: AMMO

Set contains:

- resin: 1 part
- decals: no
- photo-etched details: yes, pre-painted
- painting mask: no



LööK

632197

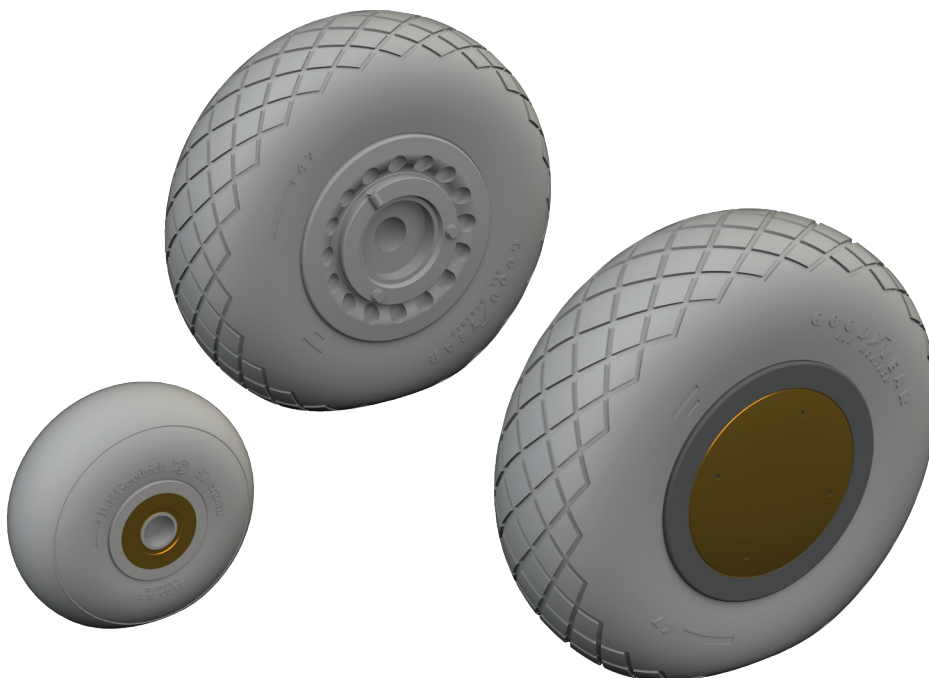
A-20G wheels

1/32 HKM

Brassin set - the undercarriage wheels for A-20G in 1/32 scale. The set consists of the main wheels and a nose wheel. Easy to assemble, replaces plastic parts. Recommended kit: HKM

Set contains:

- resin: 3 parts
- 3D print: 2 parts
- decals: no
- photo-etched details: yes
- painting mask: yes



635033

Sd.Kfz. 251/1 Ausf. C radio equipment PRINT

1/35 Academy

Brassin set - radio equipment for Sd.Kfz. 251/1 Ausf. C in 1/35 scale. Made by direct 3D printing. Recommended kit: Academy

Set contains:

- 3D print: 14 parts
- resin: 1 part
- decals: yes
- photo-etched details: yes
- painting mask: no



1 2 3
5 - 4
635033-OBT1 Sd.Kfz. 251/1 Ausf. C
radio equipment

635034

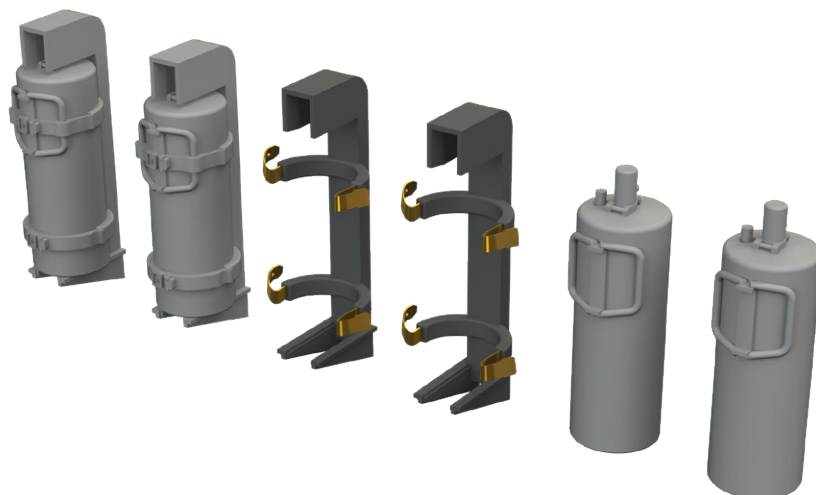
WWII German fire extinguishers PRINT

1/35

Brassin set - fire extinguishers for German WWII AFV in 1/35 scale. The set consists of 4 extinguishers. Made by direct 3D printing.

Set contains:

- 3D print: 6 parts
- decals: yes
- photo-etched details: yes
- painting mask: no



648875

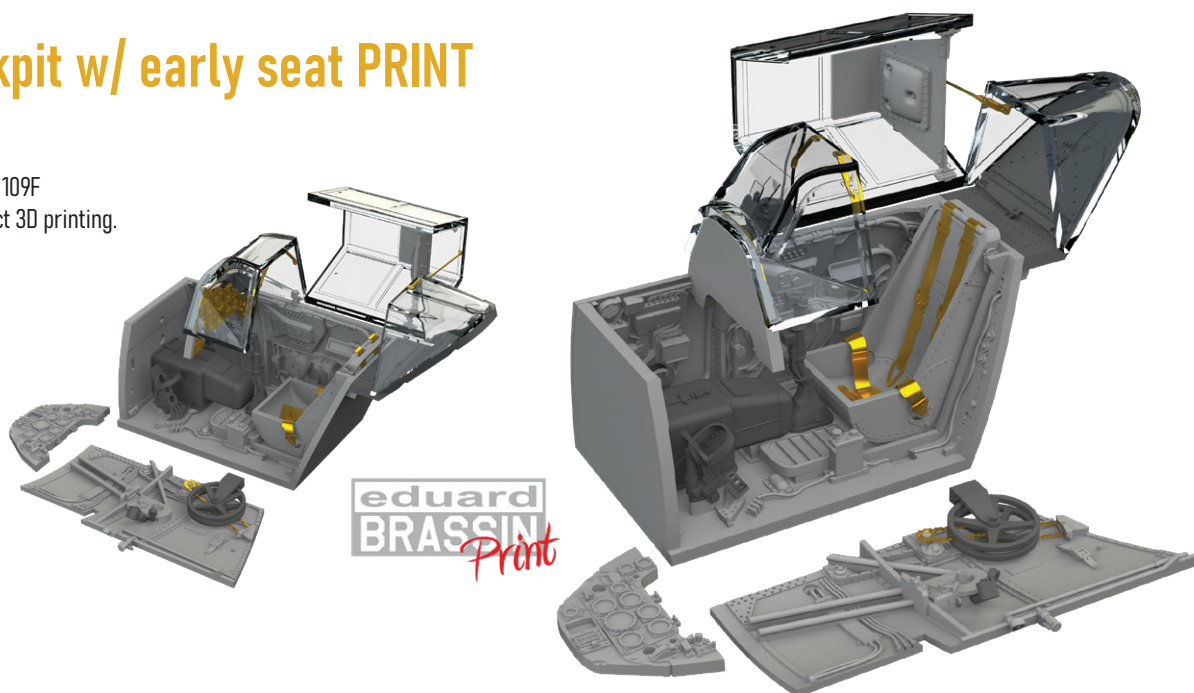
Bf 109F cockpit w/ early seat PRINT

1/48 Eduard

Brassin set - cockpit for Bf 109F in 1/48 scale. Made by direct 3D printing. Recommended kit: Eduard

Set contains:

- 3D print: 17 parts
- resin: 1 part
- decals: yes
- photo-etched details: yes, pre-painted
- painting mask: no
- SPACE 3D decals: no



648880

Bf 109F wheel bays rounded PRINT

1/48 Eduard

Brassin set - rounded wheel bays for Bf 109F in 1/48 scale. Made by direct 3D printing. Recommended kit: Eduard

Set contains:

- 3D print: 2 parts
- decals: no
- photo-etched details: no
- painting mask: no



648881

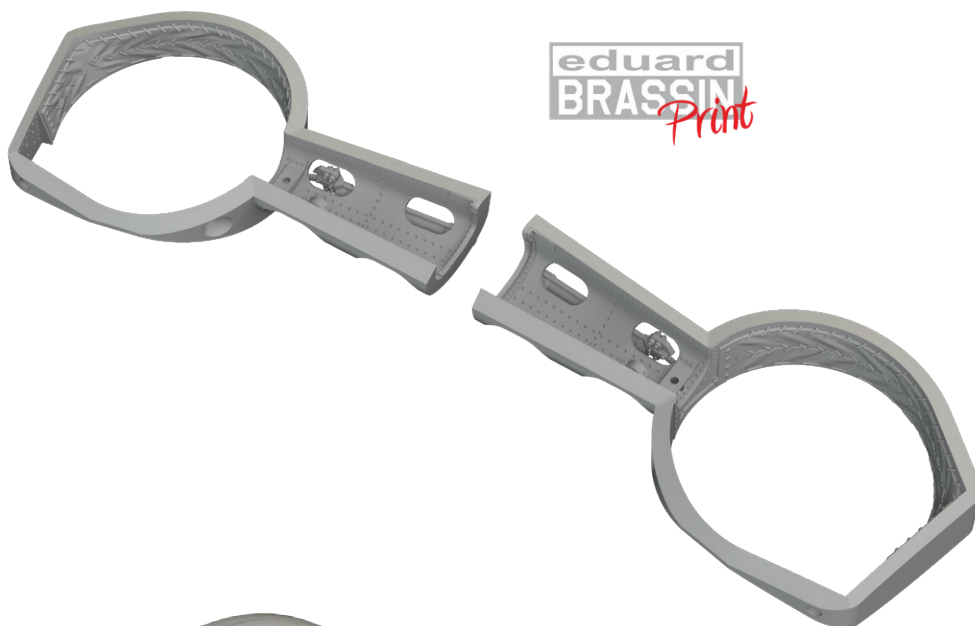
Bf 109F wheel bays angular PRINT

1/48 Eduard

Brassin set - angular wheel bays for Bf 109F in 1/48 scale. Made by direct 3D printing. Recommended kit: Eduard

Set contains:

- 3D print: 2 parts
- decals: no
- photo-etched details: no
- painting mask: no



648882

F-4E wheels

1/48 Meng

Brassin set - the undercarriage wheels for F-4E in 1/48 scale. The set consists of the main wheels and nose wheels. Easy to assemble, replaces plastic parts. Recommended kit: Meng

Set contains:

- resin: 4 parts
- decals: no
- photo-etched details: no
- painting mask: yes



648883

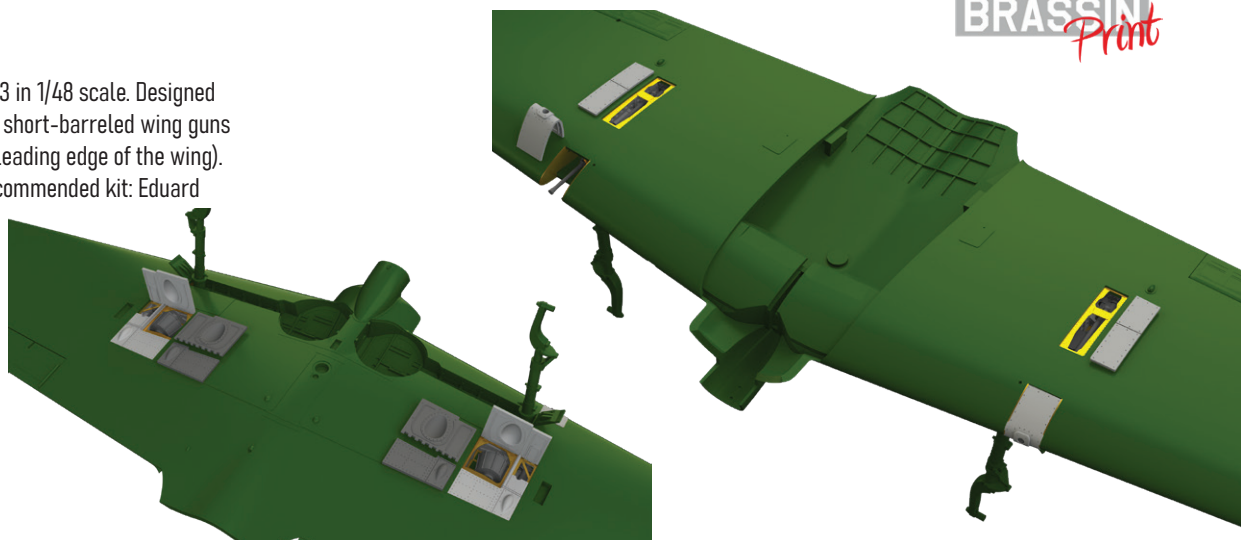
A6M3 gun bays short barrel PRINT

1/48 Eduard

Brassin set - gun bays for A6M3 in 1/48 scale. Designed for Zeroes Type 32 and 22 with short-barreled wing guns (guns not protruding from the leading edge of the wing). Made by direct 3D printing. Recommended kit: Eduard

Set contains:

- 3D print: 22 parts
- decals: no
- photo-etched details: yes
- painting mask: no



648886

FM-2 undercarriage legs BRONZE**1/48 Eduard**

Brassin set - the undercarriage legs for FM-2 in 1/48 scale.
The legs are made of bronze. Recommended kit: Eduard

Set contains:

- 3D print: 4 parts
- bronze: 2 parts
- decals: no
- photo-etched details: no
- painting mask: no



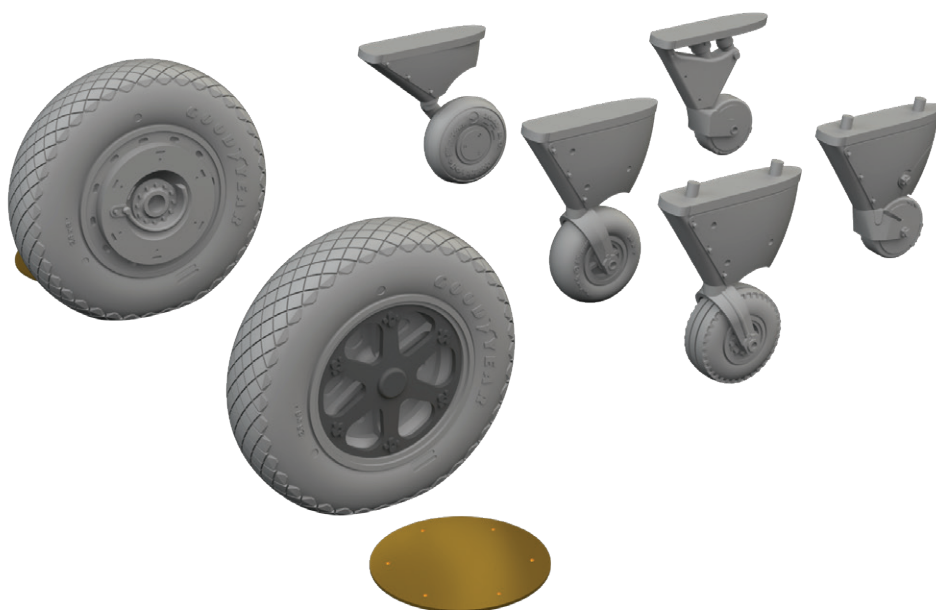
648887

FM-2 wheels**1/48 Eduard**

Brassin set - the undercarriage wheels for FM-2 in 1/48 scale. The set consists of the main wheels and a tail wheel. Easy to assemble, replaces plastic parts. Recommended kit: Eduard

Set contains:

- resin: 9 parts
- decals: no
- photo-etched details: yes
- painting mask: yes



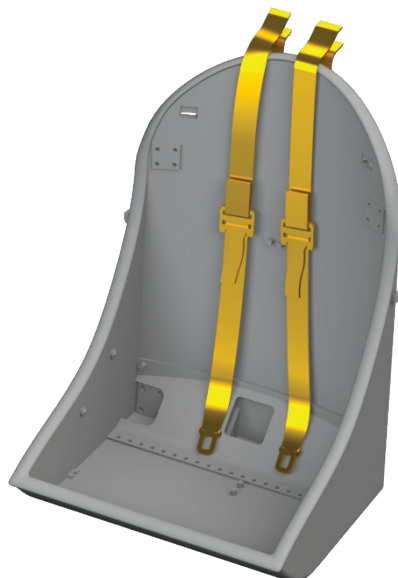
648888

FM-2 seat PRINT**1/48 Eduard**

Brassin set - the seat for FM-2 in 1/48 scale.
Made by direct 3D printing. Easy to assemble, replaces plastic parts. Recommended kit: Eduard

Set contains:

- 3D print: 1 part
- decals: no
- photo-etched details: yes, pre-painted
- painting mask: yes



eduard
BRASSIN
Print

648889

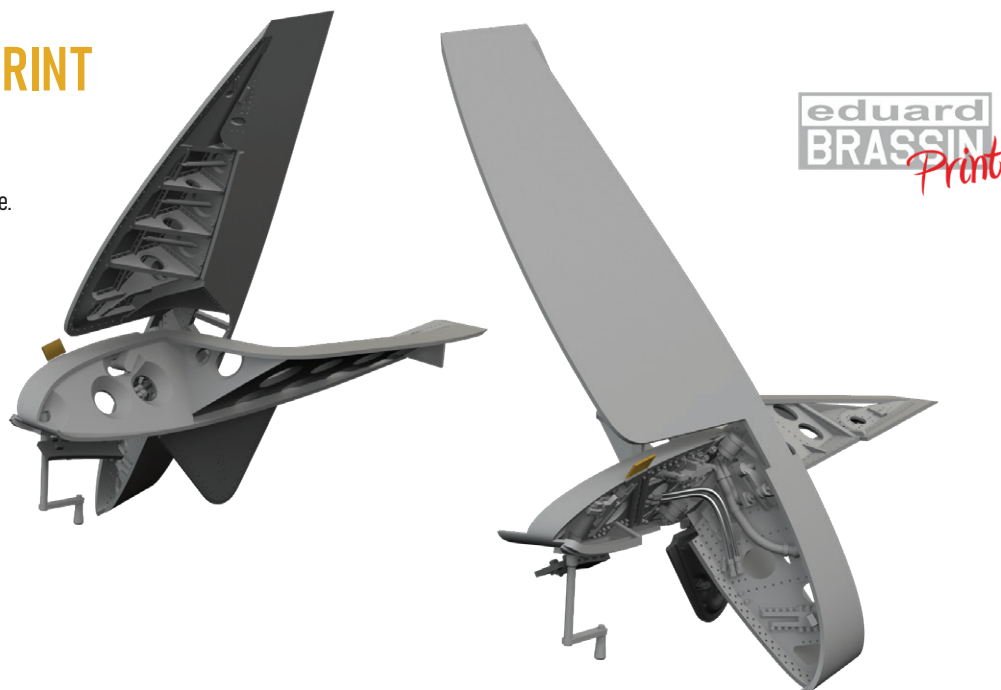
FM-2 folding wings PRINT

1/48 Eduard

Brassin set - folding wings for FM-2 in 1/48 scale.
The set consists of parts for both wings.
Made by direct 3D printing.
Recommended kit: Eduard

Set contains:

- 3D print: 10 parts
- plastic: 4 parts
- decals: no
- photo-etched details: yes
- painting mask: no



6488890

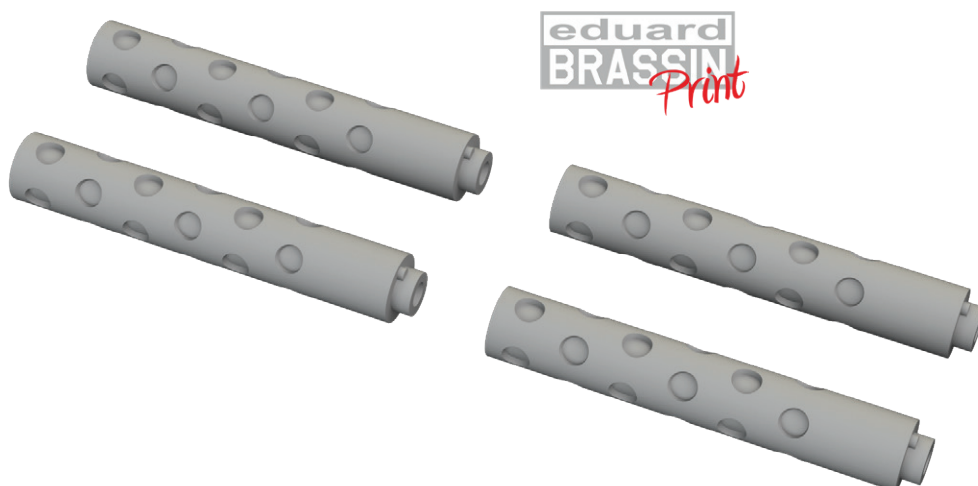
FM-2 gun barrels PRINT

1/48 Eduard

Brassin set - gun barrels for FM-2
in 1/48 scale. Made by direct 3D printing.
Recommended kit: Eduard

Set contains:

- 3D print: 4 parts
- decals: no
- photo-etched details: no
- painting mask: no



648891

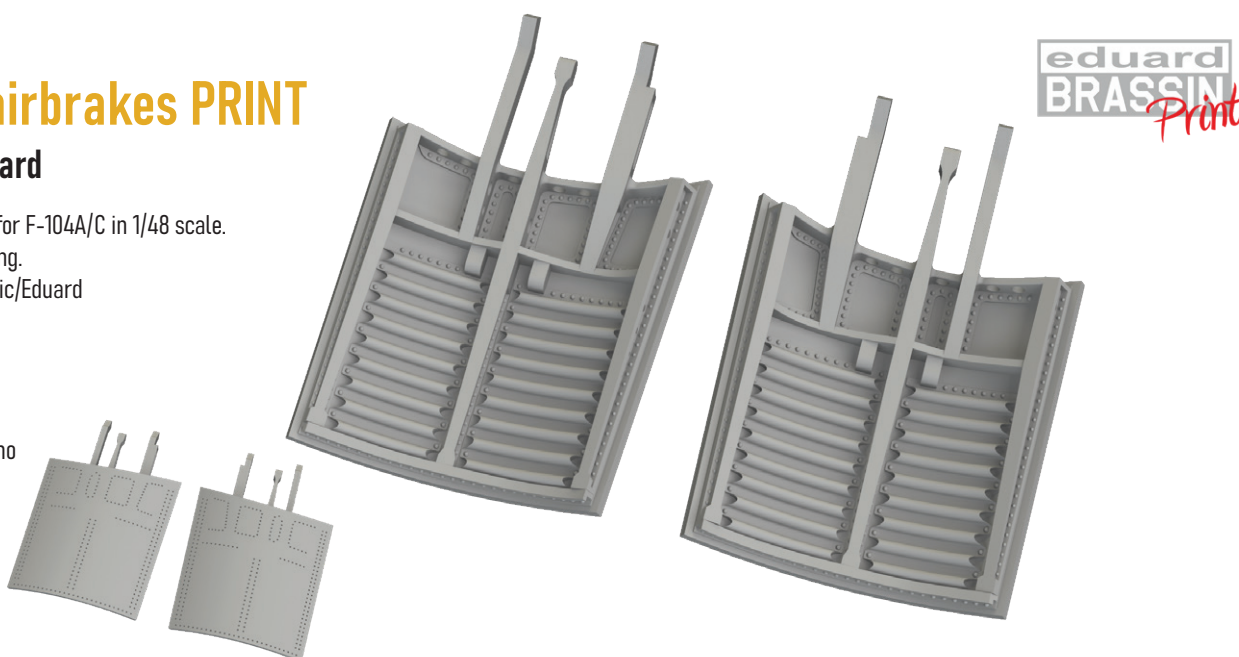
F-104A/C airbrakes PRINT

1/48 Kinetic/Eduard

Brassin set - airbrakes for F-104A/C in 1/48 scale.
Made by direct 3D printing.
Recommended kit: Kinetic/Eduard

Set contains:

- 3D print: 2 parts
- decals: no
- photo-etched details: no
- painting mask: no



648892

F-104A/C exhaust nozzle PRINT

1/48 Kinetic/Eduard

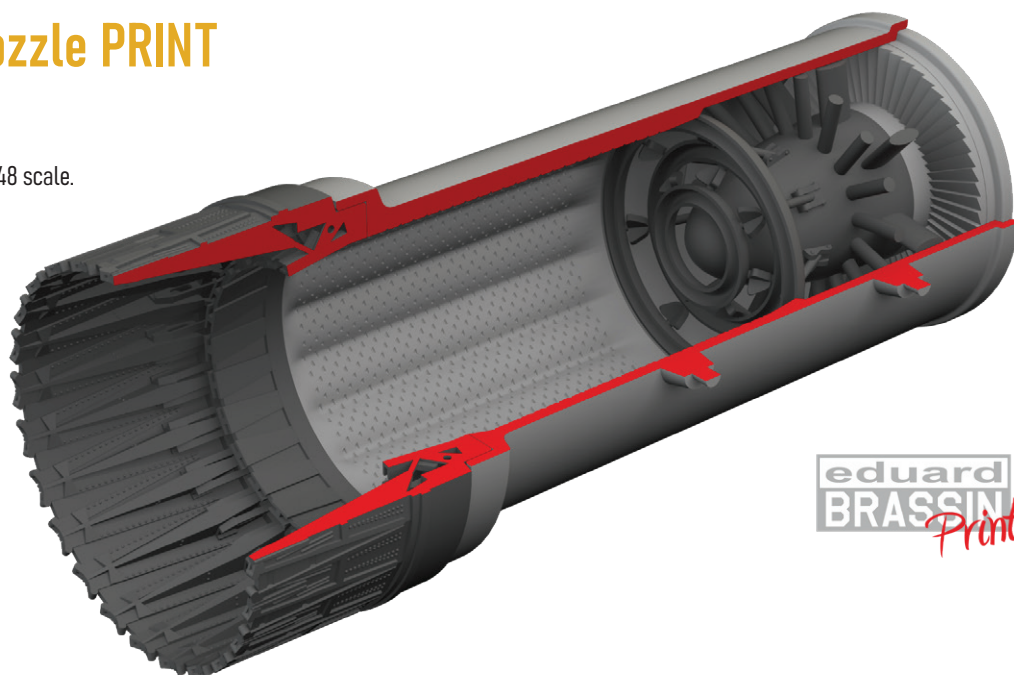
Brassin set - exhaust nozzle for F-104A/C in 1/48 scale.

Made by direct 3D printing. Easy to assemble, replaces plastic parts.

Recommended kit: Kinetic/Eduard

Set contains:

- 3D print: 4 parts
- decals: no
- photo-etched details: no
- painting mask: no



648895

FM-2 cockpit PRINT

1/48 Eduard

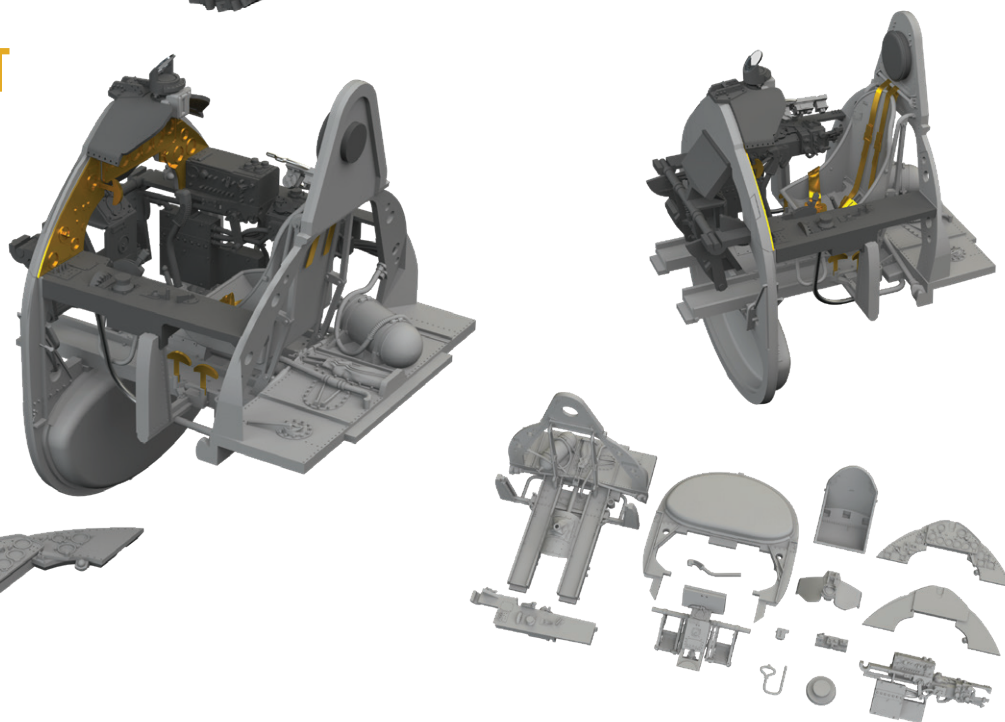
Brassin set - cockpit for FM-2 in 1/48 scale.

Made by direct 3D printing.

Recommended kit: Eduard

Set contains:

- 3D print: 1 parts
- decals: yes
- photo-etched details: yes, pre-painted
- painting mask: no
- SPACE 3D decals: no



672317

Bf 109F undercarriage legs BRONZE

1/72 Eduard

Brassin set - the undercarriage legs for Bf 109F in 1/72 scale. The legs are made of bronze.

Recommended kit: Eduard

Set contains:

- 3D print: 2 parts
- bronze: 2 parts
- decals: no
- photo-etched details: no
- painting mask: no



672326

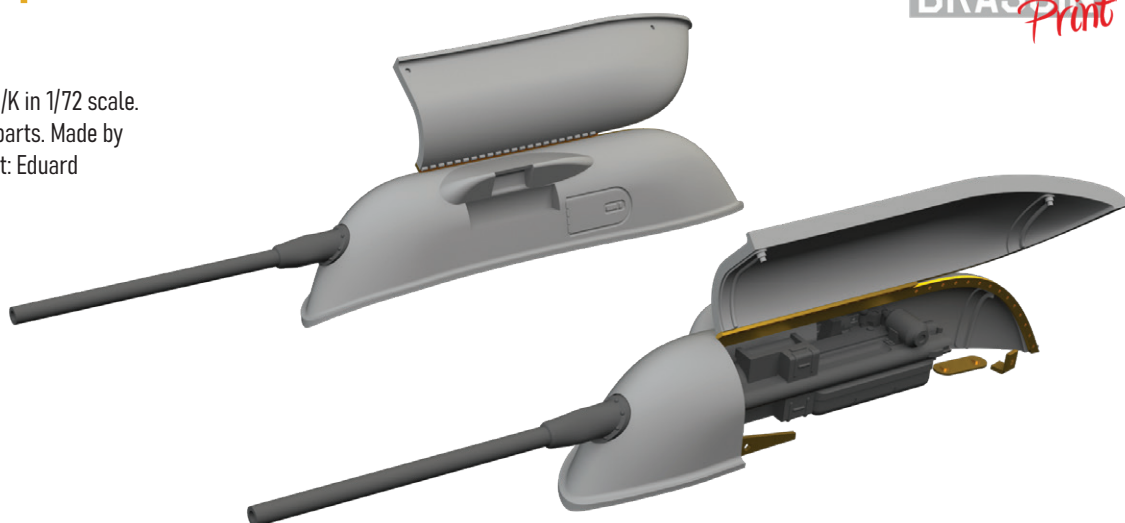
Bf 109F/G/K gun pods PRINT

1/72 Eduard

Brassin set - gun pods for Bf 109F/G/K in 1/72 scale.
Easy to assemble, replaces plastic parts. Made by
direct 3D printing. Recommended kit: Eduard

Set contains:

- 3D print: 8 parts
- decals: no
- photo-etched details: yes
- painting mask: no



672329

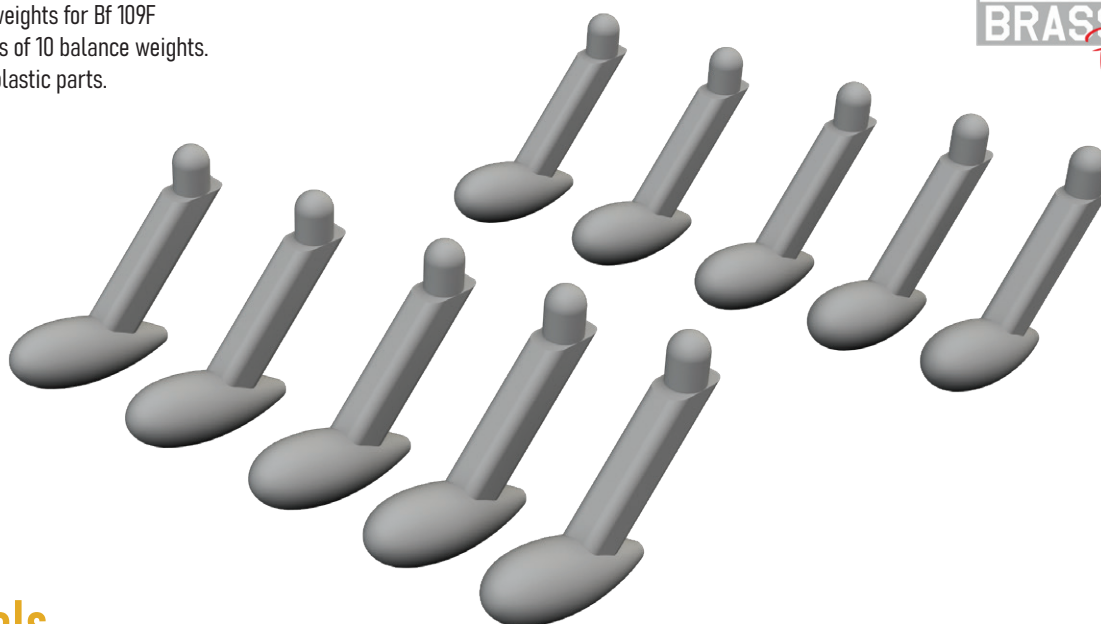
Bf 109 balance weights PRINT

1/72 Eduard

Brassin set - wing balance weights for Bf 109F
in 1/72 scale. The set consists of 10 balance weights.
Easy to assemble, replaces plastic parts.
Made by direct 3D printing.
Recommended kit: Eduard

Set contains:

- 3D print: 10 parts
- decals: no
- photo-etched details: no
- painting mask: no



672330

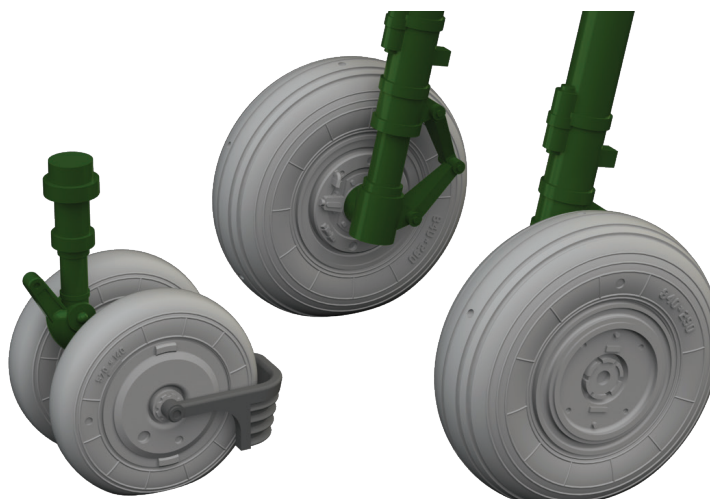
MiG-29 wheels

1/72 Great Wall Hobby

Brassin set - the undercarriage wheels for MiG-29
in 1/72 scale. The set consists of the main wheels
and nose wheels. Easy to assemble, replaces plastic parts.
Recommended kit: Great Wall Hobby

Set contains:

- resin: 4 parts
- 3D print: 1 part
- decals: no
- photo-etched details: no
- painting mask: yes



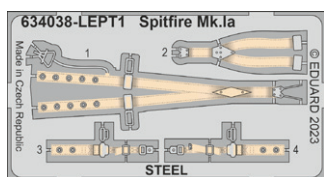
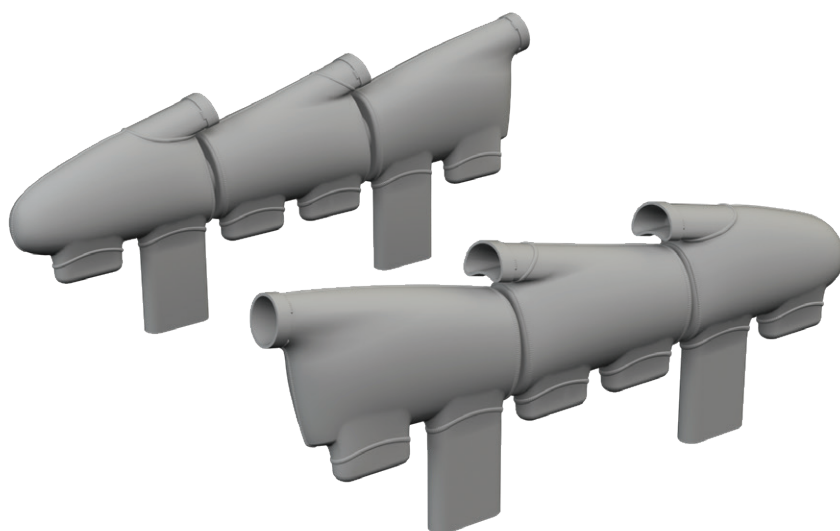
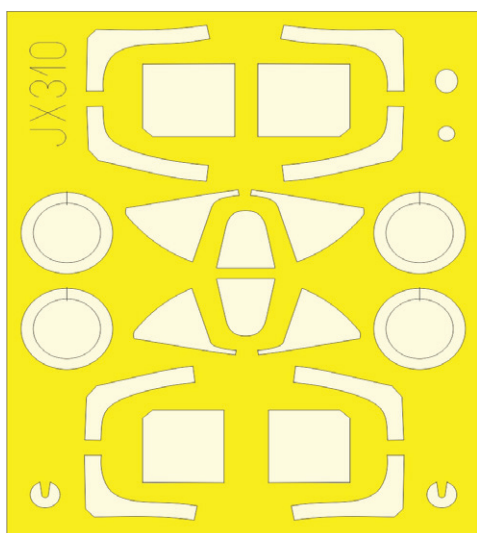
634040

Spitfire Mk.Ia LööKplus**1/32 Kotare**

Collection of 4 sets for Spitfire Mk.Ia in 1/32 scale.

Recommended kit: Kotare

- LööK set (pre-painted Brassin dashboards & Steelbelts)
- TFace painting mask
- undercarriage wheels
- exhaust stacks

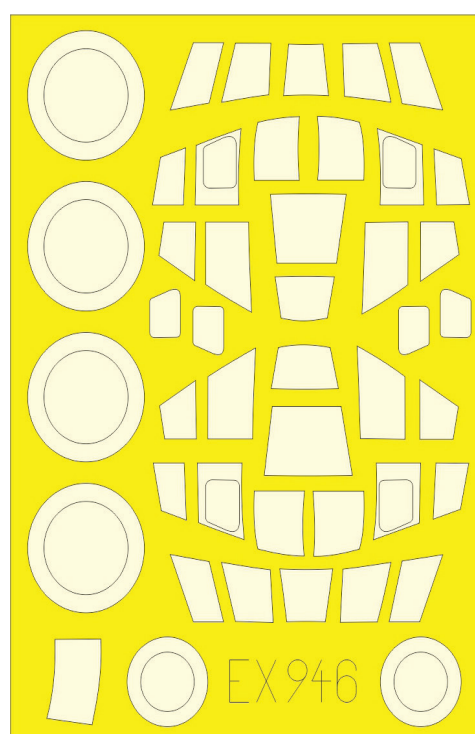
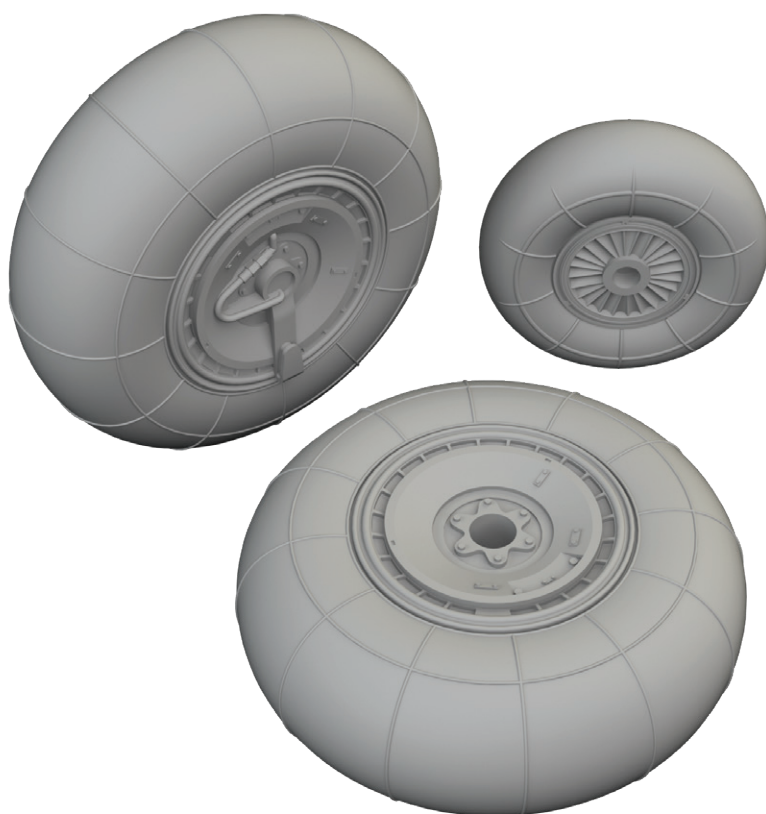
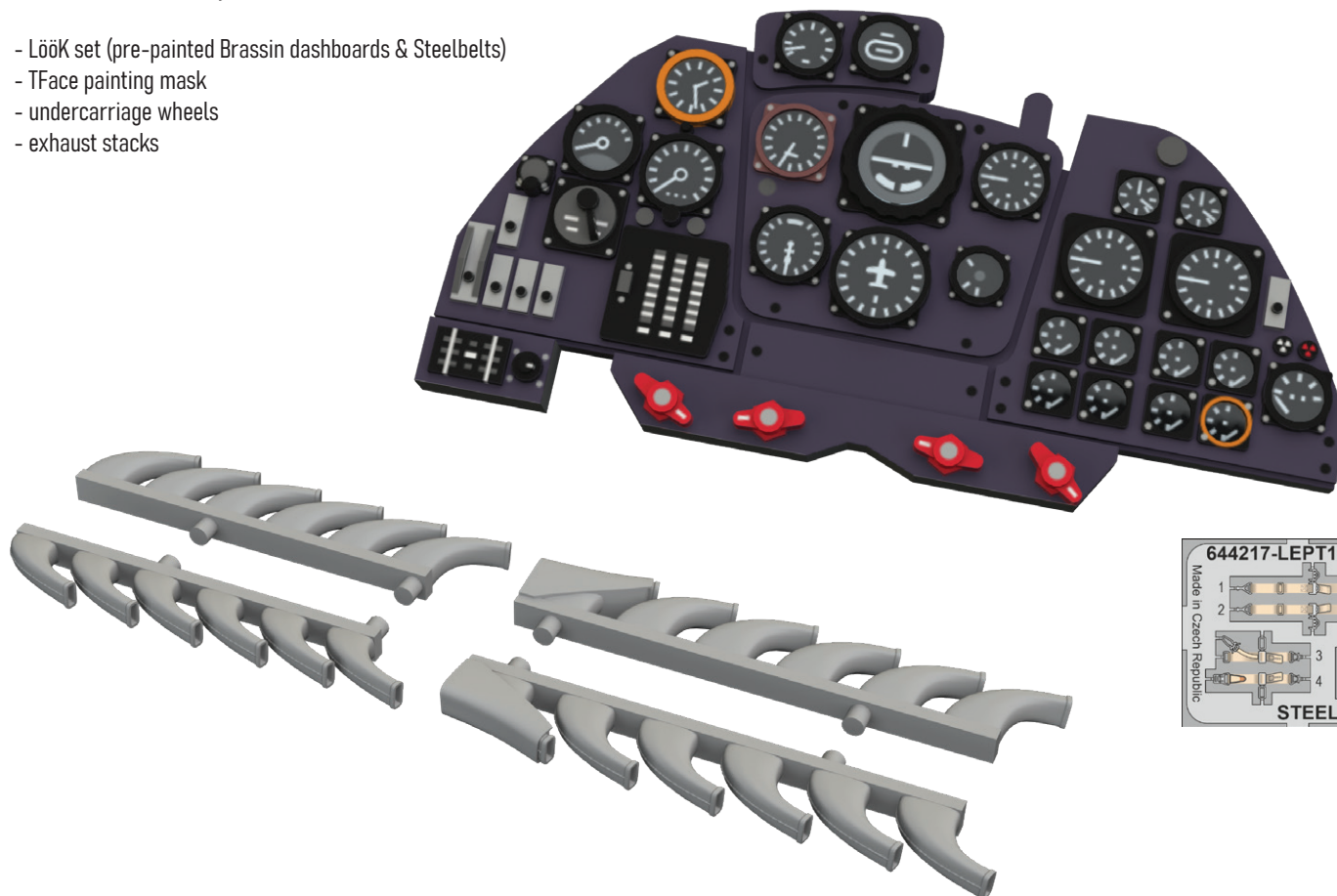
644221

Do 335A LööKplus**1/48 Tamiya**

Collection of 4 sets for Do 335A in 1/48 scale.

Recommended kit: Tamiya

- LööK set (pre-painted Brassin dashboards & Steelbelts)
- TFace painting mask
- undercarriage wheels
- exhaust stacks

LööK

SIN648108

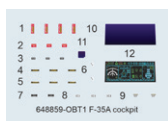
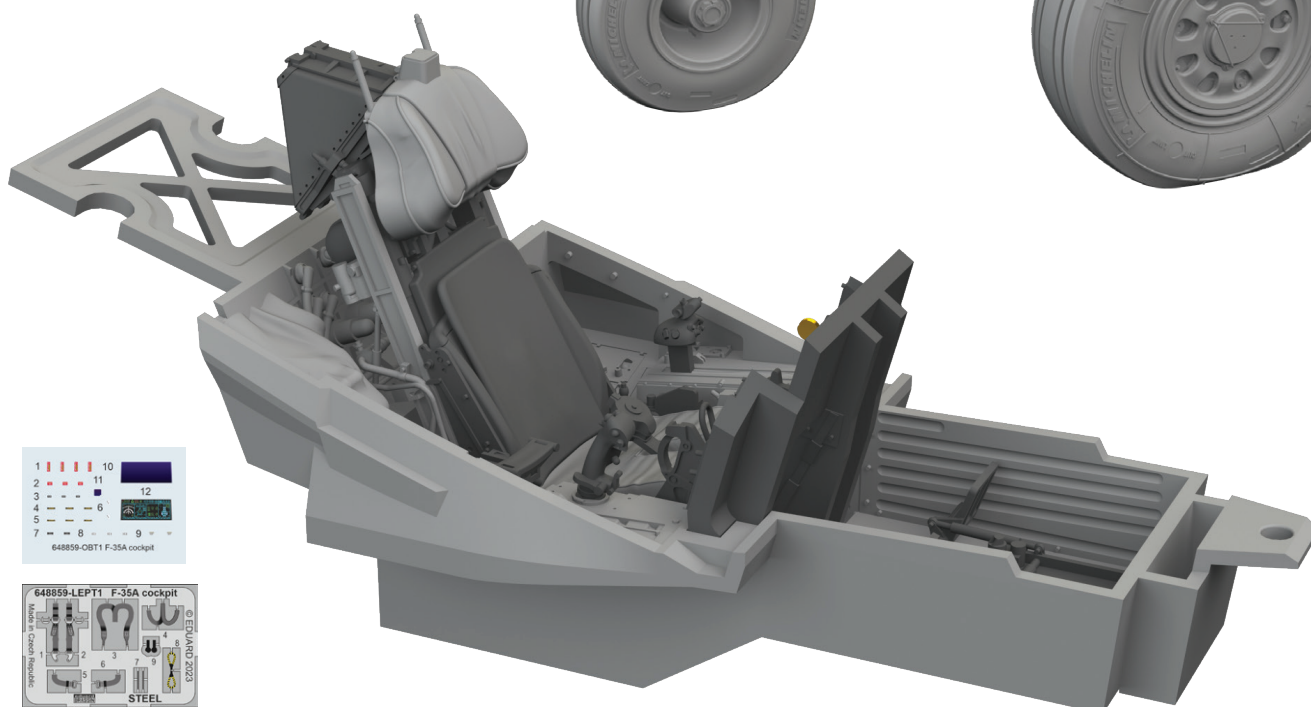
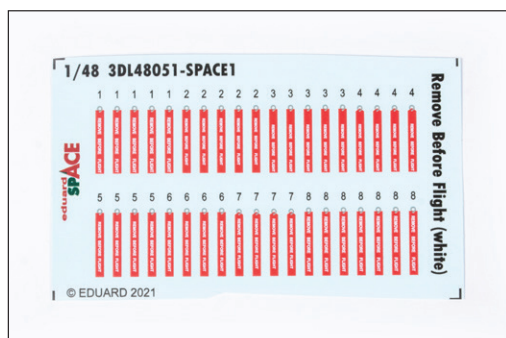
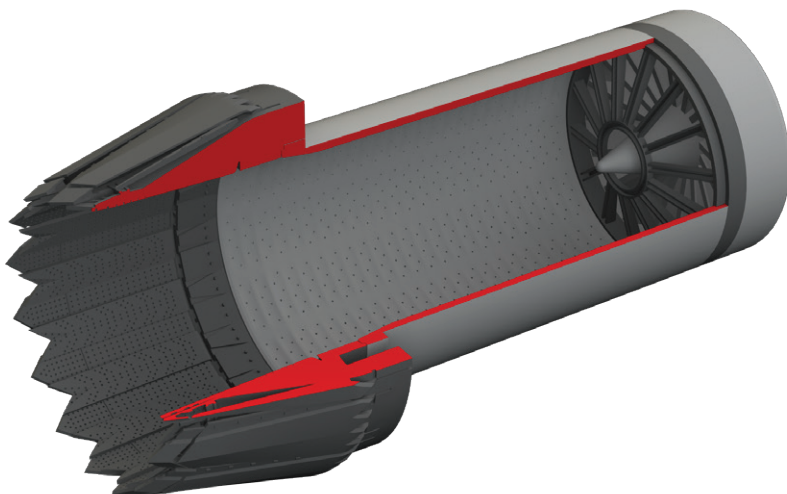
F-35A**1/48 Tamiya**

Collection of 4 sets for F-35A in 1/48 scale.

Recommended kit: Tamiya

- cockpit
- exhaust nozzle
- undercarriage wheels
- Remove Before Flight tags SPACE

All sets included in this BIG SIN are available separately, but with every BIG SIN set you save up to 30 %.



SIN648109

F-4E armament

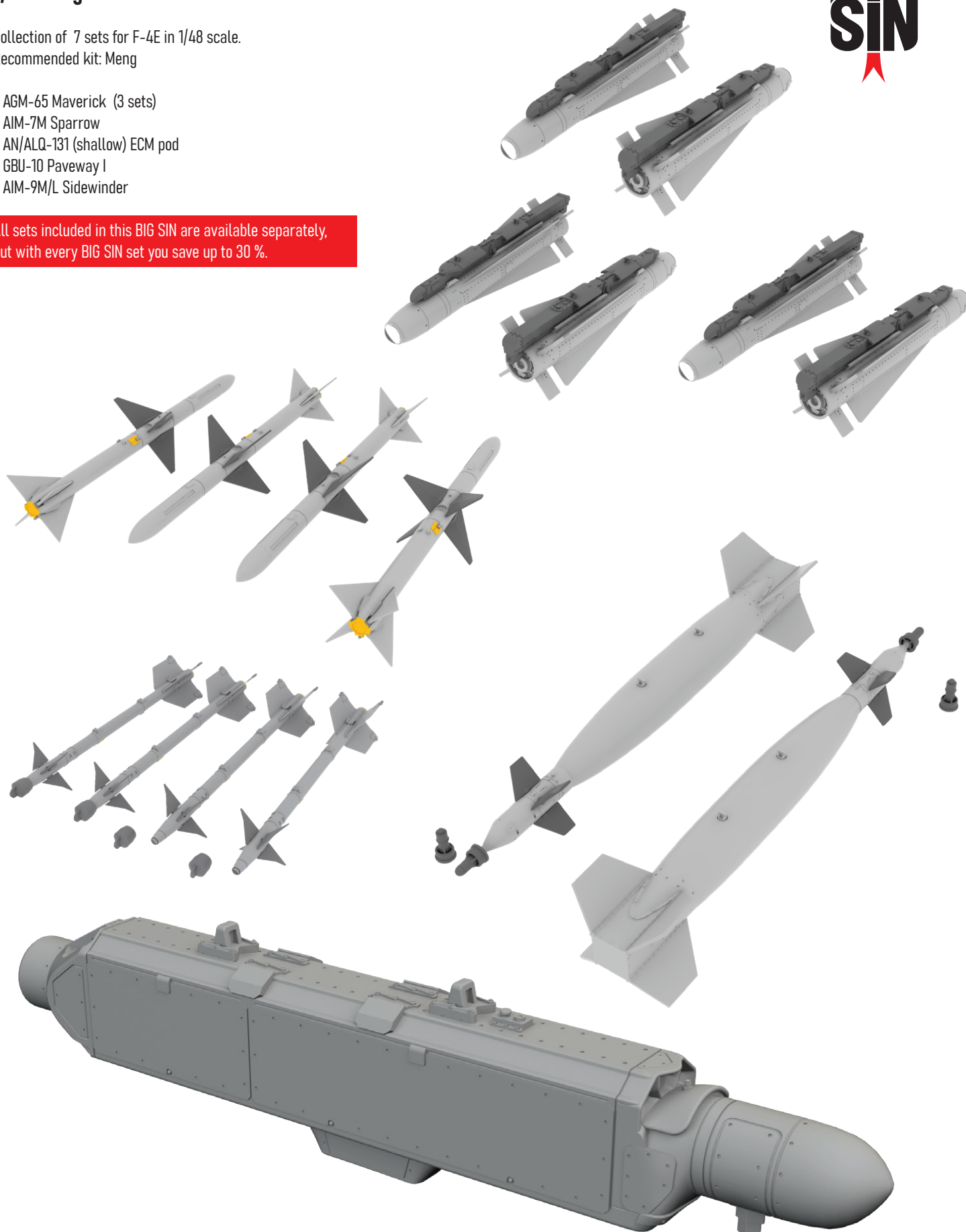
1/48 Meng

Collection of 7 sets for F-4E in 1/48 scale.

Recommended kit: Meng

- AGM-65 Maverick (3 sets)
- AIM-7M Sparrow
- AN/ALQ-131 (shallow) ECM pod
- GBU-10 Paveway I
- AIM-9M/L Sidewinder

All sets included in this BIG SIN are available separately, but with every BIG SIN set you save up to 30 %.



PE-SETS

53295	USS Nimitz CVN-68 part 1	1/350	Trumpeter
32484	A-20G bomb bay	1/32	HKM
32485	A-20G main wheel wells	1/32	HKM
481118	F-16 reinforcement straps STEEL	1/48	Kinetic
481119	FM-2 landing flaps	1/48	Eduard
481120	A-10C formation lights	1/48	Academy
491369	F-16D Block 30	1/48	Kinetic
491370	F-16D Block 40	1/48	Kinetic
491371	F-16D Block 50	1/48	Kinetic
491373	A-10C	1/48	Academy
73805	OV-10A	1/72	ICM

ZOOMS

FE1369	F-16D Block 30	1/48	Kinetic
FE1370	F-16D Block 40	1/48	Kinetic
FE1371	F-16D Block 50	1/48	Kinetic
FE1372	F-16D Block 30/40/50 seatbelts STEEL	1/48	Kinetic
FE1373	A-10C	1/48	Academy
FE1374	A-10C seatbelts STEEL	1/48	Academy
FE1375	A6M3 Zero Type 32 Weekend	1/48	Eduard
SS805	OV-10A	1/72	ICM

MASKS

EX964	A-10C TFace	1/48	Academy
EX965	FM-2 TFace	1/48	Eduard
EX966	F-16D Block 30/40/50	1/48	Kinetic
EX967	F-16D Block 30/40/50 TFace	1/48	Kinetic
EX968	F-35B RAM coating	1/48	Italeri
EX969	A6M2-N Rufe national insignia	1/48	Eduard
EX970	A6M3 Zero Type 32 Weekend	1/48	Eduard
CX650	OV-10A	1/72	ICM

SPACE

3DL48127	Bf 110G-4 SPACE	1/48	Eduard
3DL48128	FM-2 SPACE	1/48	Eduard
3DL48129	F-16D Block 30 SPACE	1/48	Kinetic
3DL48130	F-16D Block 40 SPACE	1/48	Kinetic
3DL48131	F-16D Block 50 SPACE	1/48	Kinetic
3DL48132	A-10C SPACE	1/48	Academy
3DL72020	OV-10A SPACE	1/72	ICM

DECAL SET

D72045	Bf 109F stencils	1/72	Eduard
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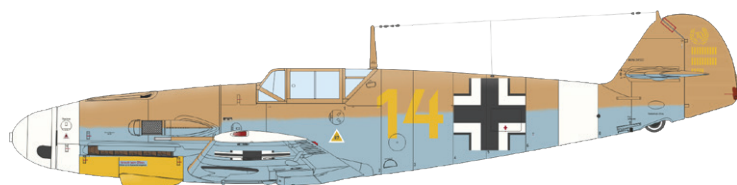
EDDIE THE RIVETER

ER32001	Single riveting rows	1/32	
ER48006	Single riveting rows	1/48	
ER72001	Single riveting rows	1/72	

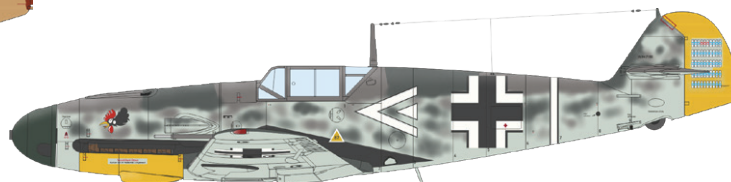
Bf 109F-4

#70155

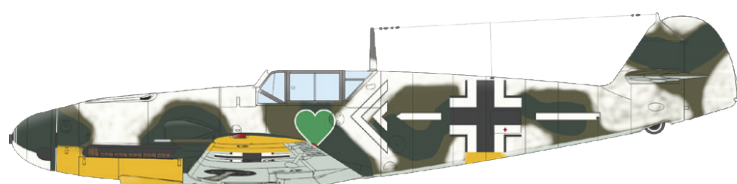
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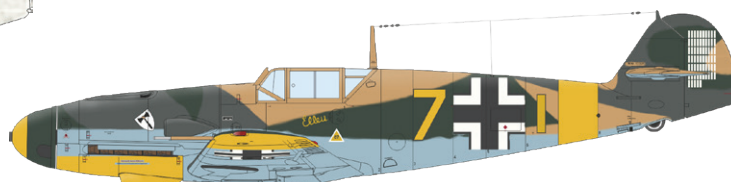
Bf 109F-4/Trop, WNr. 10137, Oblt. Hans-Joachim Marseille,
CO of 3./JG 27, Ain-el-Gazala, Libya, June 1942



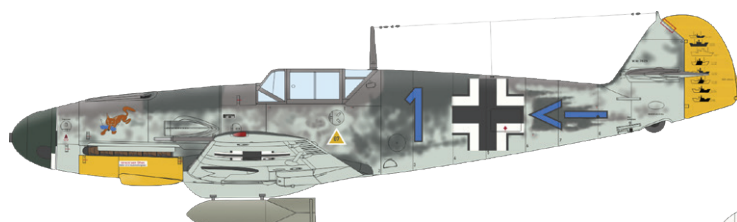
Bf 109F-4, WNr. 7183, Hptm. Hans Hahn, III./JG 2,
St. Pol, France, October 1941



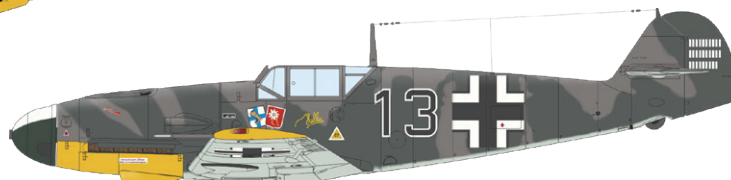
Bf 109F-4, Maj. Hannes Trautloft, CO of JG 54,
Relbitsy, the Soviet Union, March 1942



Bf 109F-4/Z, WNr. 13325, Oblt. Viktor Bauer, 9./JG 3,
Shchigry, the Soviet Union, June 1942



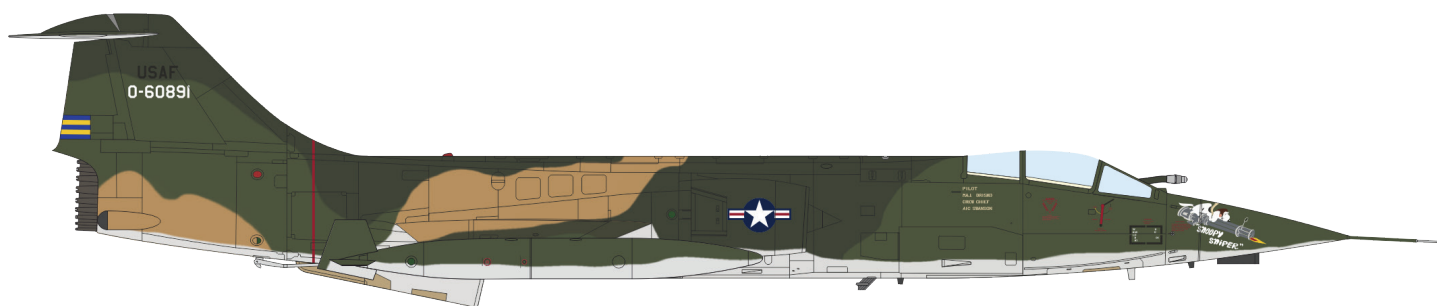
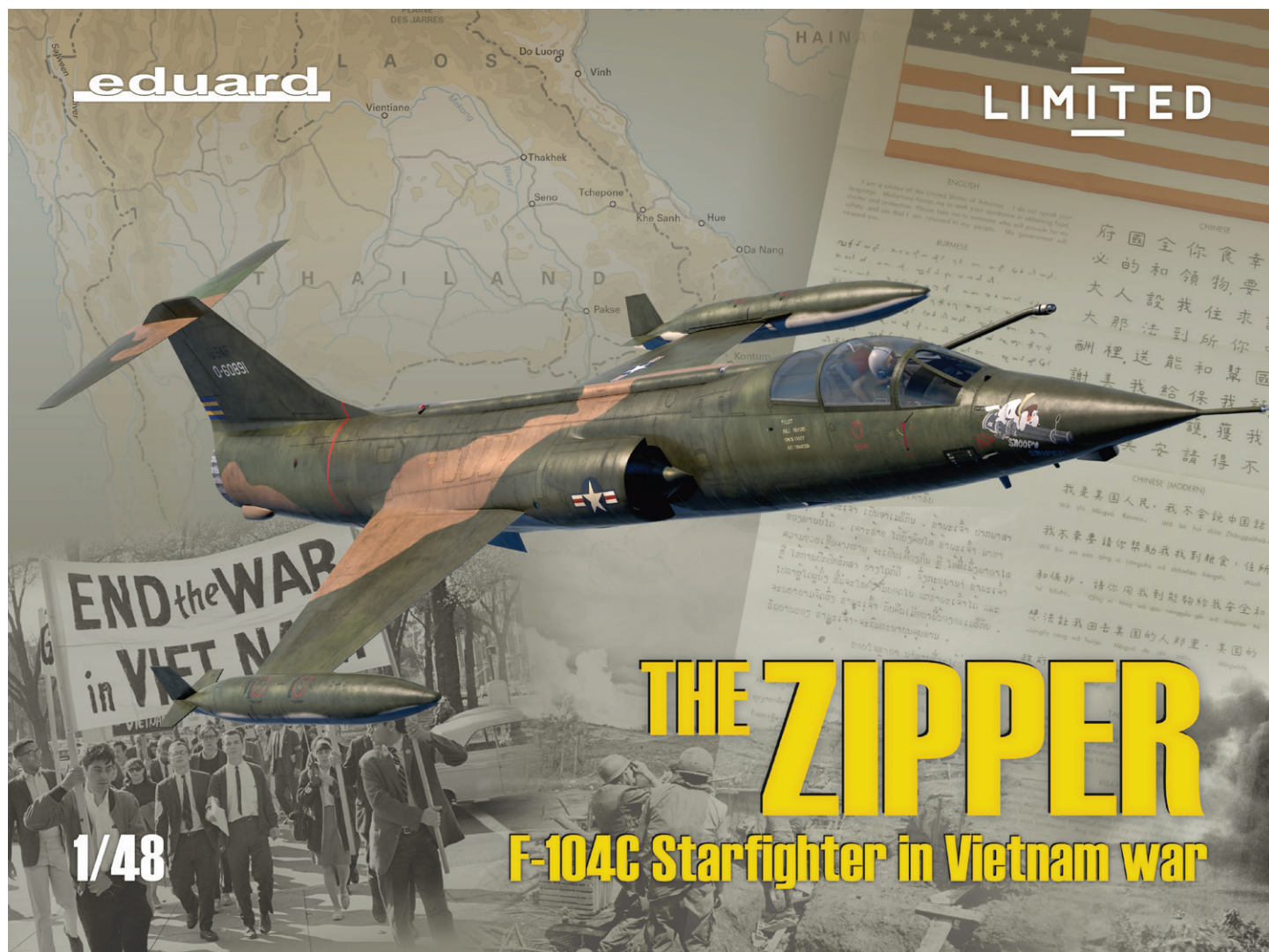
Bf 109F-4/B, Oblt. Frank Liesendahl, 10.(Jabo)/JG 2,
France, June 1942



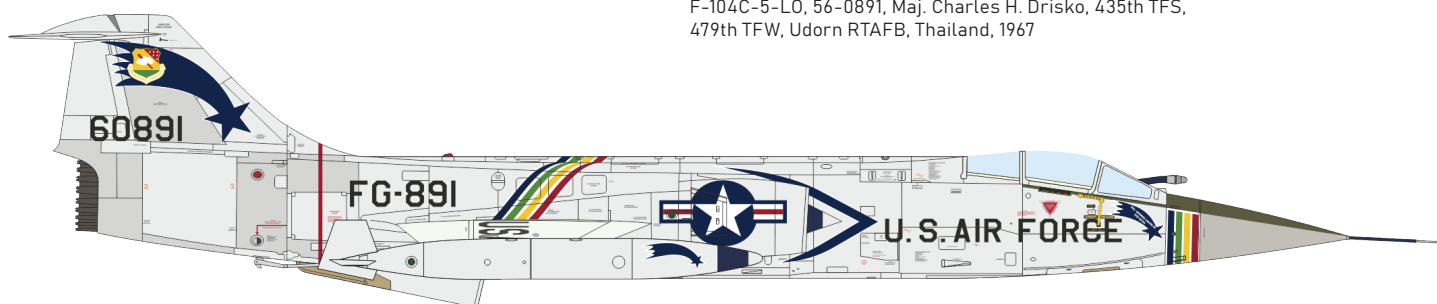
Bf 109F-4, WNr. 13169, Fw. Heinrich Bartels, 8./JG 5,
Petsamo, Finland, September 1942

THE ZIPPER #11169

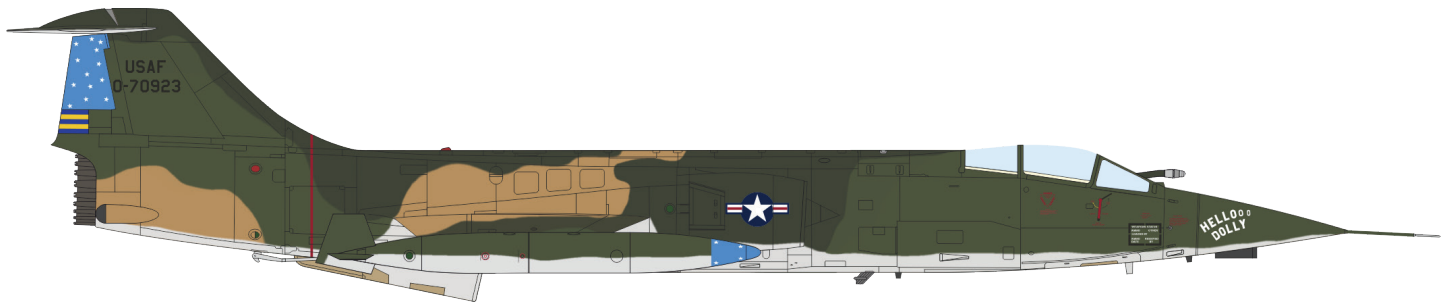
1/48



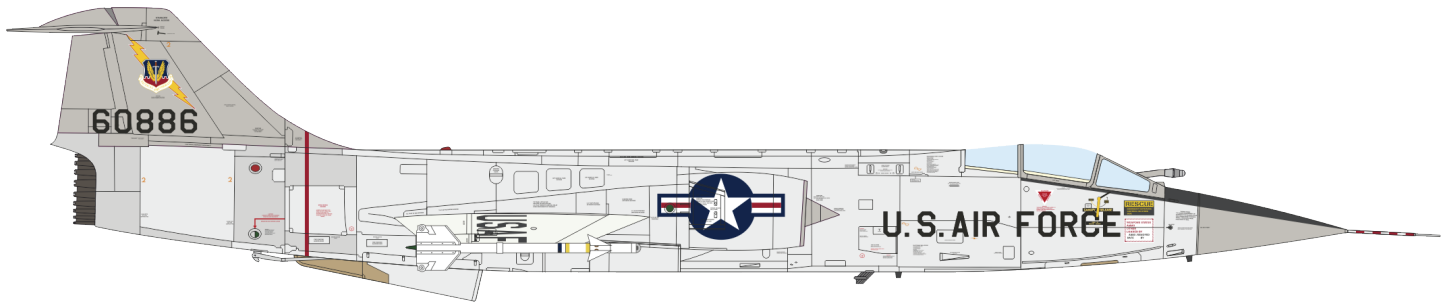
F-104C-5-LO, 56-0891, Maj. Charles H. Drisko, 435th TFS,
479th TFW, Udorn RTAFB, Thailand, 1967



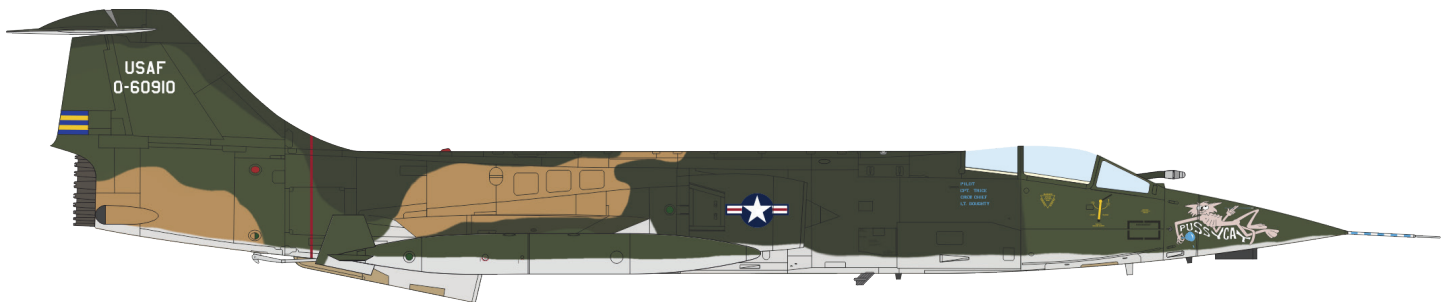
F-104C-5-LO, 56-0891, Col. George Laven Jr., 479th TFW,
George AFB, California, United States, 1959



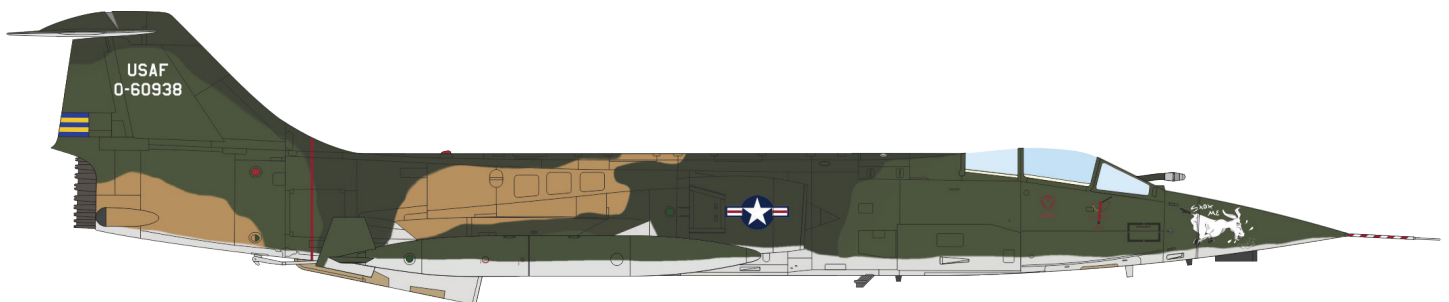
F-104C-10-L0, 57-0923, Lt. Col. Robert A. Preciado, 435th TFS,
479th TFW, Udorn RTAFB, Thailand, July 1967



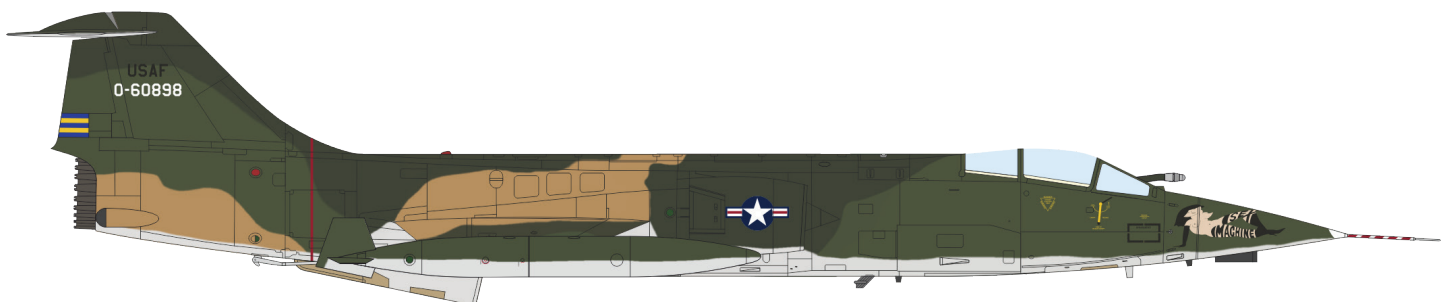
F-104C-5-L0, 56-0886, 476th TFS, 479th TFW, Da Nang AB,
South Vietnam, April 1965



F-104C-5-L0, 56-0910, Capt. James B. Trice, 435th TFS,
479th TFW, Udorn RTAFB, Thailand, 1967



F-104C-5-L0, 56-0938, Maj. Bobby D. Betsworth, 435th TFS,
479th TFW, Udorn RTAFB, Thailand, June-August 1967

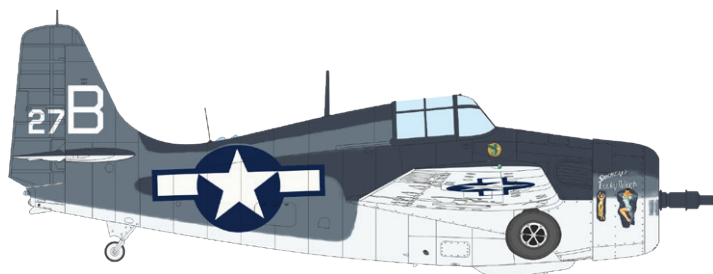


F-104C-5-L0, 56-0898, Maj. Hugh B. Spencer, 435th TFS,
479th TFW, Udorn RTAFB, Thailand, 1967

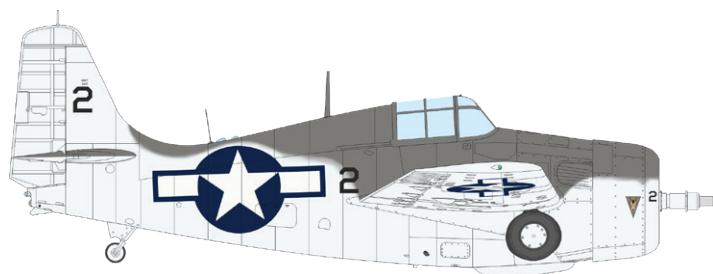
WILDER CAT

#11175

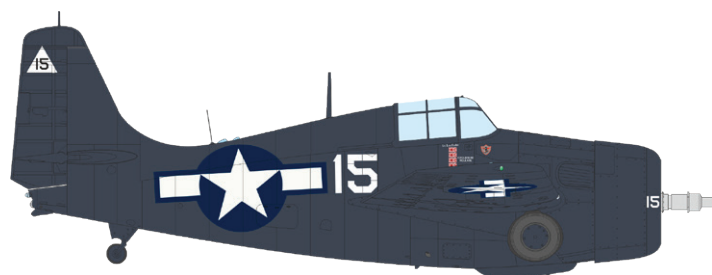
1/48



Ens. Darrell C. Bennett, VC-10,
USS Gambier Bay, August 1944



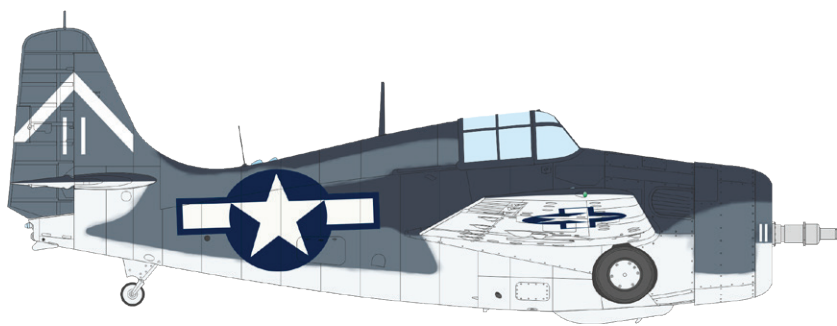
VC-69, USS Guadalcanal,
spring/summer 1944



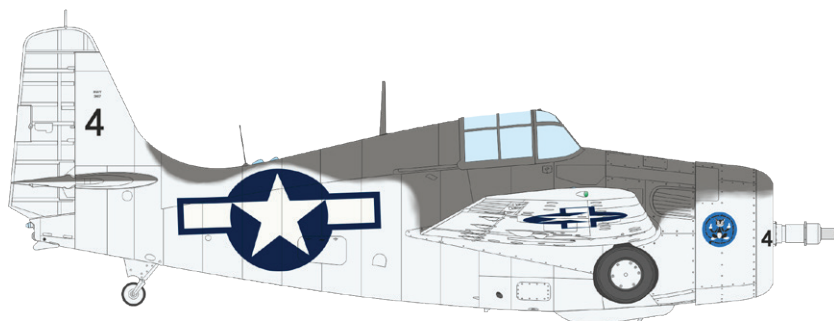
Lt. Leopold M. Ferko, VC-4,
USS White Plains, November 1944



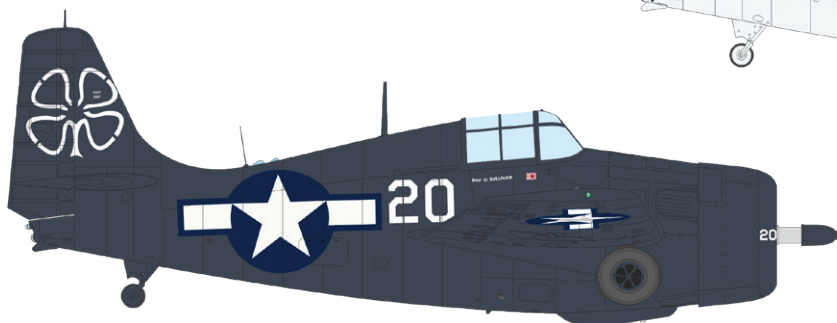
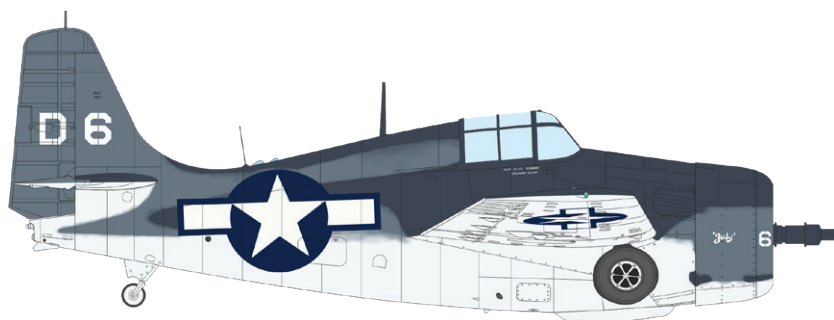
VC-8, Lt(jg) Harry N. O'Connor,
USS Nehenta Bay, August 5, 1945



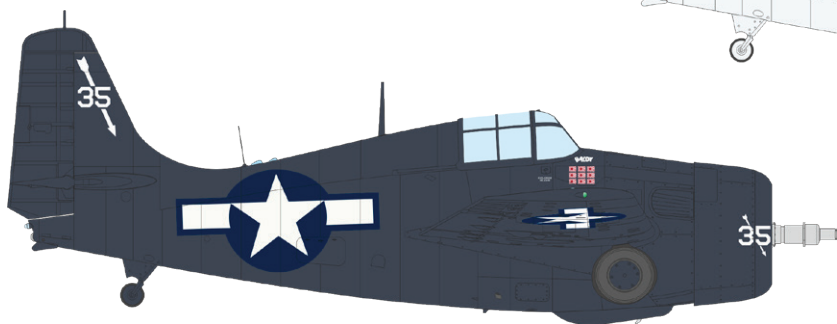
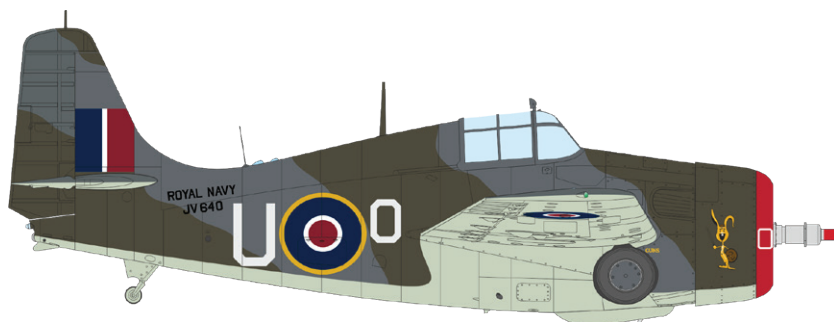
VC-80, USS Manila Bay, autumn 1944



Lt. O'Neill, VC-13, USS Tripoli, spring 1944

VC-93, Lt(jg) Robert Sullivan,
USS Petrof Bay, Okinawa, April–May 1945

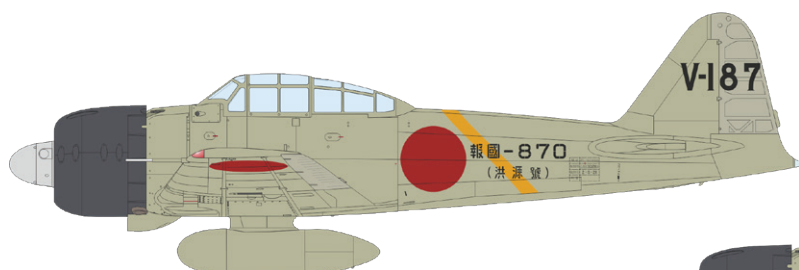
VC-14, USS Hogatt Bay, November 1944

VC-27, Lt. Ralph Elliot, Jr.,
USS Savo Island, January 1945JV640, Sub-Lt W. Park, No. 881 Squadron FAA,
HMS Pursuit, August 1944

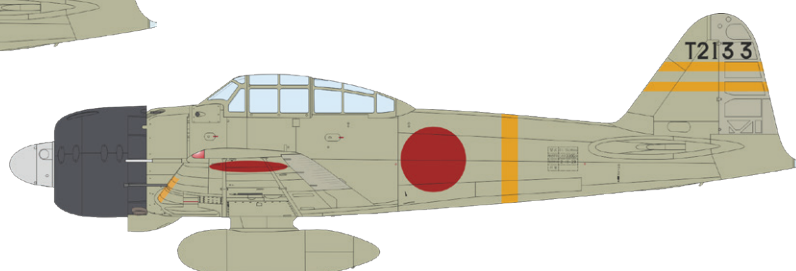
A6M3 Zero Type 32

#84191

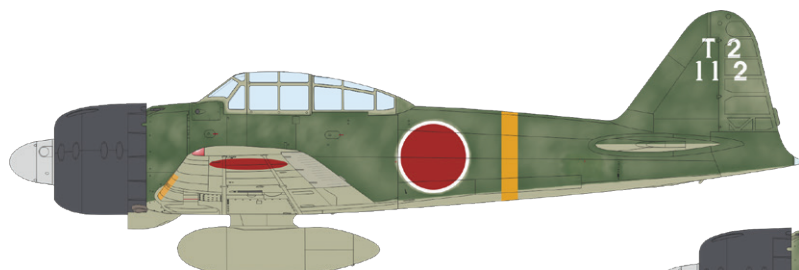
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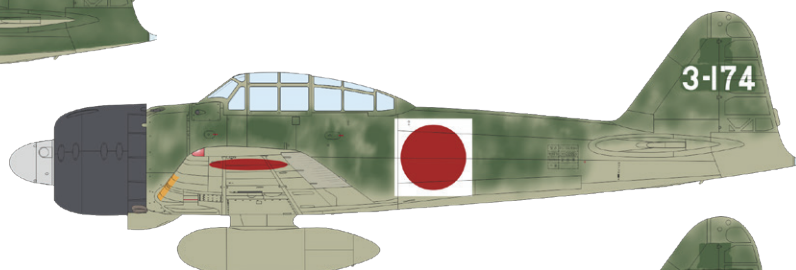
c/n 3028, Tainan Kōkūtai, Buna airfield,
New Guinea, August 1942



c/n 3305, Kōkūtai 204, Buin,
Bougainville island, January 1943



Warrant Officer Matsuo Hagiri,
Rabaul, New Britain, July 1943



c/n 3285, Rabauru Kōkūbuntai, Rabaul,
New Britain, August 1943

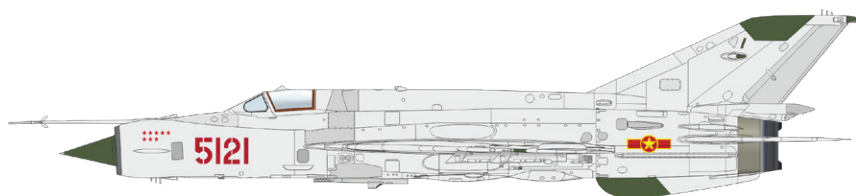
c/n 3285, Rabauru Kōkūbuntai, Ballale Airfield,
Ballale Island, Solomon Islands, October 1943



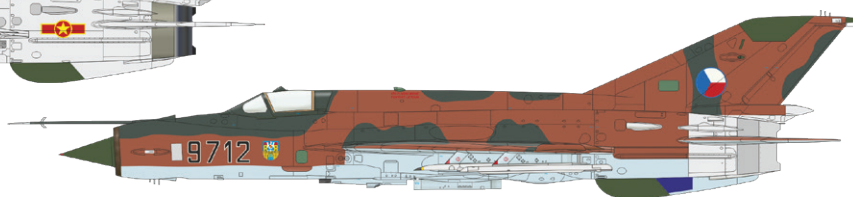
MiG-21MF Fighter Bomber

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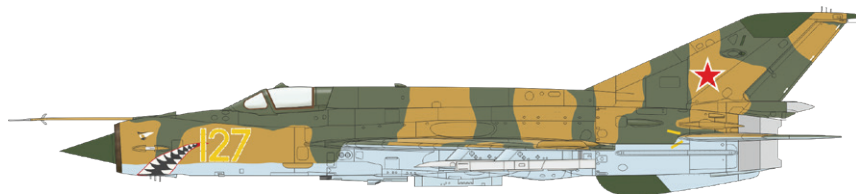
Re-release #70142

ProfiPACK
 edition


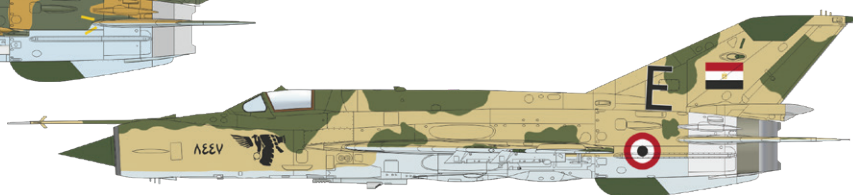
No. 5121, Phạm Tuân, 921 Fighter Regiment,
 Noi Bai AB, Democratic Republic of Vietnam,
 December 1972



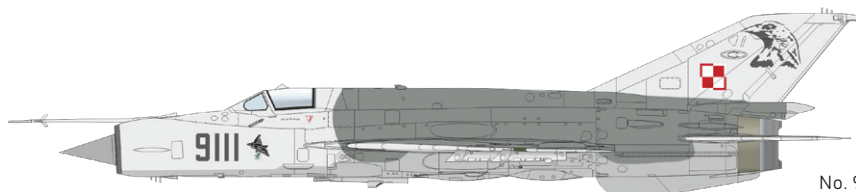
No. 9712, 9 Fighter Regiment,
 Bechyně, Czechoslovakia, 1989–1993



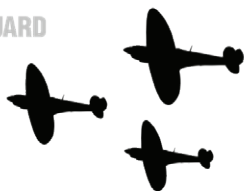
No. 127, 812th Training Air Regiment,
 Kharkiv Higher Military Aviation School of Pilots,
 Kupiansk Airfield, the Soviet Union, August 1991



No. 8447, No. 46 Squadron, Egypt, 1973



No. 9111, 3 Squadron of Tactical Aviation,
 Poznań Krzesiny, Poland, 2002



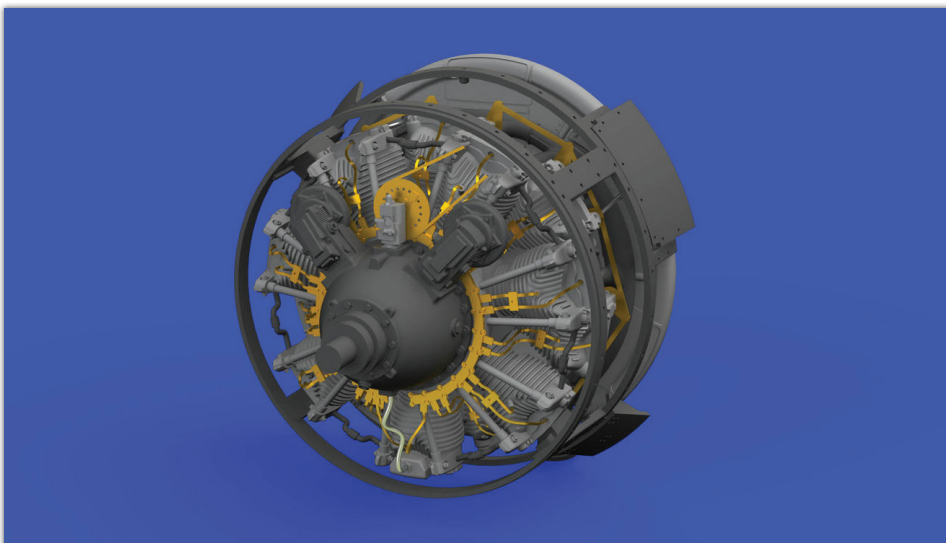
TWO THINGS ON MY MIND

Text: Jakub Nademlejnský

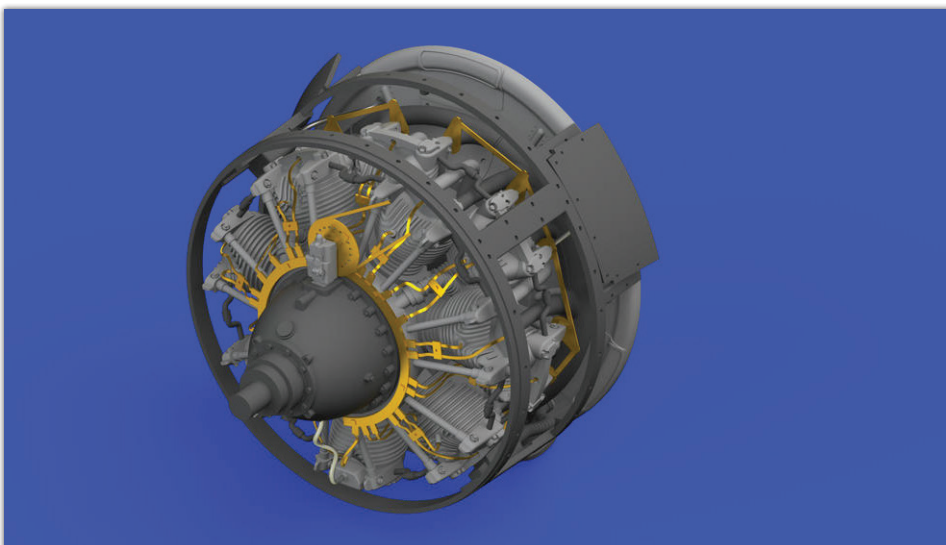
As the title of this article suggests, I would like to address two topics in this Tail End Charlie issue. The first concerns engines. Specifically, I mean our Brassin engines. I will directly follow up on the step by step article by Honza Baranec, who, in my opinion, assembled and painted the engine for the F4F-4 Wildcat in an absolutely fantastic way. I approached him with the idea of an article on the construction of a separate engine right after I saw the result of his work. Little did I know that at this year's Iron Bunny event, the competitors would be literally racing Brassin Wildcat engines. I would like to take this opportunity to apologize to the contestants for the fact that the printed instructions do not mention the need to cut the plastic parts, and I recommend that all modelers, in case of confusion, check out the instructions on the product page of our e-shop, as they are always the most up-to-date versions. If we find any discrepancy or error, or if we receive feedback from customers that some steps during construction are not clear to them, we modify the instructions. And since it is not possible to send them to all customers afterwards, we update them on the product page of the e-shop.

But there is one more type of question we are receiving from our customers regarding the Wildcat engines. This brings me to the second topic, which is a certain modeling laziness, and maybe I would even go so far as to call it pampering. And we at Eduard are probably to blame for this. We get a lot of questions from modelers about which version of the Brassin engine for the F4F-3 they should actually buy, because there are four on offer – for the early, mid, late and also for the F4F-3A. This also corresponds to the concept of the plastic kit, in which we also deal with several types of cowlings and engine cooling systems, as well as two versions of the engine. In short, Grumman changed and improved these items on the F4F-3 several times during the war. And that's not even addressing the cowlings of the first 19 production machines, which was composed of two halves!

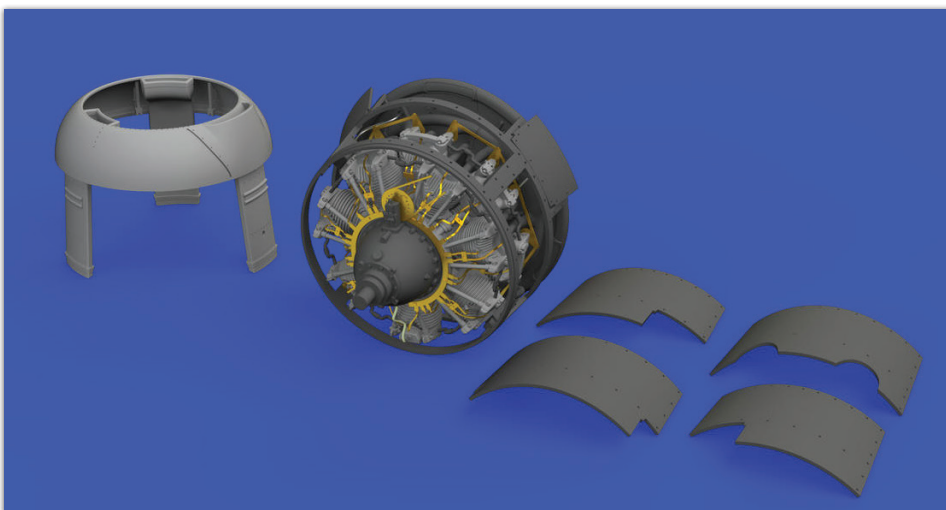
Our recommendation is quite simple. Each modeler must first clarify what camouflage he wants to model and thus what specific aircraft he will build. Subsequently, according to the selected camouflage in the instructions, the choice is made with respect to the appropriate version of the engine, cooling and engine covers that correspond to the chosen camouflage. We have all this conveniently indicated in the instructions for the kits, and it is therefore also a reliable guide for choosing an appropriate Brassin set. A general question like "Which set should I buy for such and such a kit" is often impossible to answer because it deals with multiple variants of the engine. If you don't



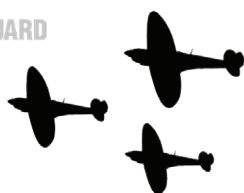
Engine with two magnetos on the reduction gear housing.



Engine subtype without two magnetos on the reduction gear.

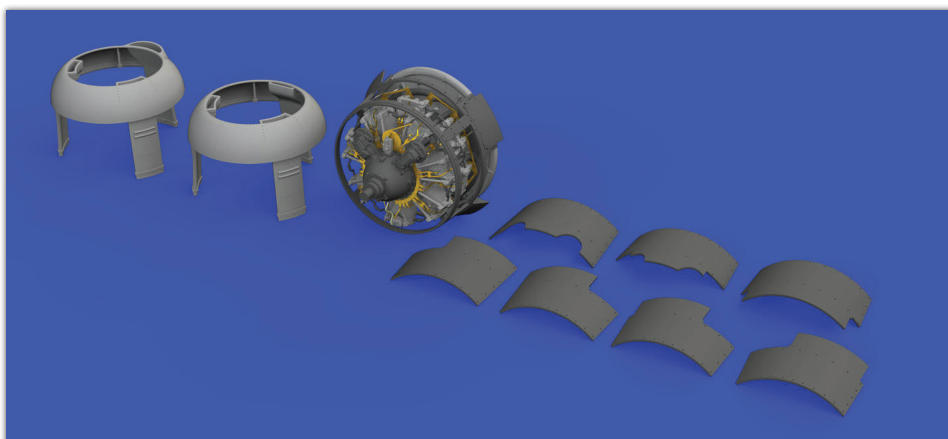


F4F-3 early version engine. Reducer without the two magnetos, side intake for air cooling on the front of the cowl ring and one cooling flap on the side covers.

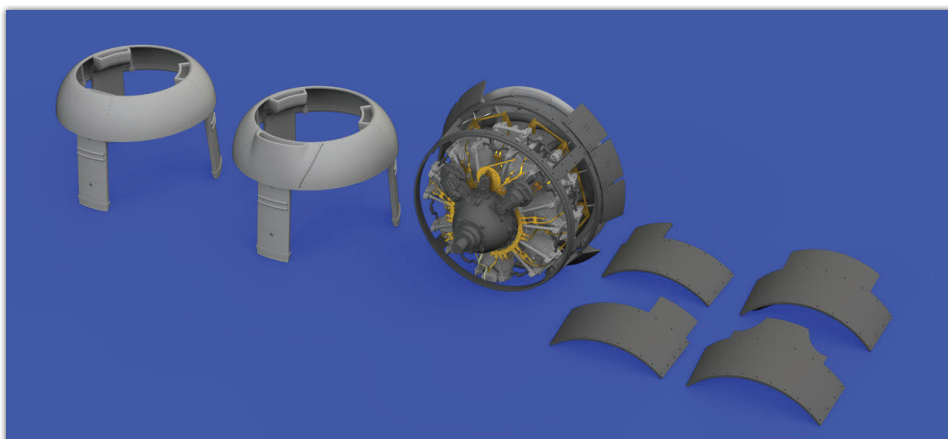


have the instructions for the kit with you at the moment, you can access them on the e-shop in electronic form. By comparing the plastic parts specified in the kit instructions with the resin sets, you will get answer to the question of which resin set to buy. To illustrate, I am attaching renders from the construction of the engines so that all readers can see the differences.

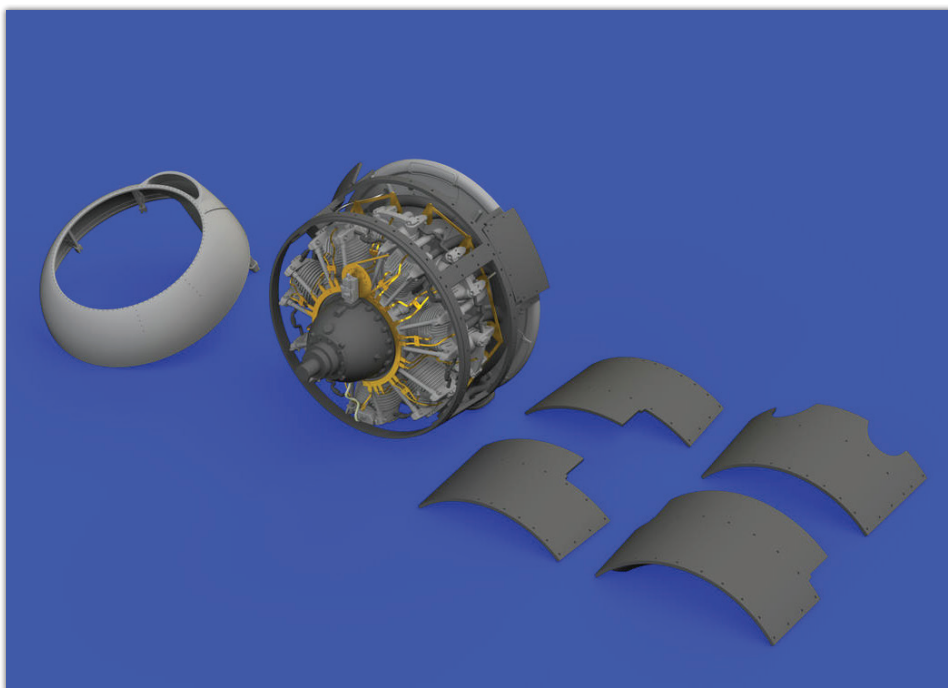
Yes, it may seem complicated to some. If we didn't care about the design of the F4F-3 model and made only one cover (as most model companies would probably do) and then offered one aftermarket engine, we would have greatly simplified our lives. But then it wouldn't be us! Our philosophy is to cover the given subject with the highest possible degree of accuracy and historical faithfulness. It requires the study of all available and most up-to-date references and a series of discussions with experts on the given topic. And we think that even modelers should devote some time to studying the materials and also the texts that we publish in the instructions when preparing to build their model. We provide this information to modelers precisely to help them choose camouflage schemes and to clarify as much as possible the technical and camouflage specifics of each aircraft offered in the kit. Short and sweet: We put a lot of effort into preparation, and we expect modelers to put in some effort as well. Through this joint effort, models faithfully corresponding to the originals according to all available materials can be created. In the end, we won't have to spend time through customer support answering questions that the modelers can answer relatively easily on their own. The days when a modeler had to make such an engine from scratch are not so distant, and the effort required for such scratchbuilding was quite considerable. Today, you only need to decide on which one to choose from our options. And I think that's decent progress ...



F4F-3 mid production version engine. Reducer with two magnetos, side intake for air cooling and two types of upper intake on the front of the cowl ring; variant with one or two separate cooling flaps on the side covers.



F4F-3 late version engine. Reducer with two magnetos, side intake for air cooling and two types of upper intake on the front of the cowl ring; three cooling flaps in a row above each other on the side covers.



F4F-3A engine. Reducer without the two magnetos, no side intake for air cooling; single cooling flaps on the side covers.