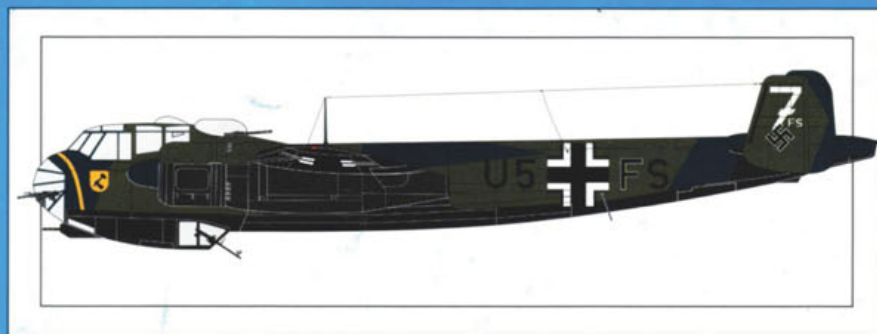




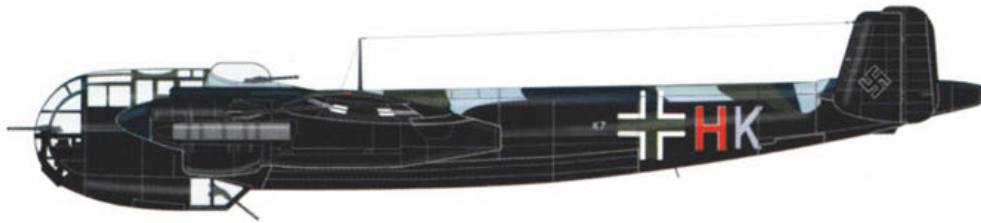
WARPAINT SERIES No. 24

DORNIER Do 217

BY JERRY SCUTTS

Do 217E-4s belonging to Kampfgeschwader 2, the only unit to be fully equipped with the type, flying over France in late 1942. The white and yellow recognition markings deliberately contrasting the dark paint finish were commonly applied to Do 217Es operating from occupied French airfields (Toulouse-Francazal in this case), primarily as a recognition aid to their own Flak units. (Nowarra/Griehl)



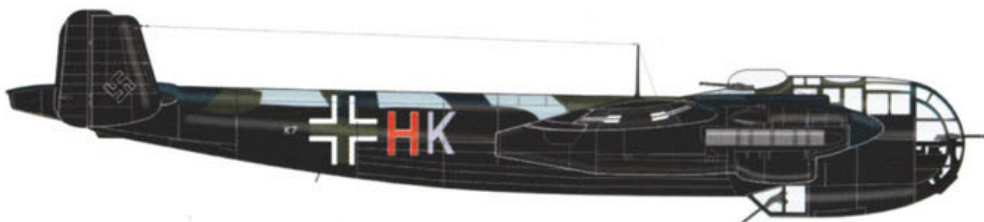


Dornier Do 217 M-1

K7+HK of 2.(F)/Aufkl.Gr.Nacht., based in Denmark, May 1945.



Drawings by David Howley



By Jerry Scutts

DORNIER Do 217

As one of the primary manufacturers of twin-engined bombers for the Luftwaffe, the Dornier concern of Freidrichshafen made its mark on the pre-war aviation world with its highly streamlined Do 17. The 1935 vintage 'flying pencil' went on to give reliable early war service before the basic design was progressively developed into the Do 215 of 1938. That same year a further refinement emerged as the Do 217. This aircraft, despite extrapolation of the basic design into the Do 317 and 417, became the last Dornier bomber to see front line service with the Luftwaffe.

In common with numerous other aircraft, the Do 217 design was originally considered for dual roles; in this particular case however the relatively unusual requirement for a maritime attack aircraft, the so-called 'sea Stuka', figured prominently in its early development. Convinced that the bombing accuracy achieved by the Ju 87 dive bomber could be duplicated in a larger aircraft, both the Kriegsmarine and the Technische Amt initially backed Dornier's proposal for a Do 217 floatplane. The requirement, put forward in January 1938, soon changed. By February the Do 217 had been turned down

As with many German aircraft, prototype and early production Do 217s received civil registrations, that shown being D-ACBF, the V7. White letters appear under the black wings and the forward fuselage shows some signs of overpainting. Four-bladed propellers were fitted to the engines of other Do 217 Versuchs aircraft, although service aircraft initially standardised on three blades. (Dornier)

due to its anticipated high water landing speed and Dornier, although not entirely shelving the floatplane concept, turned its attention to developing the Do 217 as a landplane to fulfill a bombing and reconnaissance role.

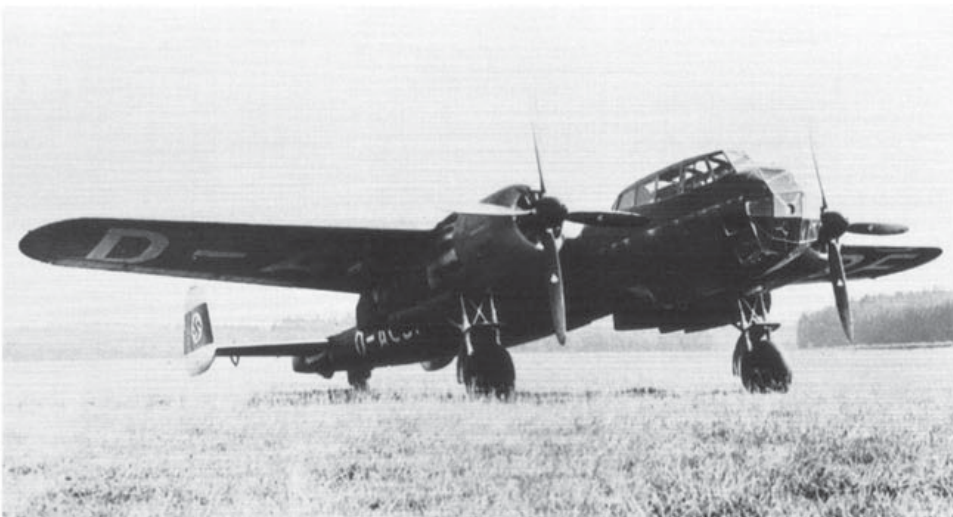
A challenge many military aircraft designers had to allow for in the late 1930s was the slow development of aero engines, not only with enough rated power but available in the numbers required for mass production. Dornier 'hedged its bets' by giving the Do 217 the design option of accommodating the DB 601 B, the Jumo 211, the Bramo 329 and the BMW 139, a forerunner of the 801.

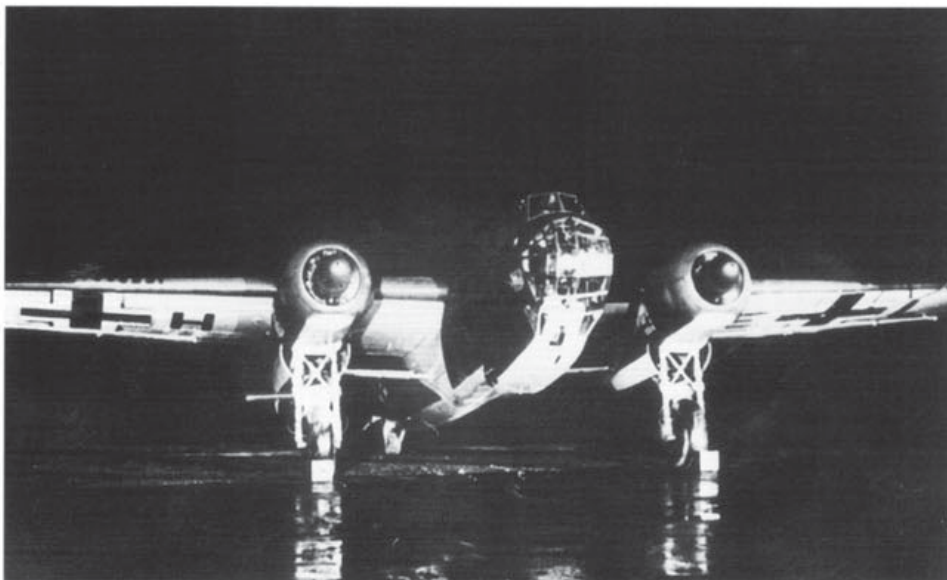
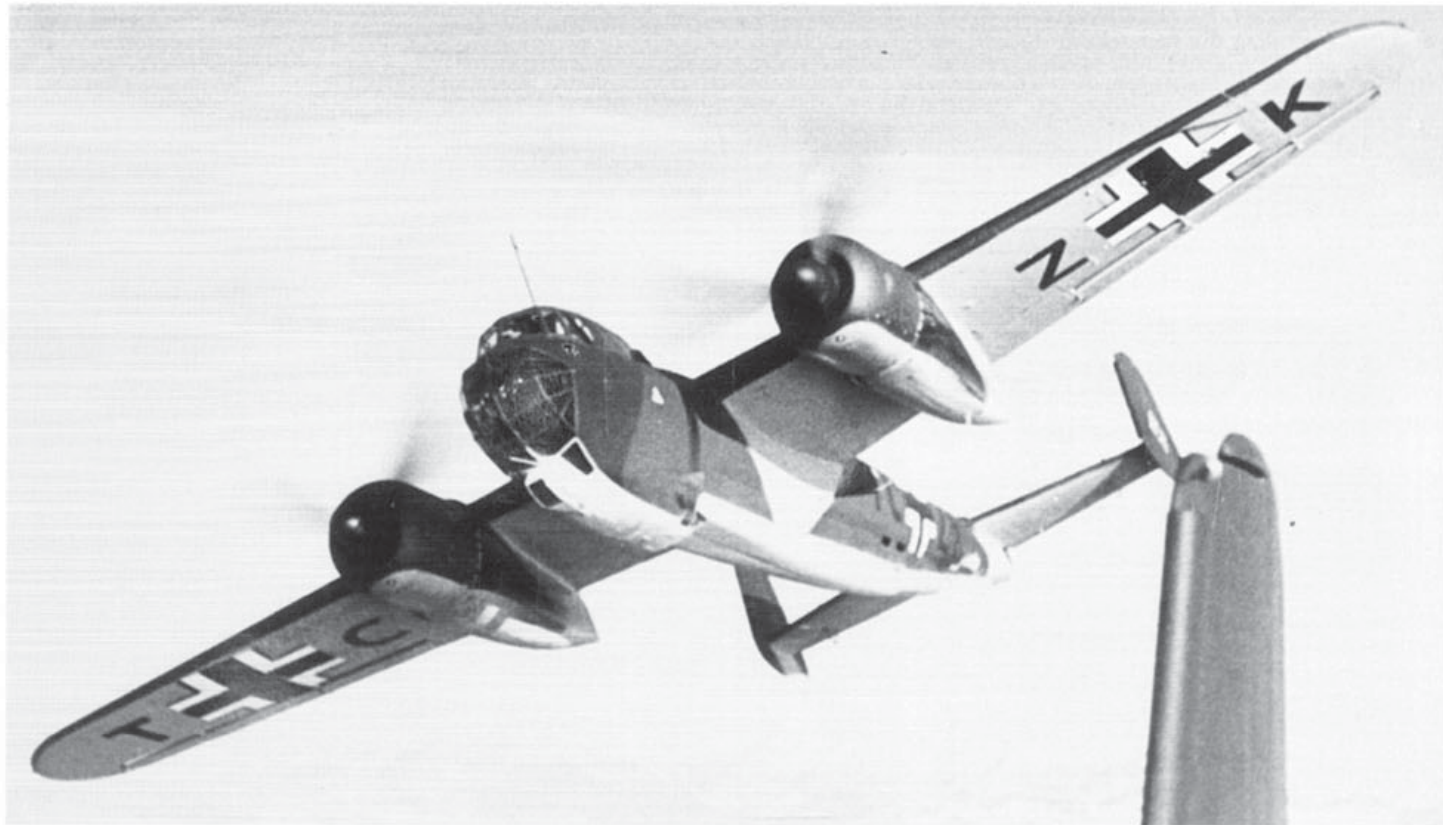
On 5 June 1938 Dornier presented a revised Do 217 proposal to the Technische

As the only Luftwaffe unit fully equipped with the Do 217E, KG 2's 'U5' code became well known to friend and foe alike. This 'blacked out' E-4 model of 8./Staffel (U5+FS) is making an approach to land over a flat Dutch landscape. (Bundesarchiv)

Amt. It emphasised a land-based role and the structural improvements made over the Do 17 to enable the new aircraft to carry a greater bomb load and increased armament. Despite the 'sea Stuka' proposal officially being shelved in January 1939, Dornier presented mock ups of the Do 217W V1 and Do 217W V2 in floatplane configuration for inspection that spring.

This exercise was important in that it confirmed the overall dimensions of the new aircraft, albeit with a single fin and rudder, a





departure from earlier Dornier design practice. Dornier put forward the Do 217 as a long range bomber, with a secondary maritime reconnaissance capability. Following the construction of several mock-ups, the Do 217V1 emerged as a bomber powered by two DB 601A engines, the aircraft having

provision for a crew of four. The prototype Do 217 also included the ability to dive bomb targets with the aid of a tail-mounted braking device which opened umbrella-fashion to slow the rate of descent.

Flying from Friedrichshafen for the first time on 4 October 1938, the Do 217V1 (W.

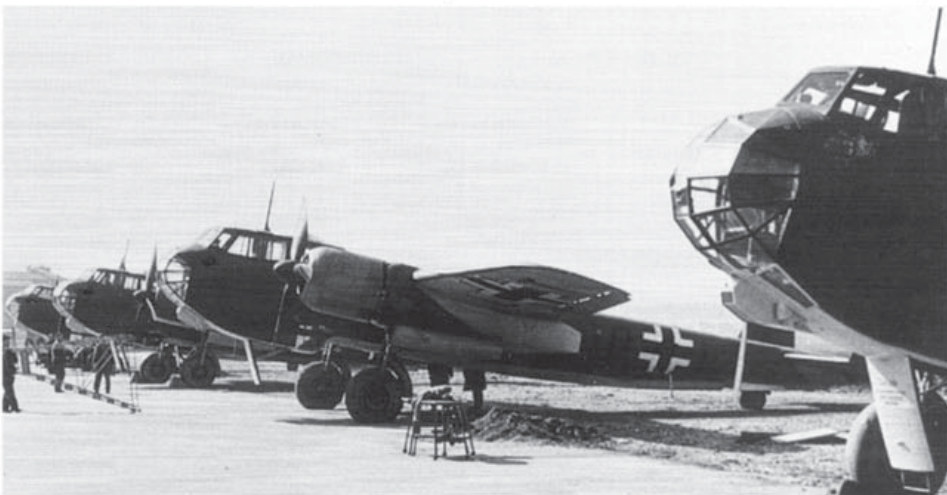
Above: Each newly completed Do 217E was camouflaged in splinter pattern green 70/71 with blue 65 undersides, given a factory code and test flown before delivery to the Luftwaffe. Banking away from the cameraship is a typical example coded TC+ZK. (MAP) Left: The German propaganda ministry widely distributed photos of Do 217s taken at night, preferably with the aircraft reflected in water to heighten the dramatic effect! This Do 217E-2 (RH+EL) was the subject of a series of prints, some of which were reproduced in British aviation journals during the war when it was a type new to Allied intelligence. (Bundesarchiv)

Nr. 687) exhibited rather poor handling qualities and suffered from directional instability. It existed for just over one week for on 11 October it crashed during handling trials when one engine inadvertently feathered. The extent of the damage was such that the prototype was not repaired, test flying passing to the Do 217V2, W. Nr. 688 (D-ABWC/CH+HJ) which flew on 5 November powered by Jumo 211A engines. This aircraft undertook the necessary pre-production trials programme including being modified for single pilot control to minimise loss of crew members in the event of another crash. The programme was joined by a replacement for the lost V1, the Do 217V1E (W. Nr. 694), in June 1939.

DESIGN CHANGES

On 25 February 1939 the Do 217V3 (D-ACDE/CN+HK) had flown, powered by Jumo 211A-1 engines. This aircraft also carried out numerous trials, including those associated with the most practical vertical tail surfaces. At various times a tall single fin and rudder and two different twin assemblies, one featuring distinctive 'triangular'

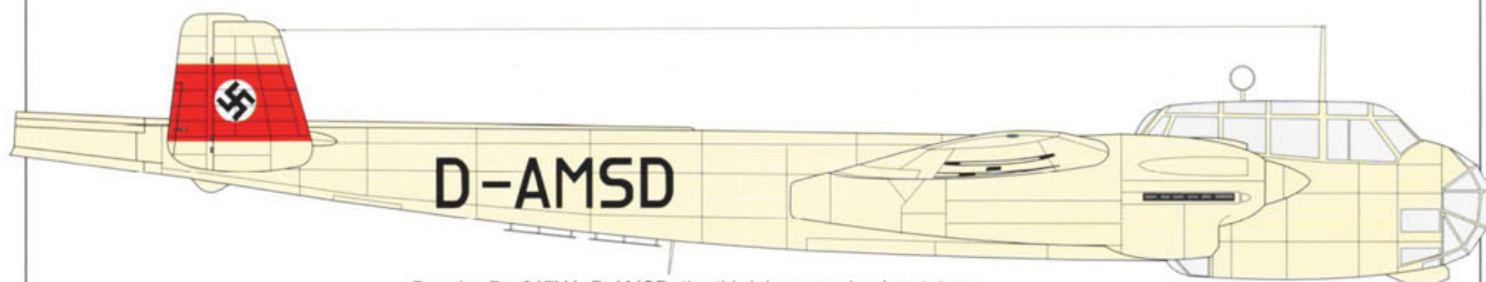
Factory fresh Do 217E-1s (with their forward fuselage serial numbers censored) lined up at Friedrichshafen, the main company production plant for the type, although Do 217Es were also built at the Munich and Wismar works. Various flight tests required several examples being retained by the company. (MAP)



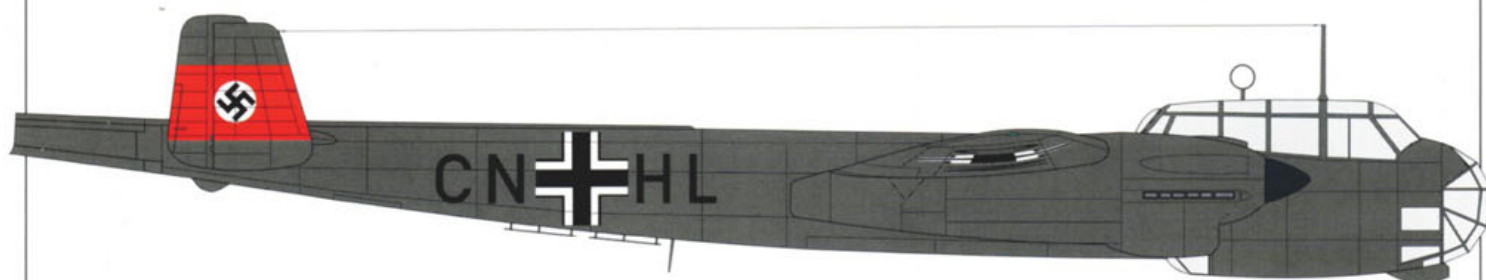
Dornier Do 217 camouflage and markings

DORNIER Do 217 COLOUR KEY

Black	White	RLM 04 Yellow	RLM 23 Red	RLM 25 Green	RLM 72 Green	RLM 73 Green	RLM 75 Grauviolett	RLM 65 Blue	RLM 02 Grau	RLM 76 Lichtblau	RLM 77 Hellgrau	RLM 05 Creme



Dornier Do 217V4, D-AMSD, the third Jumo-engined prototype



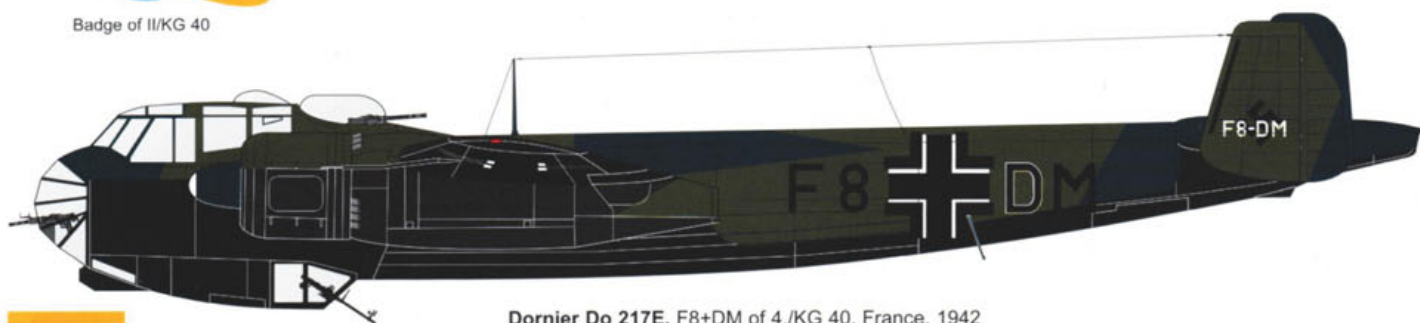
Dornier Do 217V4, CN+HL, markings used whilst under test at Lowental in 1939-40



Dornier Do 217E-1, F8+GN of II/KG 40, Bordeaux, France in 1941



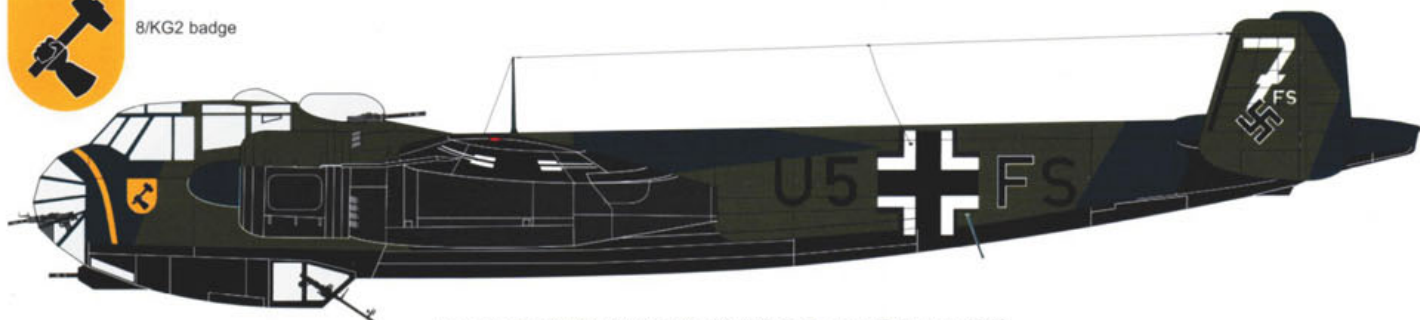
Badge of II/KG 40



Dornier Do 217E, F8+DM of 4./KG 40, France, 1942

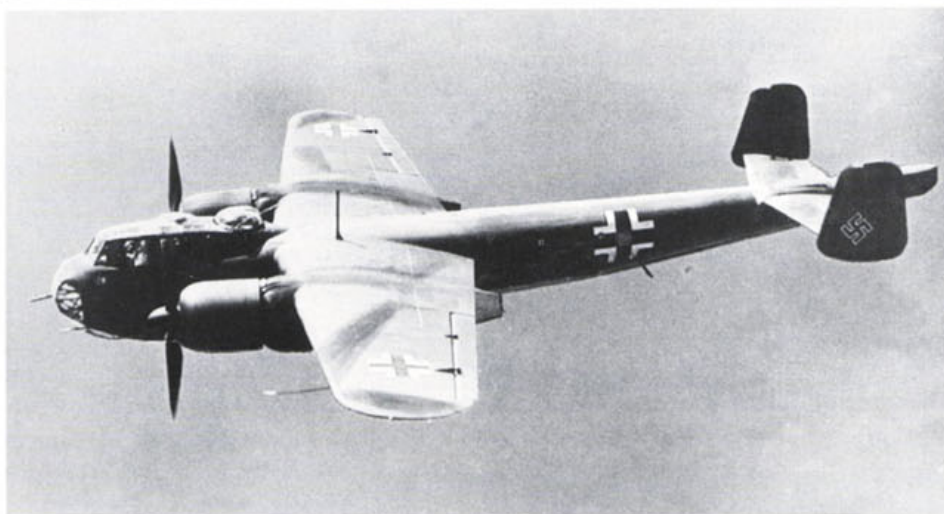
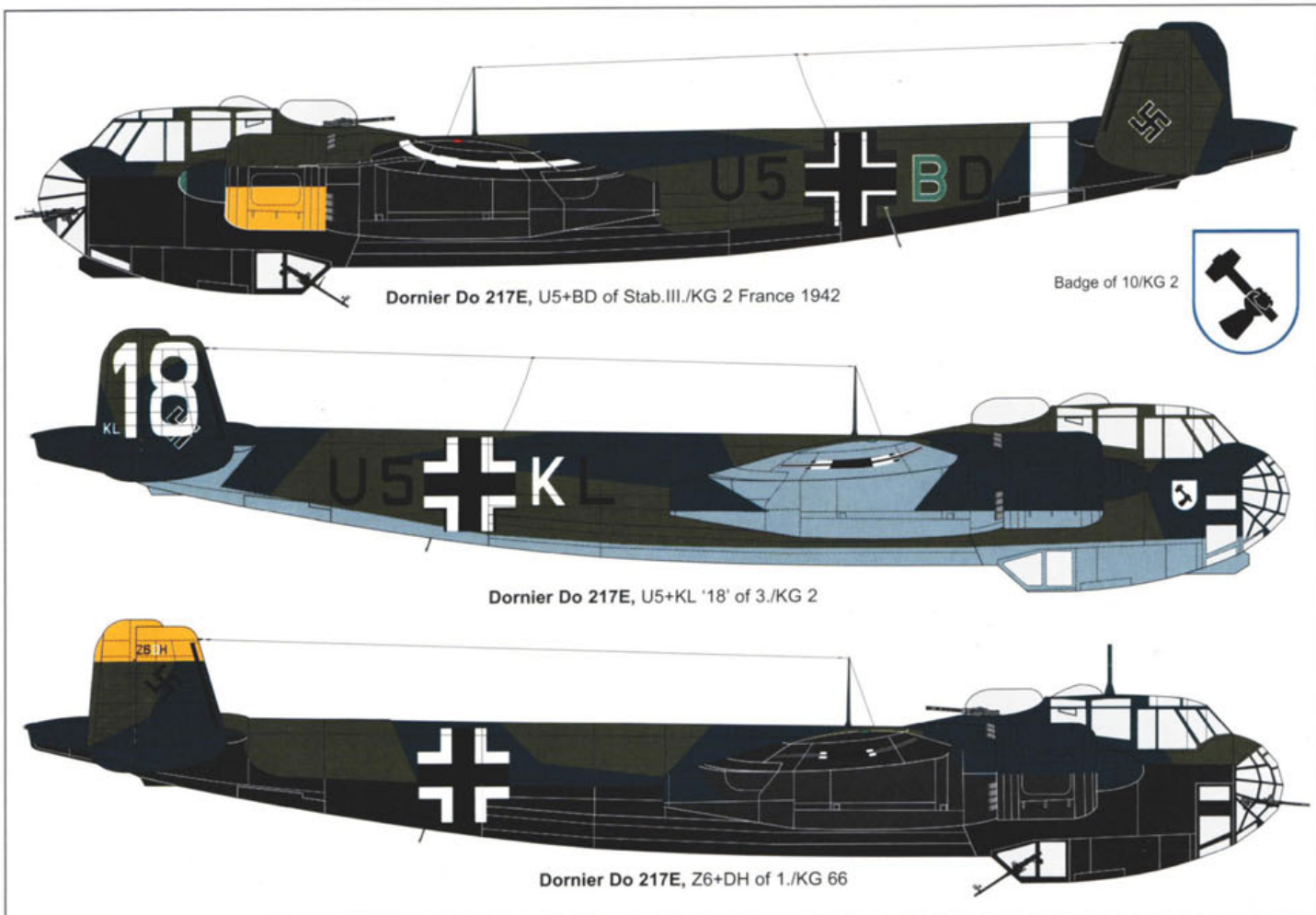


8./KG2 badge



Dornier Do 217E, U5+FS '7' of 8./KG 2, France, February 1942

Drawings by David Howley



The elegant lines of the Do 217E are apparent in this view of an early production machine on flight test. Light effects have distorted the upper surface paintwork which was a pattern of green 70/71. (MAP)

aircraft respectively being registered D-ACBF and D-AHJE.

Further refinement of the basic design led to the first production variants, the Do 217A-0 and C-0, as well as a prototype of the Do 217E series, which started life as the single Do 217VE. Initial production (of three Do 217A-1s) commenced in late 1939, these first aircraft carrying the temporary designation Do 217A (Rowehl). The suffix indicated their use by Kommando Rowehl, an operational reconnaissance group (Aufklarungsgruppe) under the direct com-

end plate fins and rudders, were considered. The Do 217V4 (D-AMSD), V5 and V6 followed and by the time war broke out, much of the testing with Jumo 211B-1 engines had been completed, these engines being replaced by the DB 601A in April 1940. Also cleared for production aircraft were revised and slightly larger vertical tail surfaces first fitted to the Do 217V4 and incorporating fixed slots in the leading edges of each fin to cure low speed stalling. To ensure that the new aircraft functioned equally well with air cooled powerplants, BMW 139 engines were fitted to the Do 217 V7 with BMW 801s being substituted in the V8, these two

Extended trailing edge flaps divided by the engine nacelles seen to advantage on a Do 217E-2 of II./KG 40. The reduction in size of the fuselage Balkenkreuz was one of many noteworthy changes in bomber camouflage brought about by night operations. (via Griehl)



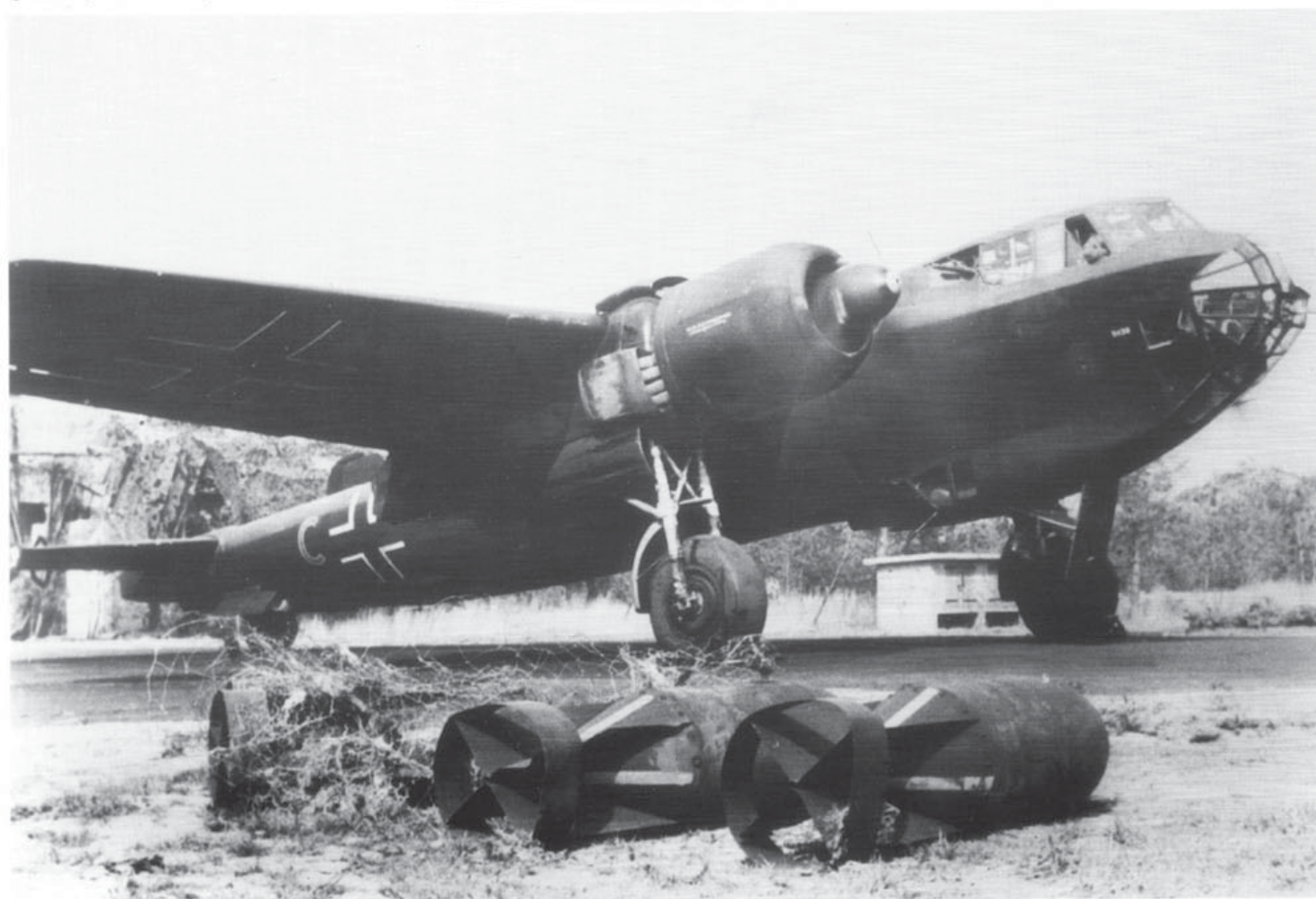
Considerable retouching, extending even to the removal of white on both upper wing surface Balkenkreuz, is evident on a Do 217E-4/R19 (W. Nr. 4272) U5 + NT of 9./KG 2 which has a periscope cockpit sight for the fixed tail guns. (via Griehl)

mand of Oberbefehlshaber der Luftwaffe (Ob.d.L.), or office of the C-in-C of the air force.

It had been possible to deliver the Do 217A reconnaissance aircraft by early 1940 because they were so similar to the Do 215 that few new jigs had been required to build them. But delays in obtaining engines of sufficient power for the high altitude, long range Do 217B derivative ultimately led to its cancellation although nine examples (W. Nr. 2710 to 2718) of the similar Do 217C-0 were built.

A fourth Do 217A-0, which started life as the V6 (W. Nr. 2704/CO+JJ), made its maiden flight on 15 October 1939. Among its other test programmes, this aircraft was flown from Travemünde during exploration of aerial mine delivery techniques. A projected configuration of the Do 217 that emerged at this time included extended

Right: An early production Do 217E-4 W.Nr.4381, RF+RF in the black underside paintwork adopted for most machines operating over Britain. The three groups of four exhaust pipes per engine were often enclosed in 'box' fairings for flame damping purposes and the tailwheel doors were commonly removed to prevent mud from hampering wheel retraction. (MAP) Below: Revving up the BMWs ready to taxi out this Do 217E-4 (F8+CP) of 6./KG 40 was photographed at Soesterburg early in 1943, almost certainly about to embark on a training flight as this was II Gruppe's duty at that time. Note the SC 500 bombs marked with yellow stripes to denote light case with HE composition in the foreground. (Bundesarchiv)



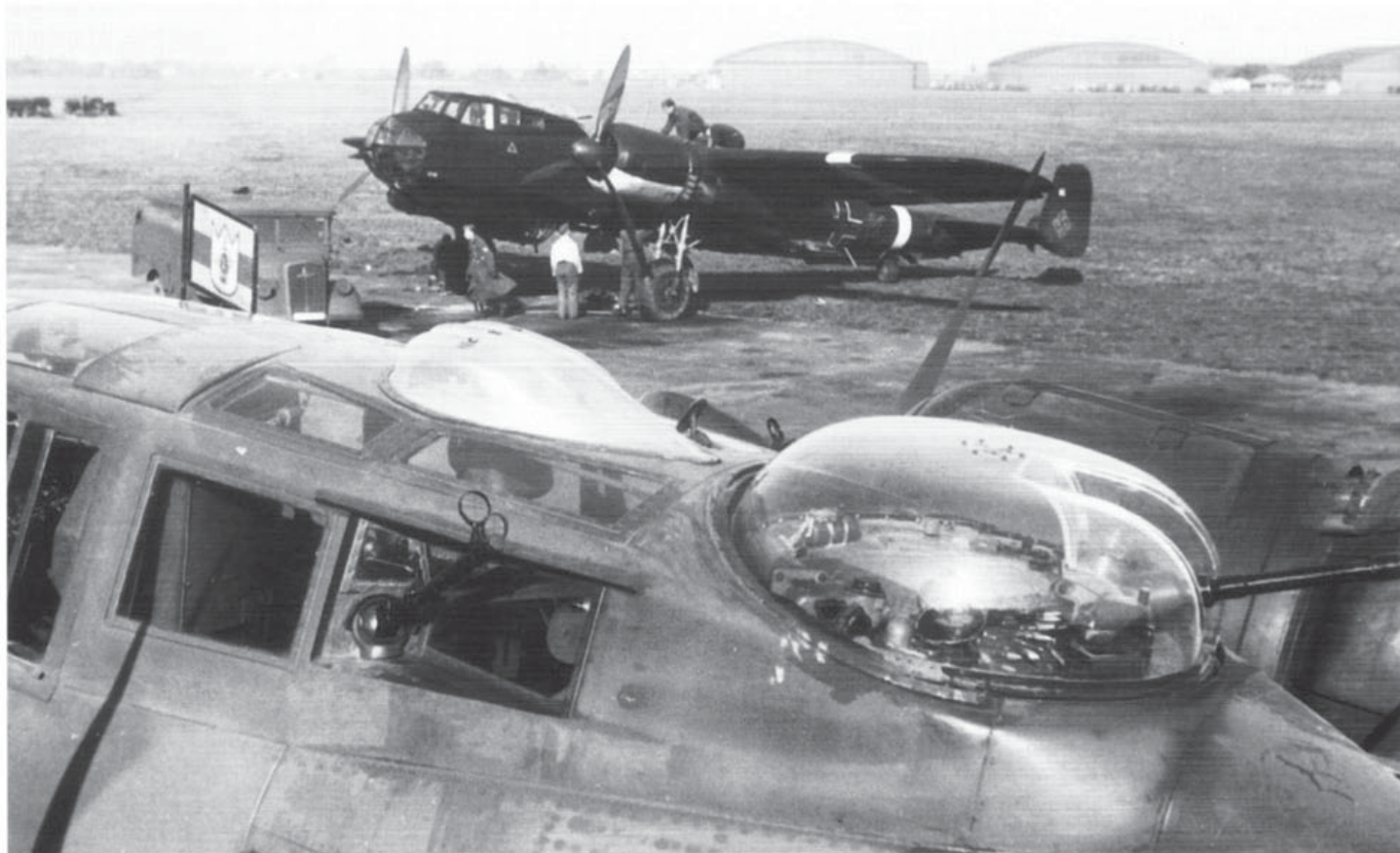


Above: Mist shrouded mountains and aircraft rarely mix well but these Do 217E-4s of KG 2 are maintaining a good height for steady progress across a range. This was another instance when white recognition markings were useful. Left: Starboard side in-flight view of a Do 217E-2 reveals the aileron hinges, radio mast, the flame damping fairing for the top group of exhaust pipes and, in this case, light armament. What appears to be a retractable stop is also in evidence below the gun turret. (Bundesarchiv)

wings and power derived from DB 601R engines.

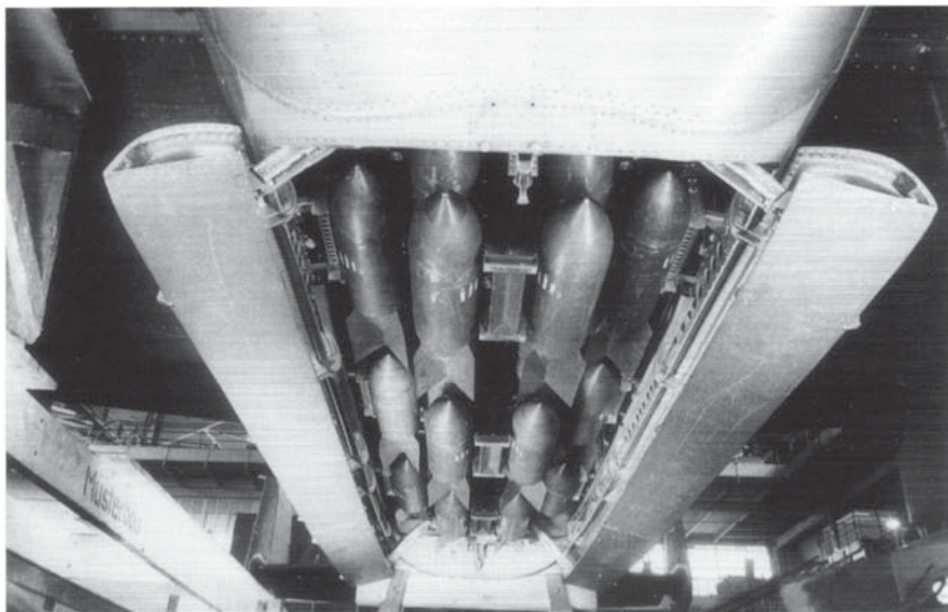
HIGH ALTITUDE

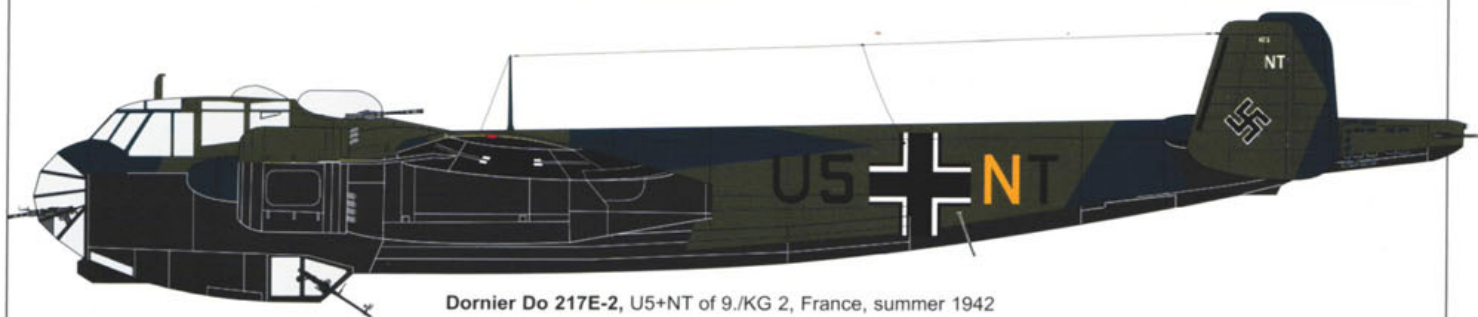
It was also in late 1939 that Dornier's experimental work centred on a version of the Do 217A fitted with a pressure cabin. The first aircraft flew on 23 April 1940, followed by a



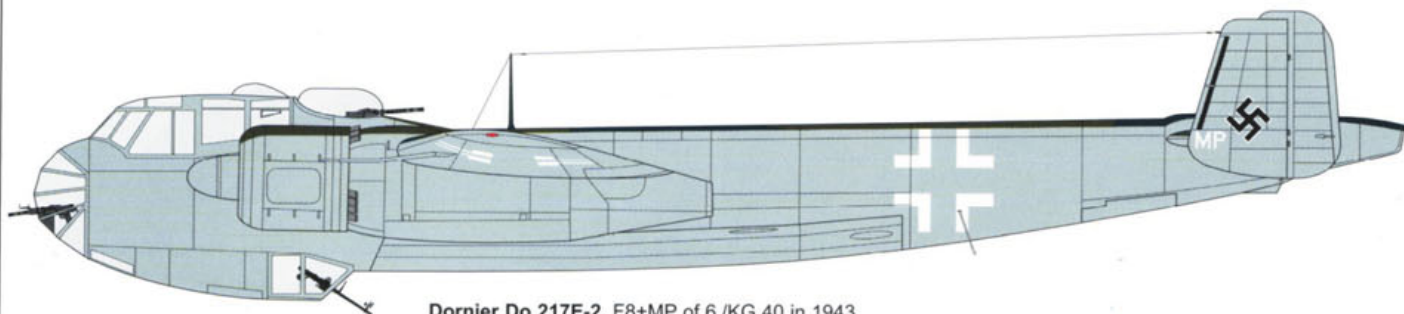
second - actually the fifth Do 217A-0 - both machines being intended to explore this important advancement in aeronautical engineering. But once again, engines of the required power for sustained high altitude flight did not materialise and Dornier decided in October 1941, to reconfigure both

Top: White wing and fuselage bands on this Do 217E-4 (W. Nr. 5462/U5+KS) of 8./KG 2 were applied primarily for recognition purposes for German Flak gunners but they also helped prevent collisions in dusk or night conditions. Details of the EDL dorsal turret and port side rear cockpit MG 15 machine gun are well shown. (Griehl) Right: Numerous mixed loads could be carried in the Do 217E's capacious bomb bay including the 14 SC 50s shown here in a loading test. Note how both sets of doors fold back on themselves and are held in place by stout hinges. (Dornier) Below: A Do 217E-2 moving out of a snow-covered dispersal point for another sortie. The aircraft is typically anonymous due to the widespread Luftwaffe practice of painting out most of the fuselage code. (Bundesarchiv)





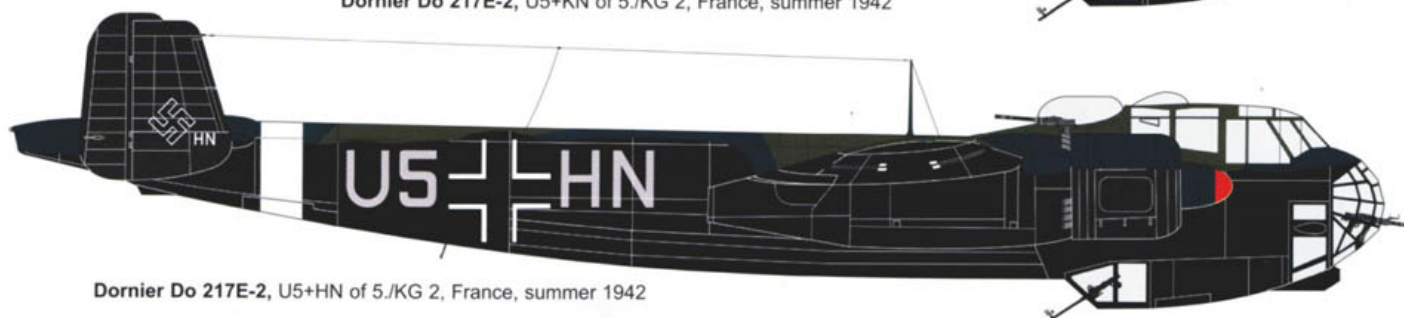
Dornier Do 217E-2, U5+NT of 9./KG 2, France, summer 1942



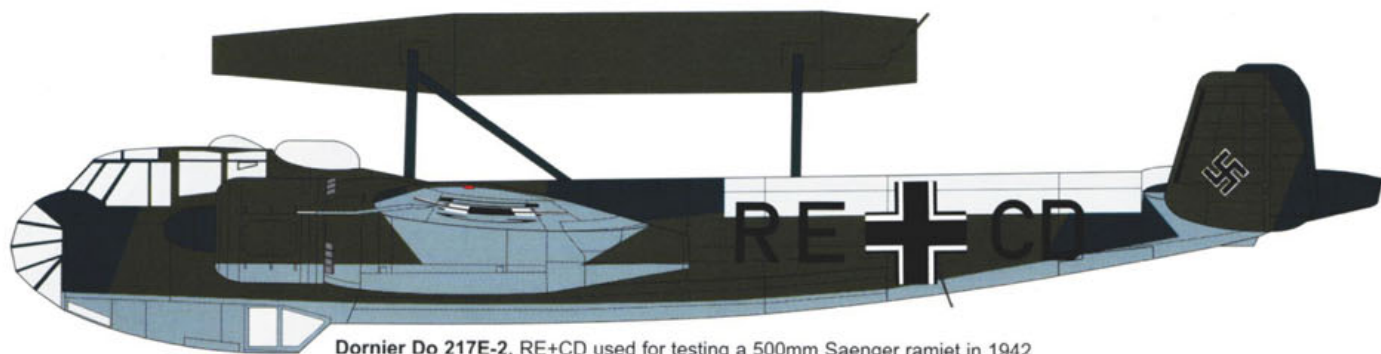
Dornier Do 217E-2, F8+MP of 6./KG 40 in 1943



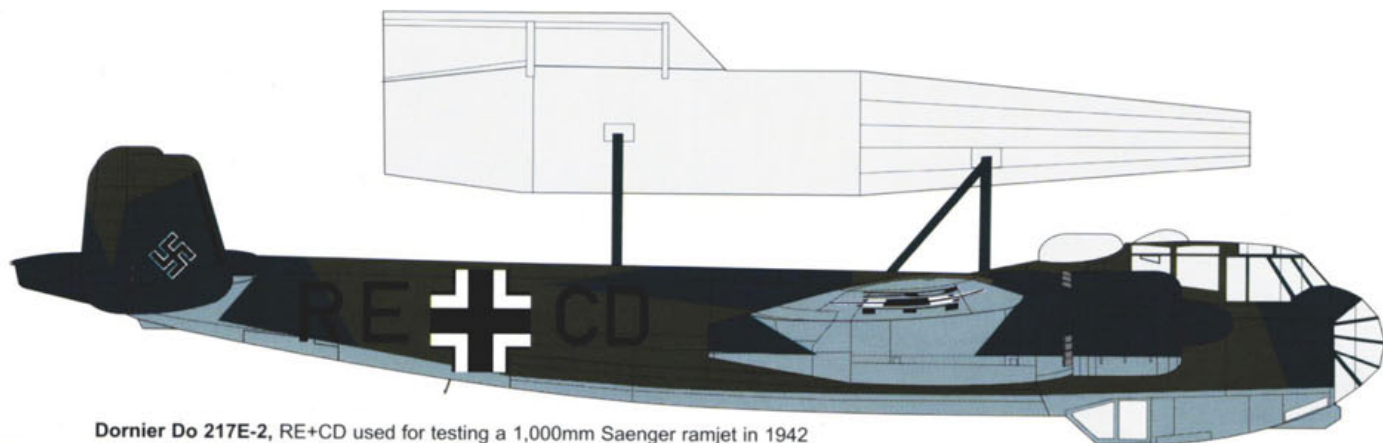
Dornier Do 217E-2, U5+KN of 5./KG 2, France, summer 1942



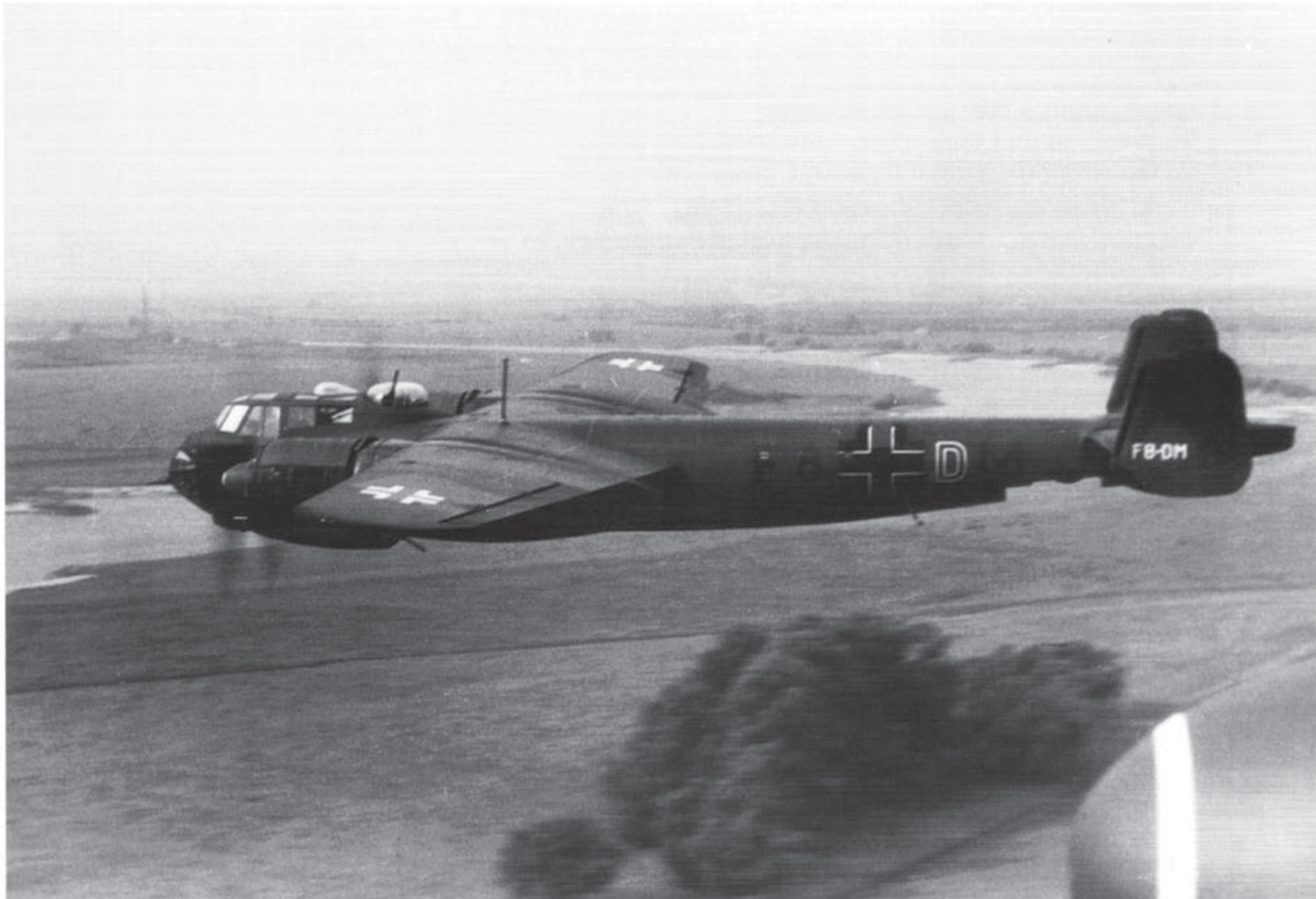
Dornier Do 217E-2, U5+HN of 5./KG 2, France, summer 1942



Dornier Do 217E-2, RE+CD used for testing a 500mm Saenger ramjet in 1942



Dornier Do 217E-2, RE+CD used for testing a 1,000mm Saenger ramjet in 1942



Above: The general application of the full coding on the fin when the fuselage codes were painted over was a notable feature of Do 217E markings. This practice is well illustrated in this view of a 4./KG 40 Do 217 (F8+DM). Right: KG 2's Do 217 U5+FS taken by a German photographer a few moments before the picture on page 1. Official photographers flew many sorties with service crews often risking their lives to record the work of the German armed forces. (Bundesarchiv).

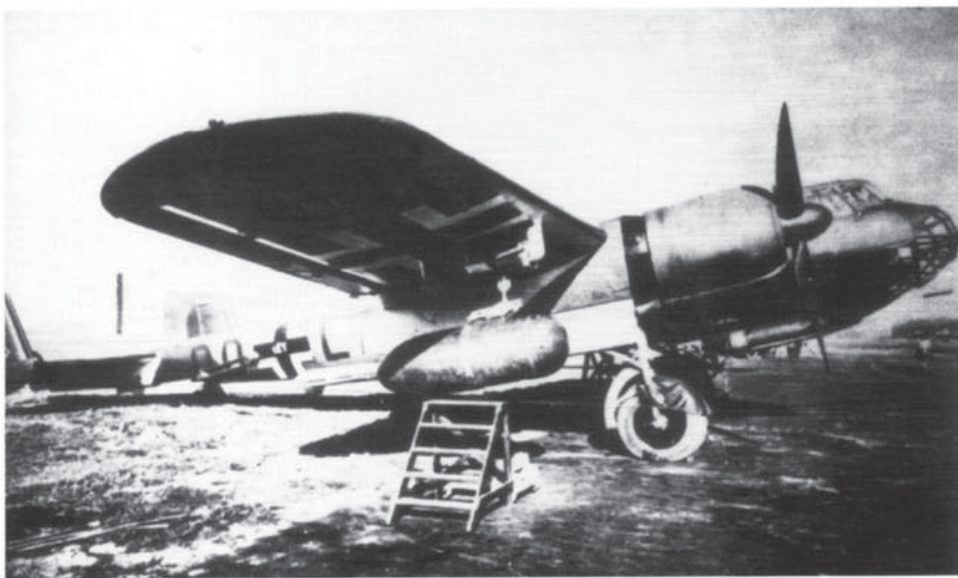
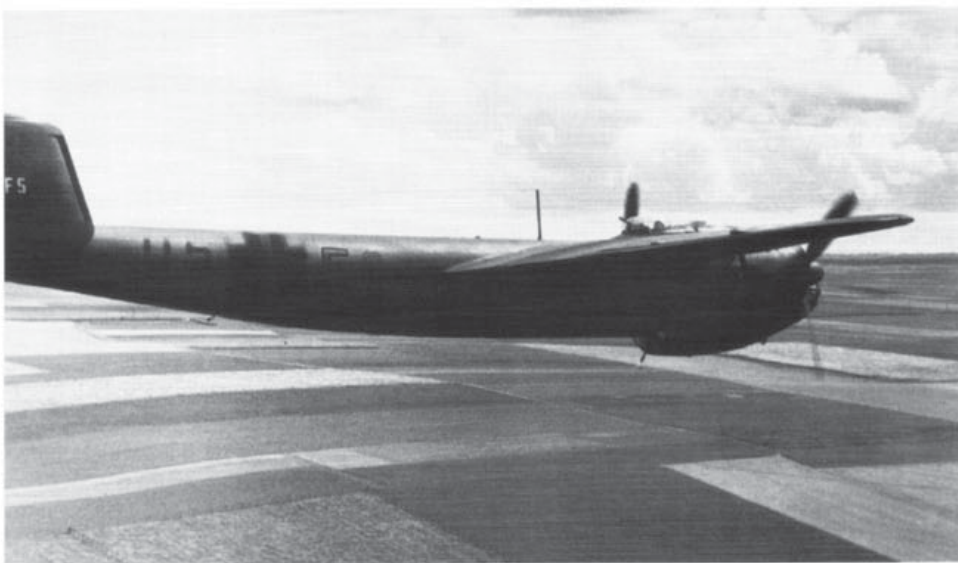
examples as standard aircraft.

An order was then received for both the 'high altitude' Dorniers to be converted for use in the transport support role without delay, although neither was completed before the February 1942 deadline. It was 30 December before the second transport conversion was able to enter service with Behelstelle Sud although it appears that the first conversion was operated on such duties from about mid-1941.

The final example of the Do 217A-0 series (Wr. Nr. 2706) flew from Lowenthal in late July 1940 and following a number of flights to test an autopilot, it passed into the hands of Aufklarungsgruppe Ob.d.L. on the 30th of that month.

The early Dornier Do 217s continued an extensive research programme to determine the ideal engines for a Luftwaffe service version and four different models of BMW A and D series engines were fitted at various times. A ninth prototype, which first flew in September 1940, carried out manufacturer's trials aimed at curing engine vibration prob-

The first production Do 217E-1 fitted with TC 2000/XIIA racks under both wings during loading tests at Friedrichshafen. Various loads could be carried by these racks (Rustsatz R10) among them external LMA tanks holding up to 900 litres of 97 octane fuel. (Dornier)



Dornier Do 217

production breakdown (operational variants only)

Variant	No built	Variant	No built
Do 217A-0	(6)	Do 217K-1	(300*)
Do 217C-0	(10)	Do 217K-2	(50*)
Do 217E-1	(94)	Do 217K-3	(40)
Do 217E-2	(185)	Do 217M-1	(440*)
Do 217E-3	**	Do 217M-11	(37*)
Do 217E-4	(258)	Do 217N-1	(240*)
Do 217E-5	(70)	Do 217N-2	(95*)
Do 217J-1	**	Do 217R-1	(5)
Do 217J-2	(130)	Do 317A	(6)
Total - 1,966			

* Figures thus qualified are approximate.

** Total believed to be combined with next model built

This total shows a discrepancy of 73 aircraft compared with the acceptance figure (1,887) quoted in the text. Another source quotes a total of 1,730 aircraft while yet another states that 1,541 bombers plus 364 night fighters were built, totalling 1,905 aircraft.



THE DORNIER Do 217E SERIES

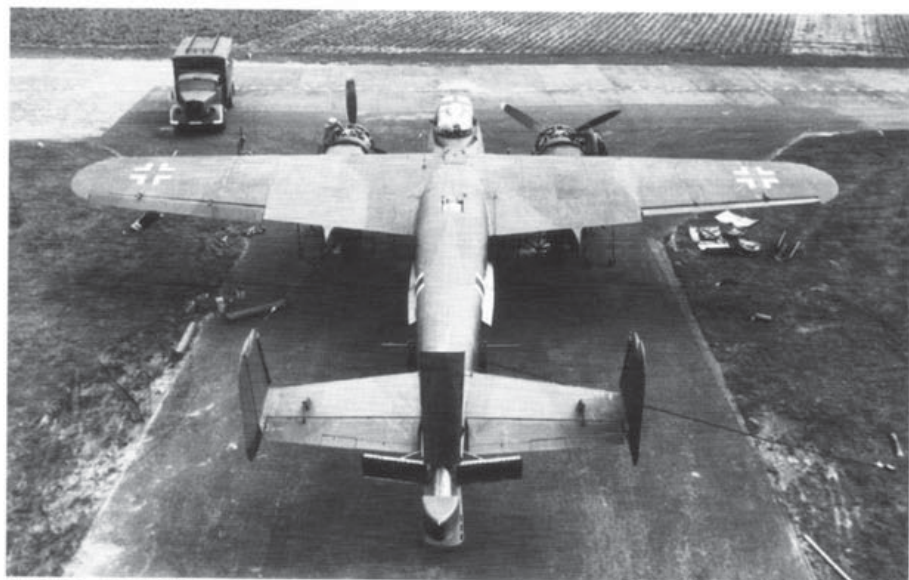
With a characteristically deep front fuselage, the first Do 217E-0 made its maiden flight from Friedrichshafen on 1 October 1940. A further four aircraft had been completed by the end of the year, these proving that the decision to switch to BMW engines, 1,560 hp 801Ma-1 models in this case, had been sound. Originating with the Do 217 V9, the new model had an extra lower fuselage section compared to the Do 217A-0, this housing a 14 ft 10 in bomb bay enclosed by double doors made in two sections which folded back, sandwich fashion. As the main bay could be extended rearwards by 5 ft 8 in to

accommodate a torpedo the Do 217 had one of the largest bomb bays of any wartime German aircraft. In addition, space was available above the bay for a fuel tank and a dinghy, traverse bracing frames being incorporated to support the additional weight.

Little time was lost in deploying the Do 217E operationally when a handful of aircraft modified (by Rustsatz R6) to carry cameras, were issued to 3.(F)/11 to continue mapping sorties over the Soviet Union, a task begun by the pre-production Do 217A-0. This Staffel was transferred to Rumania in January 1941 to shorten the distance from its allocated reconnaissance targets.

Further manufacturer's test flights continued with early production Do 217Es while the initial service example, the Do 217E-1, was being built. The fact that the Do 217E's wing loading of 64 lb/sq ft was the highest of any aircraft in its class, did not appear to present any problems. Neither did its 62 ft 4 in span, which was shorter even than that of an early B-26 Marauder's 65 feet, widely believed to be only just adequate for an aircraft of this size. And the Do 217E was subsequently stressed to take the additional weight of glide bombs, torpedoes or drop tanks, which was not attempted with the American bomber.

Crews also appreciated the fact that



Well known 'hangar roof' view of a Do 217E with the earlier petal-type dive brake fully opened, dorsal hatch and bomb doors open. The device just visible on the rear fuselage and tethered to the ground on the right, is a jack to raise the aircraft level, probably for a compass check. (Bundesarchiv)



Anti-shipping operations brought the Do 217E a fair degree of success, for which a more effective light coloured camouflage was tried. The light grey underside finish was applied to some aircraft of 5./KG 2 including this machine, U5+ZN. (Bundesarchiv)

cover fighter attacks from all angles.

OPERATIONS

Powered by two 1,850 hp BMW radial engines driving three-blade VDM wooden airscrews, enough Do 217E bombers had been completed by the end of 1940 in anticipation of equipping the first operational unit without delay. This was II./KG 2 'Holzhammer' which began receiving Do 217E-1s in January 1941, with 6. Staffel crews being the first to train on the new aircraft. It was decided during the course of the year to re-equip the entire Geschwader with the Do 217E for operations in the west and the balance of the unit including III Gruppe which served in Russia during the summer of 1941, was recalled in October. In the event KG 2 became the only Kampgeschwader to fully convert to the Do 217E.

The first unit to partially equip was KG 40, II Gruppe which was formed to fly the type in March 1941. Based at Soesterburg in Holland and Bordeaux/Merignac in France, II./KG 40 deployed its Dorniers primarily on anti-shipping operations under the control of Fliegerführer Atlantik, which had been formed on 15 March. Dornier crews often appreciated the escort service provided by their comrades in V./KG 40 which flew Ju 88C fighters.

The bulk of the 94 Do 217E-1s built went to KG 2 and KG 40, Dornier meanwhile finalising some significant changes to the otherwise similar Do 217E-2. This version, which was to have had dive bombing as its primary operational role, introduced a power

operated DL131 gun turret in the dorsal position mounting a single MG 131 machine gun. This turret gun in addition to a maximum of five fixed and flexible-mounted weapons including an MG 151 cannon in the nose, gave the Do 217E-2's armament a total of 1,668 muzzle horsepower, superior to other bombers and even the Bf 110C in standard form, according to wartime figures.

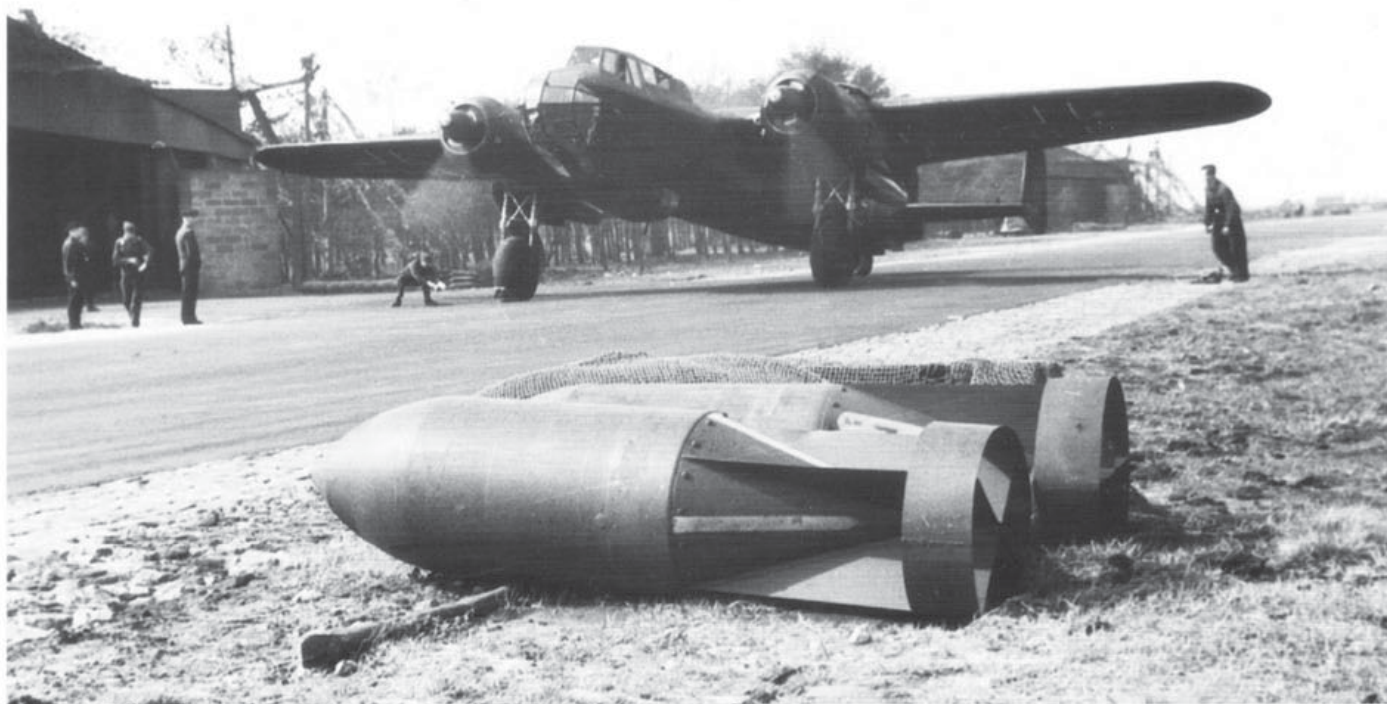
An optional boost to this firepower was made possible by development of a tail housing designed as an alternative to the air brake installation. First made available on the Do 217E-2 as Rustsatz R19, it consisted of two MG 81 7.9-mm machine guns paired as a four-gun MG 81Z installation and remotely fired by the pilot using a cockpit-mounted Revi periscope sight.

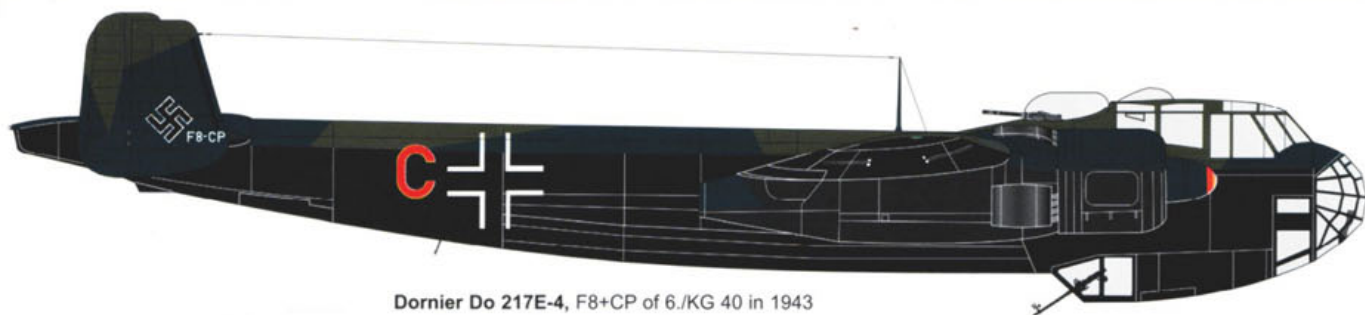
Dornier Do 217E-2s began leaving the assembly lines in March 1941; 16 examples were immediately allocated to Dornier's ongoing test programme, many flights being undertaken to further confirm the aircraft's suitability as a dive bomber. This capability, something of an obsession on the part of certain RLM officials, was proving far from practical on an aircraft of this size and weight.

The tail-mounted air brake was refined when a system employing a braking parachute was introduced although in the event it proved totally impractical to throw a 33,000 lb bomber into a power dive and expect it to build up sufficient speed to elude enemy defences. It simply could not be done with an aircraft that weighed over 2,000 lb more than a fully loaded Ju 88A-4.

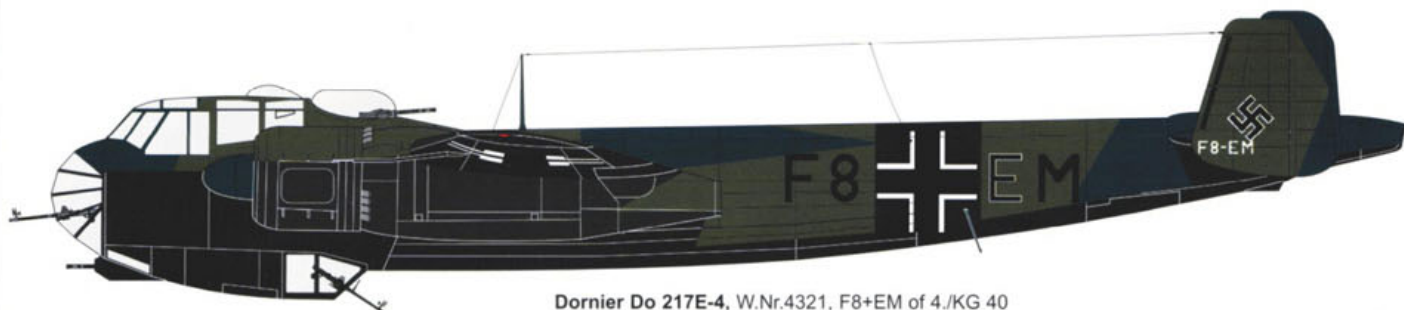
Bombs scattered around aircraft dispersals was a feature of many wartime airfields, this seemingly dangerous practice speeding the ground-crews' loading task. Bombs were in any event harmless until they were fused and this Do 217 crew, almost certainly from KG 2, have little to fear from two inert SC 500s. (Bundesarchiv)

Dornier had addressed the chronically poor armament of previous German bombers. The Do 217E-1 had provision for six guns, including a fixed 15-mm MG 151 cannon, two 13-mm MG 131s and three 7.9-mm MG machine guns with arcs of fire sufficient to





Dornier Do 217E-4, F8+CP of 6./KG 40 in 1943



Dornier Do 217E-4, W.Nr.4321, F8+EM of 4./KG 40



Dornier Do 217E-4, U5+ZN of 5./KG 2 based in the Netherlands 1942

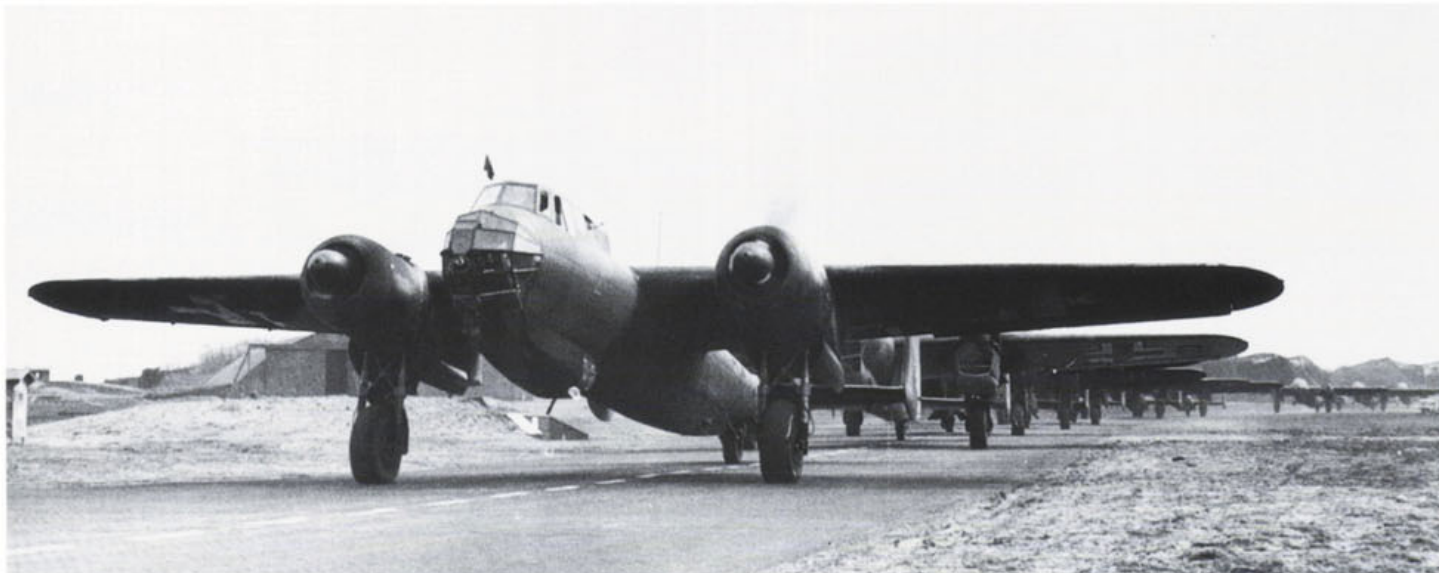
Configured as a conventional medium bomber the Do 217E-2 could carry a substantial internal mixed load of up to 5,550 lb, with an absolute maximum of 8,818 lb, this figure necessitating the utilisation of Rustsatz R2 wing racks for a pair of 551-lb SC 250 bombs and the auxiliary bomb bay, which meant sacrificing the fuselage fuel tank. The Do 217E-2 could be fitted with various other Rustsatze including the R1, a special carrier for a 3,968-lb SC 1800 bomb with an annular fin and the R5, which consisted of a single 30-mm MK 101 cannon in the lower port side of the forward fuselage. At least 28 Rustsatze were produced for the Do 217E, K, M and N series.

Like many nations, the Germans adhered to the belief that the aerial torpedo represented a useful weapon despite a spiralling risk to the delivery aircraft from enemy defences and the Dornier Do 217E-2/R4 was able to deliver a single LT F5b torpedo slung on a PVC 1006 carrier. Not known to have been used in action by the Do 217, torpedo attack trials were nevertheless conducted by III./KG 40.

When it was issued to operational units, the Do 217E-2 joined the Do 217E-3 which had actually entered service first. Similar in most respects to the Do 217E-2, the Do 217E-3 featured increased armour protection

A cannon-armed Do 217E-4 of 9./KG 2 (W. Nr. 5471/U5+ET) with the black on light blue field 'Holzhammer' unit badge well shown. Heavily braced, the clear nose includes a black panel with the aircraft's individual code 'E' in white above the Lofte bomb sight housing. Washable black paint has been applied to the fuselage undersides. (Bundesarchiv)





More than a dozen Do 217s of KG 2 taxiing out for a sortie to typify the German blitz on Britain for much of the war. Dorniers made some hard hitting attacks although the Luftwaffe never had enough aircraft to constitute a major strategic bombing force. Note the standard, occasionally 'flown' from the cockpit of individual bombers during take off. (Bundesarchiv)

for the cockpit area and had heavier standard armament, fixed and flexible-mounted guns being increased to a maximum of seven MG 15 machine guns and one 20-mm MG FF cannon.

The Do 217E-3, of which about 100 were built, was the last to have a tail braking parachute fitted as standard. When in mid-1941 the RLM finally dropped the idea of having twin engined bombers (other than the Ju 88) perform 'Stuka type' attacks, there was considerable relief, not least at Dornier which had wrestled with this problem for some time. Do 217s continued however to be built with the 'long' tail housing. The original Do 217E series of bombers was completed by the similar E-4 which was powered by BMW 801C engines of 1,580 hp and had wing leading edge balloon cable cutters, while the Do 217E-5 was built specifically to deliver the Hs 293 missile.

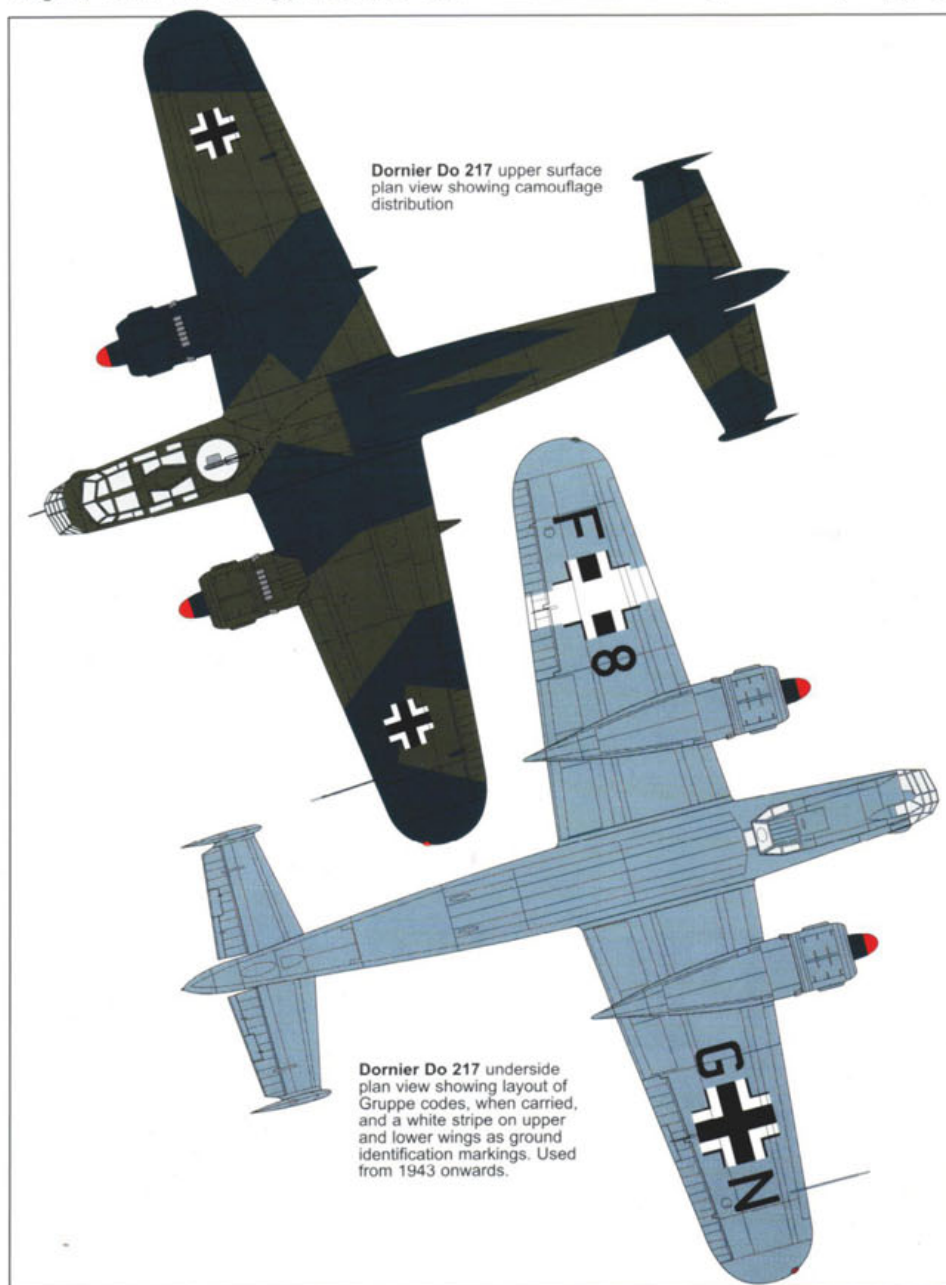
Having progressively equipped with the Do 217E-1, E-2, E-3 and E-4, the three Gruppen of KG 2 continued to undertake bombing sorties, maritime patrol and anti-shiping strikes until Hitler demanded large scale retaliation attacks on England as a riposte to Bomber Command's damaging raid on Lubeck on 28/29 March 1942. KG 2 consequently launched a 'maximum effort' raid on Exeter on 23 April, the unit sending 60 Dorniers to the Devon county town the following night and carrying out two attacks on Bath over the succeeding two nights. A total of 250 sorties were thus flown by KG 2 in four days, an effort not quite matching the 257 RAF sorties flown against Lubeck in one night.

Bomber Command devastated Rostock on four occasions during April - and the Fuhrer raged. As a reprisal he vowed to wipe out the principal English cities marked in the Baedeker Guide as being of 'special historical and artistic interest'. And although KG 2 and other Kampfgeschwader did their best to carry out this task, the so-called Baedeker raids had little strategic importance. They continued throughout the spring and early

summer of 1942, with the most damaging taking place on 3 May when the German bombers devastated Exeter's city centre. But German losses to the defences were relatively high considering the modest number of aircraft involved. KG 2 lost at least ten Do 217s and two Do 17Zs (of 12./Staffel) solely to night fighters between April and early August. Then the Kampfgeschwader was

handed a different, even more dangerous assignment when on 19 August the Allies invaded Dieppe.

For the Allies a mock invasion of a European port bought experience of combined operations at high cost and saw much air action over the bitterly contested beach-head. About 80 of KG 2's Dorniers were thrown into action against enemy shipping.





All hands to the bomb trolley as the groundcrew move an SC 500 bomb out to the hardstanding and a waiting Do 217E-4 of 5./KG 6 in a 'wave mirror' pattern camouflage scheme. The aircraft (3E+EN) is fitted with FuG 217 Neptun R early warning radar, as indicated by the set of four rod aerials under the starboard wing. (Bundesarchiv)

Set upon by hordes of Allied fighters, the bomber crews suffered heavily and by the end of the operation the RAF had claimed 33 Do 217s destroyed. The Luftwaffe admitted to losing only 25 bombers of all types including 16 of KG 2's Do 217s. This figure was little short of disastrous for by September, the unit had but 23 crews available for operations, this from a complete establishment of 88 crews at the start of 1942.

KG 2 continued to fly combat missions against English targets but the RAF was now retaliating with improved radar-equipped night fighters which not only intercepted individual German bombers but began to step up intruder attacks on the forward bases they used. Being attacked before they could take off or shot down just when they thought they were safely home did nothing for the confidence of replacement and experienced crews alike. A rising attrition rate, particularly from deadly Mosquito attacks, demanded a constant flow of replacement aircraft and crews.

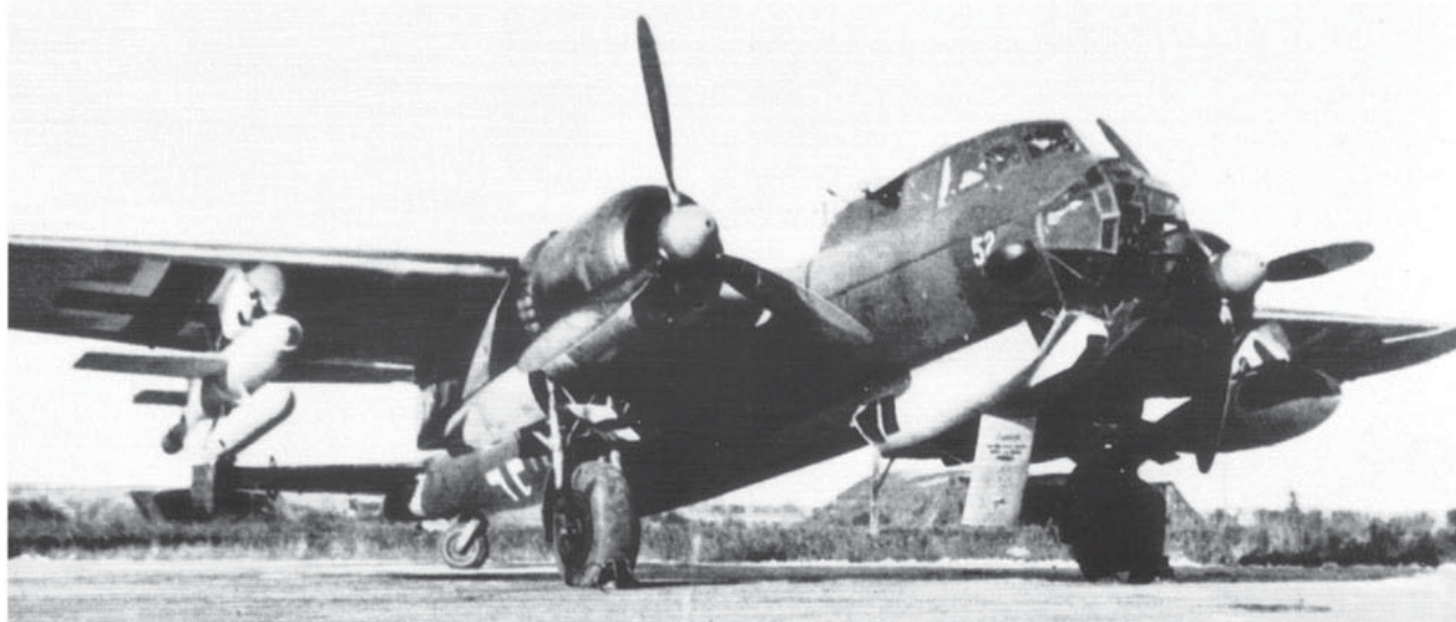
As well as regular bomber operations, KG 2 used its Do 217s as mine-layers. Typical operations took place on 2/3 and 3/4 May 1943 when the unit's aircraft respectively

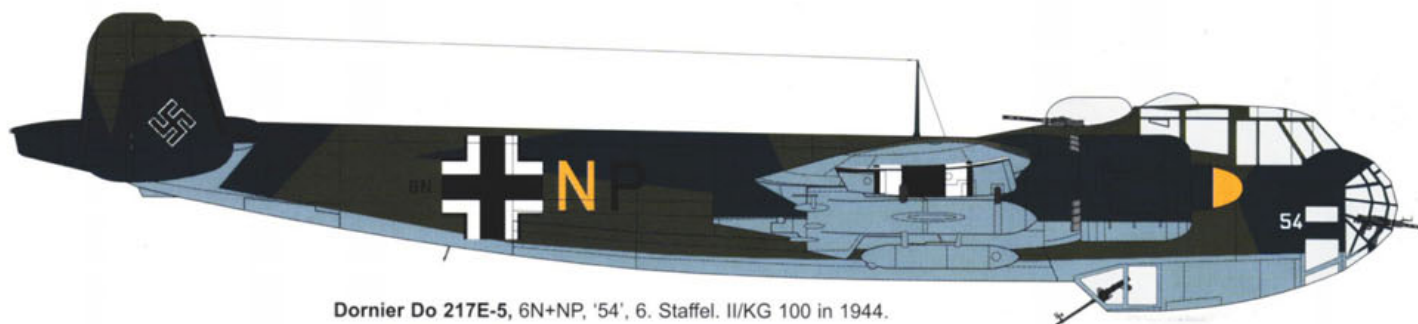
sowed mines in the Humber and Thames estuaries and the convoy route between Dover and the Thames estuary. Such operations were sometimes concluded without any reaction whatsoever on the part of the British defences.

NIGHT FIGHTERS

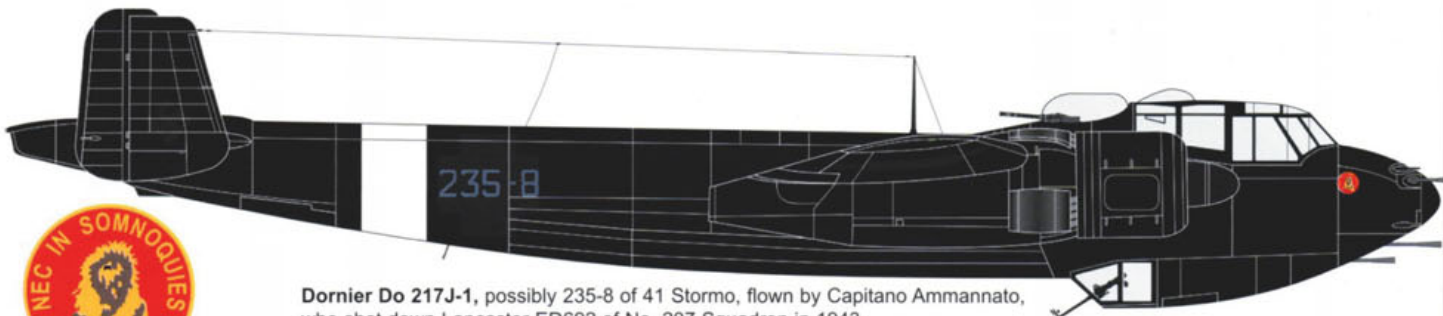
Dornier had by the summer of 1941 begun work on a night fighter version of the Do 217E-2, the company drawing on some pre-

A major Do 217 test programme was to develop carriage and guidance equipment for the Hs 293 glide bomb. Cleared operationally for use by the Do 217E-5, one of which is seen here armed with a single Hs 293, the main anti-ship attacks with this revolutionary new weapon were made by the revised Do 217K. (Dornier via Griehl)



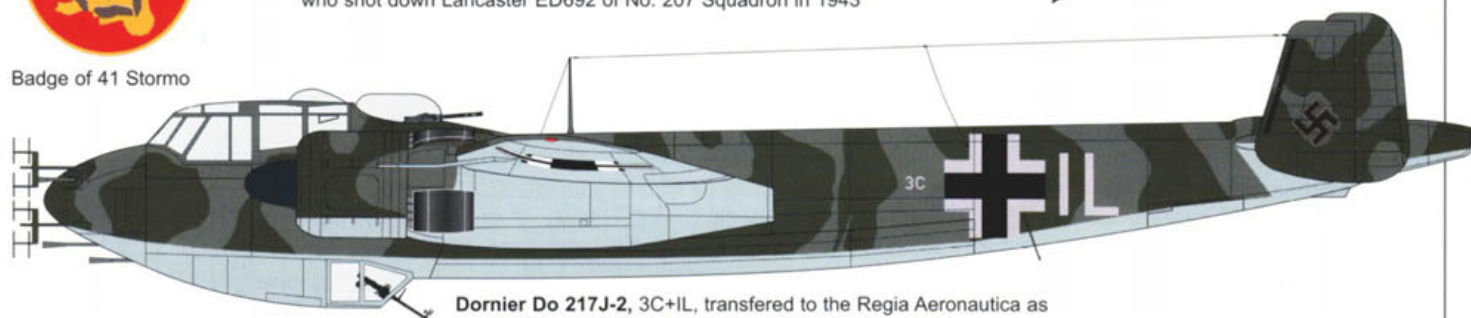


Dornier Do 217E-5, 6N+NP, '54', 6. Staffel. II/KG 100 in 1944.

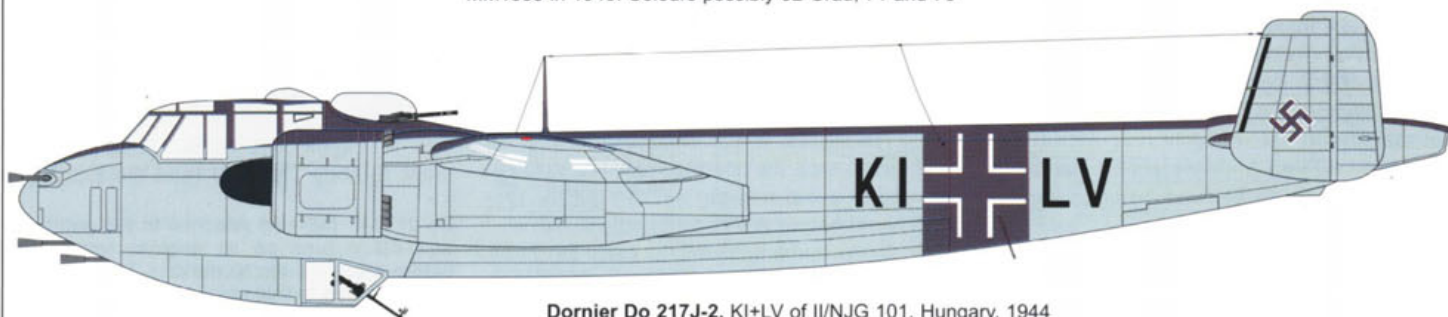


Dornier Do 217J-1, possibly 235-8 of 41 Stormo, flown by Capitano Ammannato, who shot down Lancaster ED692 of No. 207 Squadron in 1943

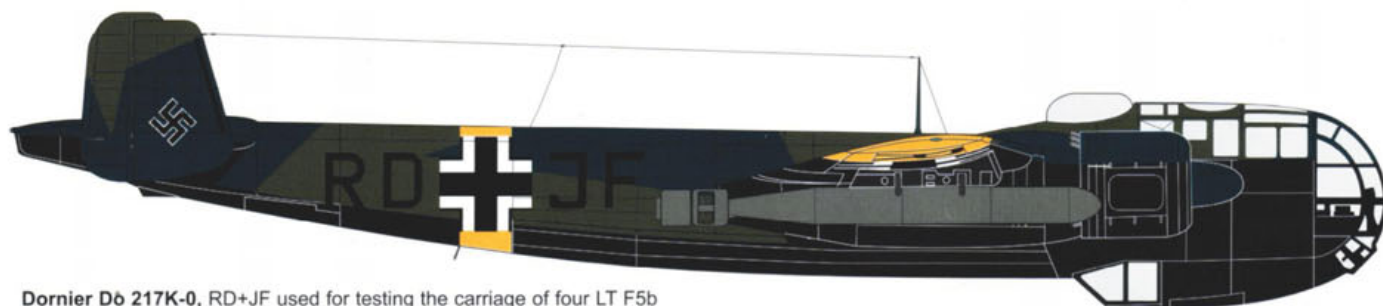
Badge of 41 Stormo



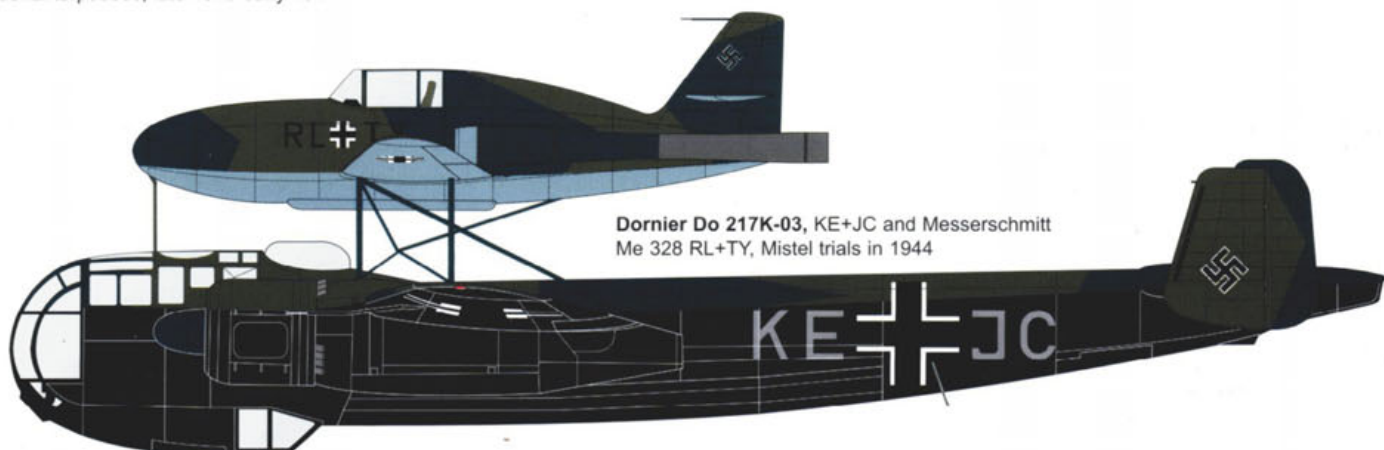
Dornier Do 217J-2, 3C+IL, transferred to the Regia Aeronautica as MM1358 in 1943. Colours possibly 02 Grau, 71 and 76



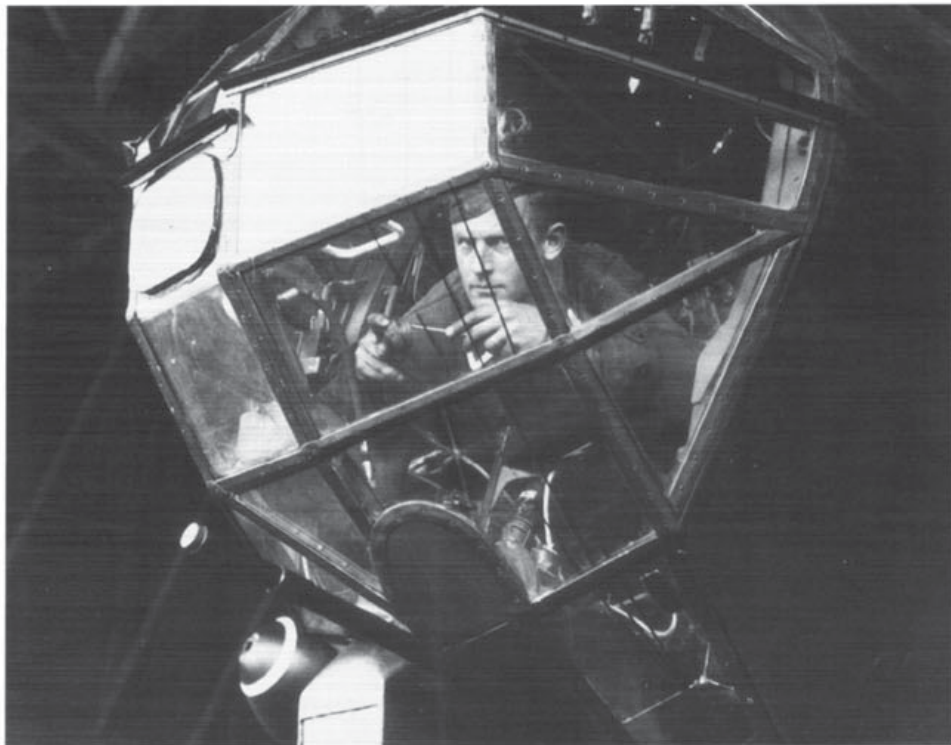
Dornier Do 217J-2, KI+LV of II/NJG 101, Hungary, 1944



Dornier Do 217K-0, RD+JF used for testing the carriage of four LT F5b aerial torpedoes, late 1943-early 1944



Dornier Do 217K-03, KE+JC and Messerschmitt Me 328 RL+TY, Mistel trials in 1944



A Luftwaffe 'black man' working in the nose of a Do 217E-2/R5 sceptically eyes the camera poked his way. The optically flat perspex panels, including a blanked-off cannon port at top right, were designed to reduce distortion during the bombing run. The long barrel of the MK 101 cannon is to the right of the Lofte 7D sight. (Bundesarchiv)

vious experience with the Do 17Z and Do 215 in meeting this demanding role. The Do 217E conversion involved changing the clear bomber nose for a solid one containing four 20-mm MG FF cannon and four 7.9-mm MG 17 machine guns. Provision for some of the original bomber armament, including the dorsal turret, was retained, as was the aft bomb bay, but defensive guns were rarely installed in the lower position owing to an overriding need to save weight.

At 30,203 lb loaded the Do 217J was double the weight of a Bf 110 and slightly heavier than the Ju 88C-6. Front line night fighter crews viewed high weight as the main drawback with all Dornier bomber adaptations for the nocturnal interception role and they also felt large size and an overall lack of agility to be equally detrimental. It was mainly due to a lower than required delivery rate of the Ju 88C to the Nachtjagd that the

proposed 'stop gap' Dornier night fighter was however welcomed by the RLM.

Operational evaluation of the Do 217J-1, which was not equipped with airborne radar, was initially undertaken by E./NJG 2 at Berlin-Schönefeld in March 1942 and thereafter at Gilze-Rijen where II./NJG 1 began flying some Dornier sorties in the late spring.

Less than favourable crew reports on overall performance also cited the high wing loading, which restricted the aircraft to using the larger airfields. In view of the nature of helle Nachtjagd, which often required night fighters to seek the nearest available landing ground to avoid running out of fuel, the Do 217 could be put at a considerable disadvantage. In the event many of the early Do 217J night fighters were used as trainers, often with armament drastically reduced.

When FuG 202 Lichtenstein radar was ini-

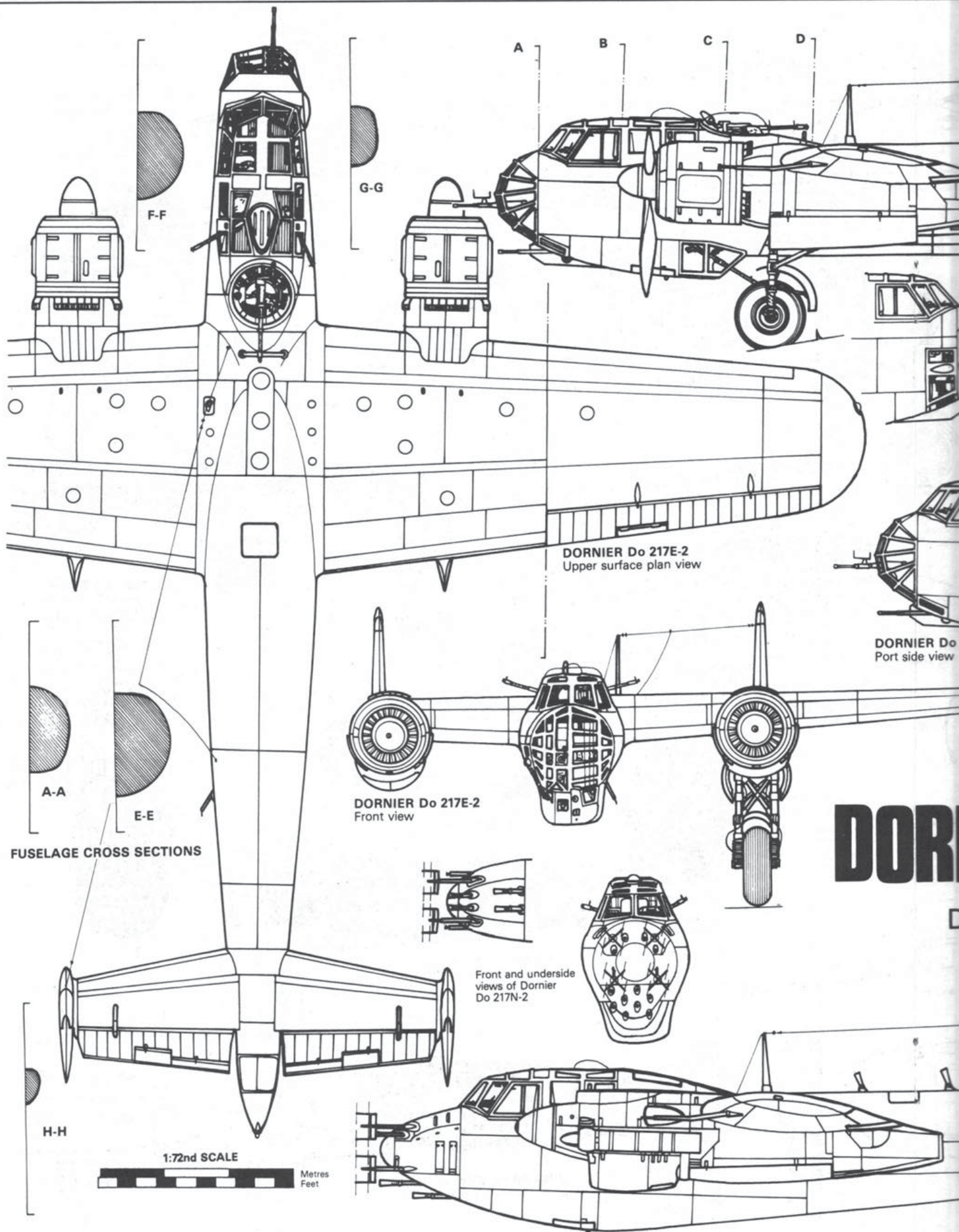
tially fitted, the aircraft took the designation Do 217J-2. Although the additional weight of the internal electronic equipment and external aerial array was somewhat offset by deleting the bomb bay, the aircraft remained heavy. The early Dornier Do 217 night fighters nevertheless continued in Nachtjagd service, NJG 1, 2, 3, 4, and 101 all receiving a number of examples.

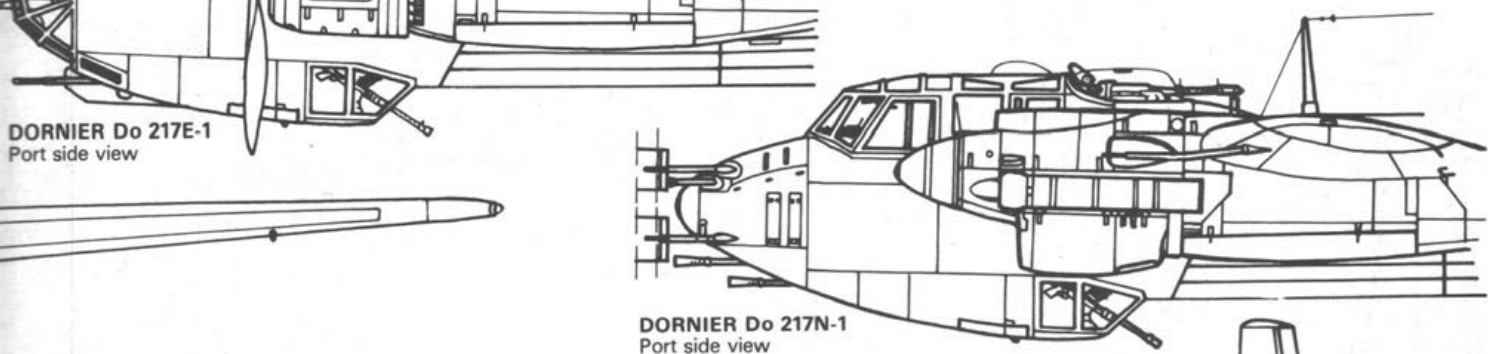
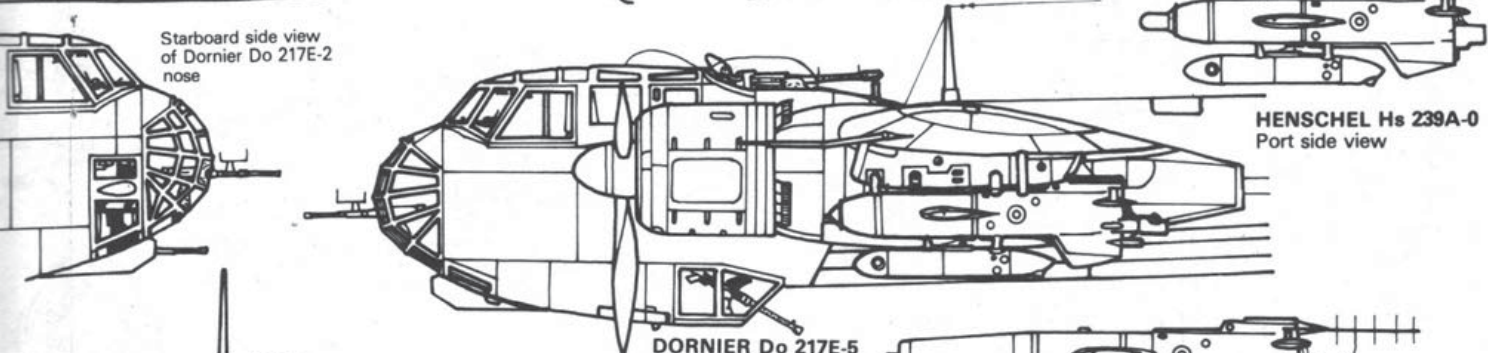
Despite its less than outstanding performance, nobody could deny that the forward-firing armament of the Do 217J could be devastating, a fact not lost on Germany's Italian allies. Lacking a night fighter force to combat RAF night raids over the Alps, the Regia Aeronautica requested Bf 110s. Germany, faced with a shortage of night fighters, sent three. The Italians were persuaded that the Do 217J-1 would meet their needs and six aircraft were supplied between September 1942 and February 1943. And although they were flown operationally by 235 Squadriglia, 41 Stormo based at Treviso and later Lonate Pozzolo, the Italian Dorniers met with a singular lack of success in terms of aerial victories. To meet a request for radar-equipped night fighters, Germany supplied six Do 217J-2s between February and June 1943. One Lancaster destroyed on 16/17 July 1943 was all that could be claimed by 235 Squadriglia while operating the German aircraft.

Flying in concert with the Bf 110 and Ju 88 was to be the operational pattern for the night fighting Do 217J (and the Do 217N)

Do 217E-4 (3E+HN) attached to the pathfinder unit KG 6 runs up its engines immediately before a sortie from Montdidier. The bomb bay remains open at this stage to prevent any build up of dangerous fumes and a lack of guns might indicate a training flight. (Bundesarchiv)

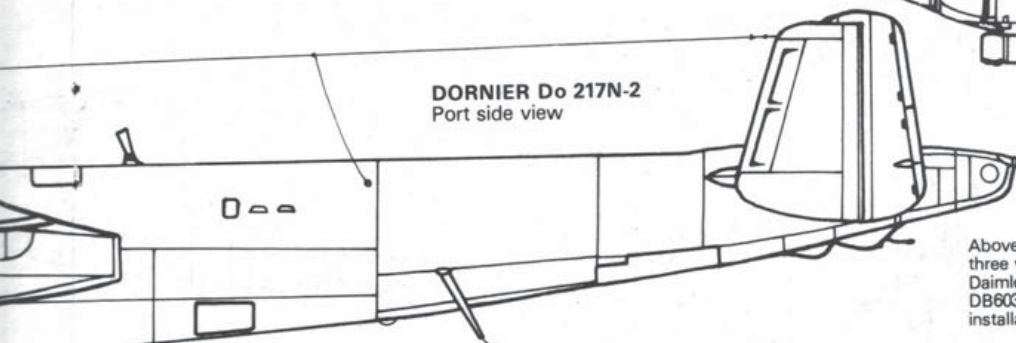
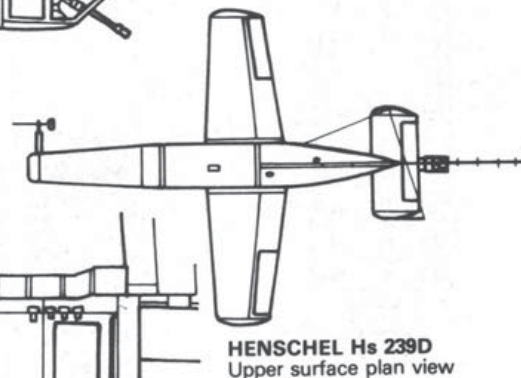




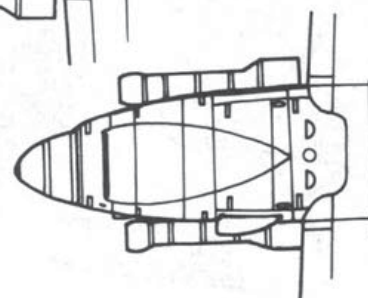


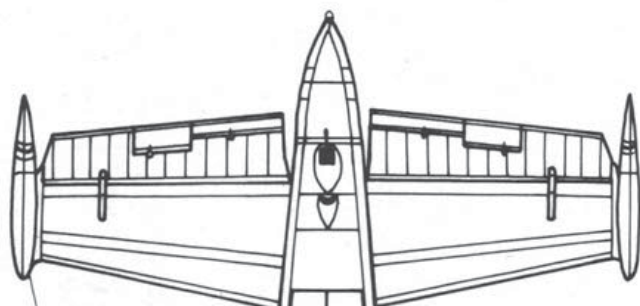
DORNIER Do 217

Drawings by Hubert Cance

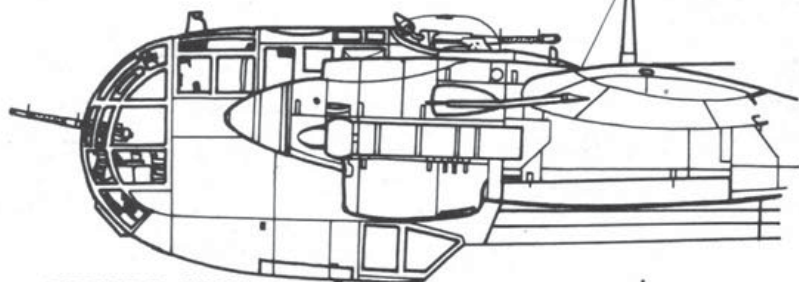
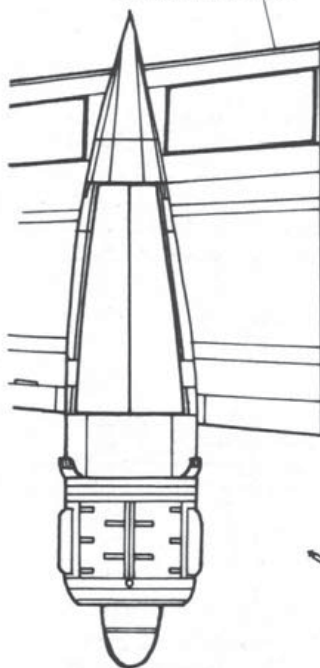


Above and right
three views of
Daimler Benz
DB603A engine
installation

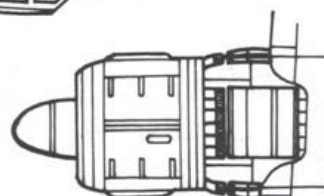
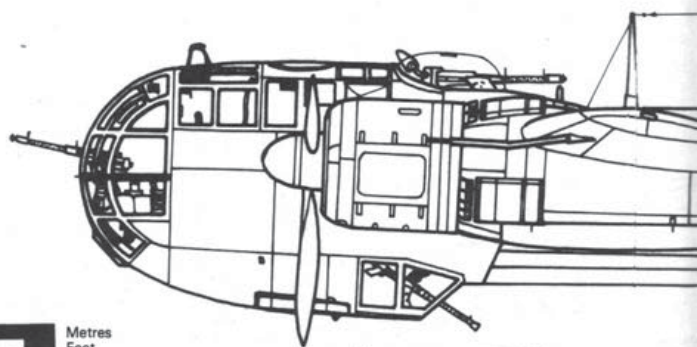




DORNIER Do 217E-2
Underside plan view



DORNIER Do 217M-1
Port side view

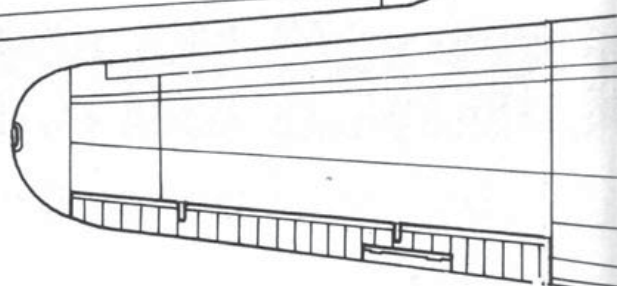
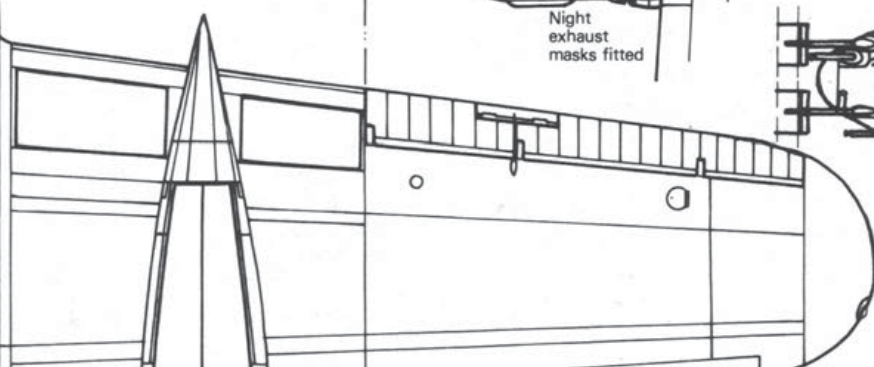


Night
exhaust
masks fitted

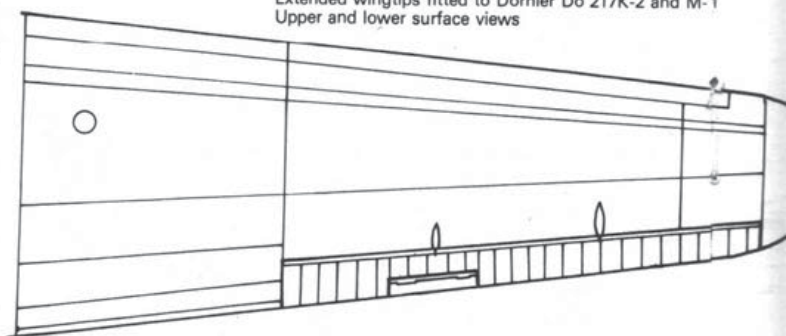
Front and
upper surface views
of BMW801 engine
installation



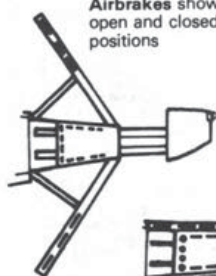
DORNIER Do 217
Port side view

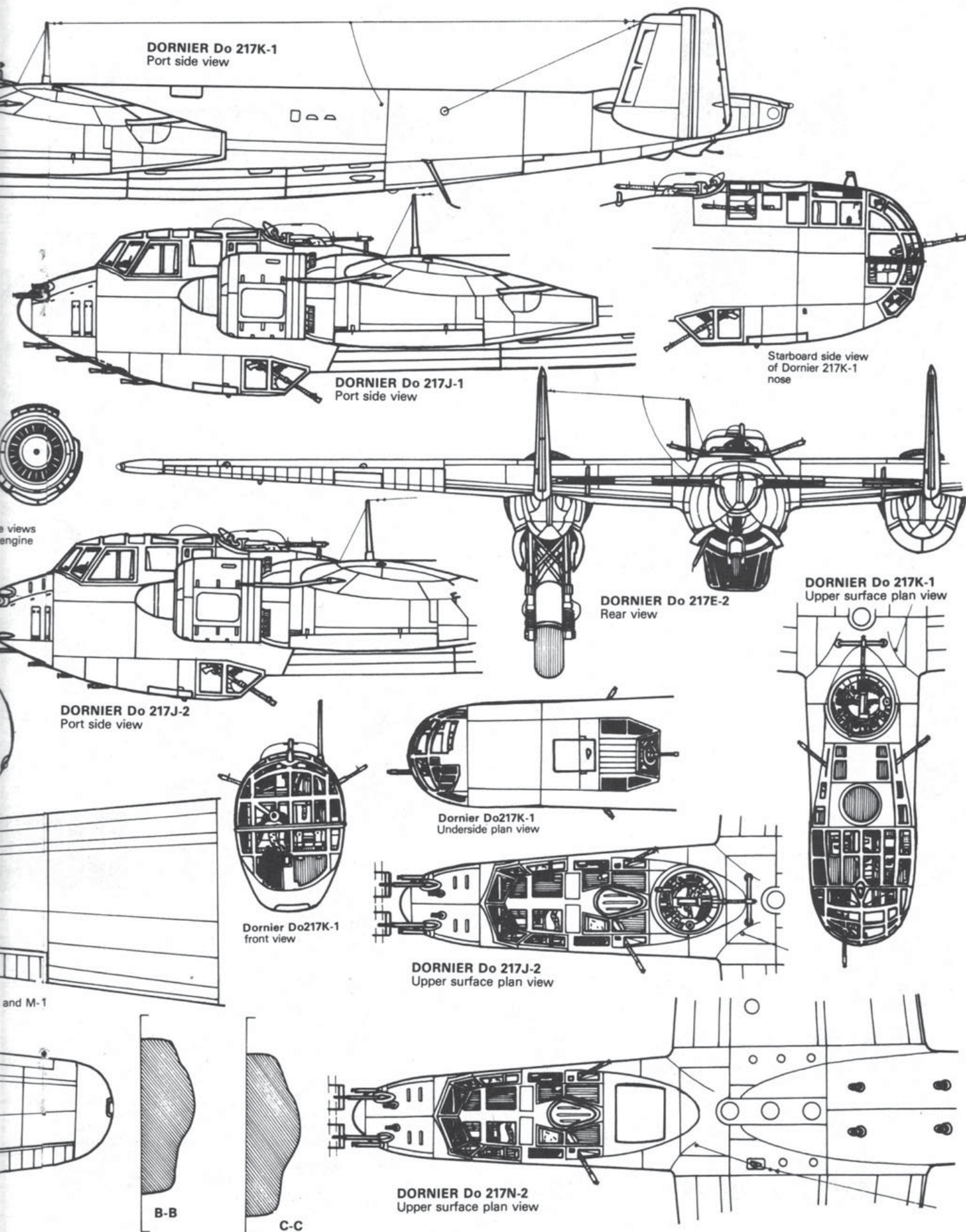


Extended wingtips fitted to Dornier Do 217K-2 and M-1
Upper and lower surface views



Airbrakes showing
open and closed
positions





On front line airfields, groundcrews could use hand winches to crank open bomb doors jammed through combat damage or electrical failure. Two SC 500 bombs are in place. (Dornier via Griehl)

neither of which were to fully equip a Nachtjagdgeschwader. NJG 1, 2, 3 and 4 used the Do 217J-2 on operations.

DORNIER Do 217 K AND M

With the progress of the air war increasingly restricting Germany's conventional bombing raids to night sorties, Dornier redesigned the Do 217 series to better undertake that role. The first production Do 217K-1 flew on 31 March 1942 and by the late summer the first examples had entered service with KG 2.

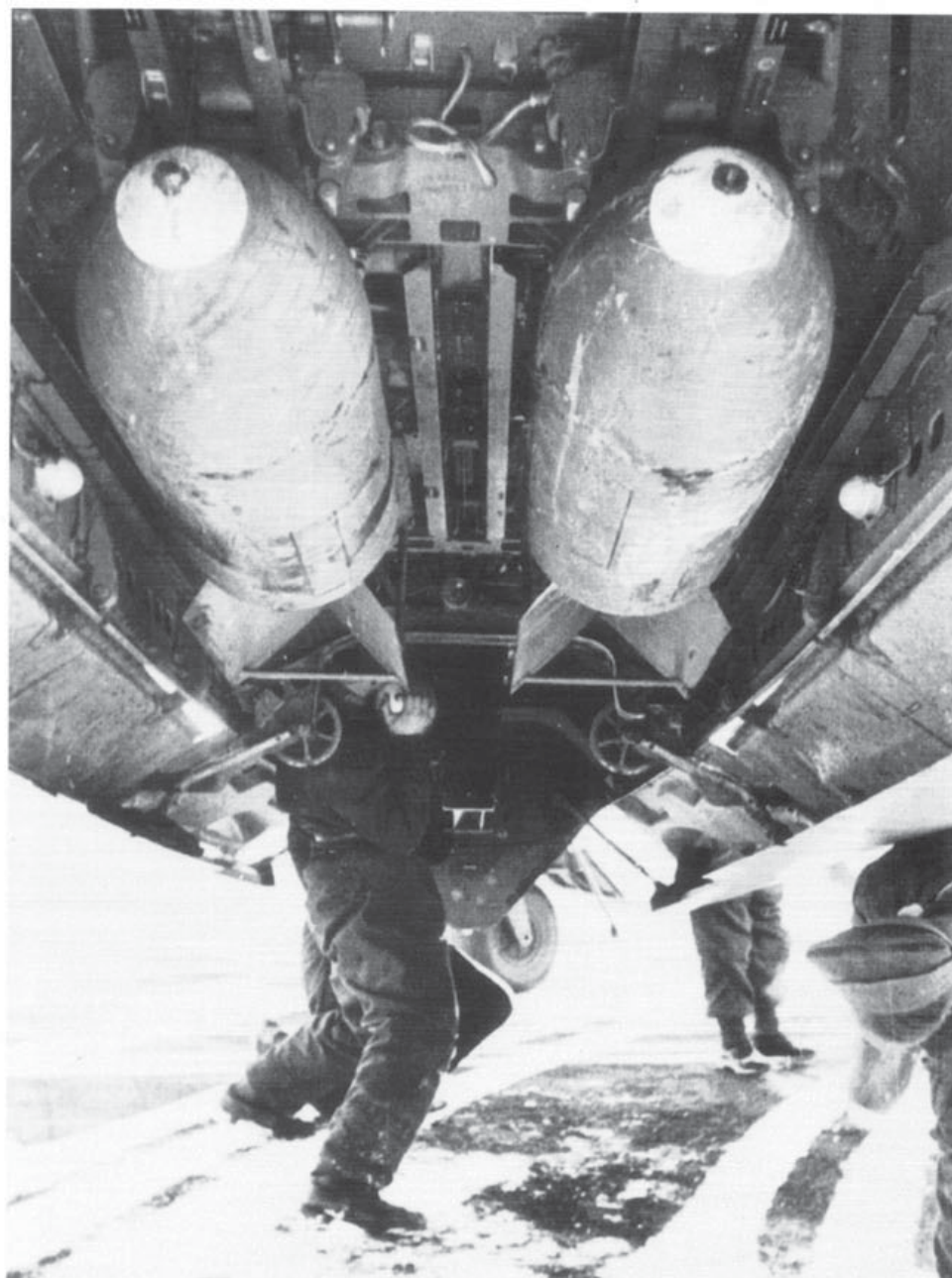
Completely new nose contours still grouped the entire crew of four in the forward fuselage but now the stepped windscreen of all earlier Dornier bombers had given way to a continuously glazed, streamlined cockpit.

Having otherwise decided to retain much of the internal layout of the Do 217E, Dornier did briefly explore alternative configurations, including a single fin and rudder. Tested on the Do 217K V1, it was not adopted and the familiar twin fin and rudder assembly of the Do 217E was retained, as was the 62 ft 4 in wing of the Do 217E. Three Do 217K prototypes were followed by the initial production K-1 variant which could be armed with four to six MG 81 and two MG 131 machine guns.

An extended wing of 81 ft 4 in was fitted to the Do 217K-2, which was built specifically to carry the FX 1400 missile.

All Do 217Ks were powered by 1,700 hp BMW 801D air-cooled radial engines, while the similar Do 217M-1 also with the original wing, had DB 603 liquid-cooled engines of 1,750 hp.

As well as having a much less streamlined nacelle, the Daimler-Benz engine required a four rather than three bladed propeller; the Do 217 wing was adapted to take liquid cooled engines principally to guard against possible shortages of the BMW powerplant. This appears not to have been a problem as the relatively modest numbers of Do 217Ks



built did not eat into BMW engine output (increasingly allocated to the Fw 190) to any great extent.

The first Do 217M-1 made its maiden flight on 16 July 1942. Having decided not to proceed with the Do 217L, which would

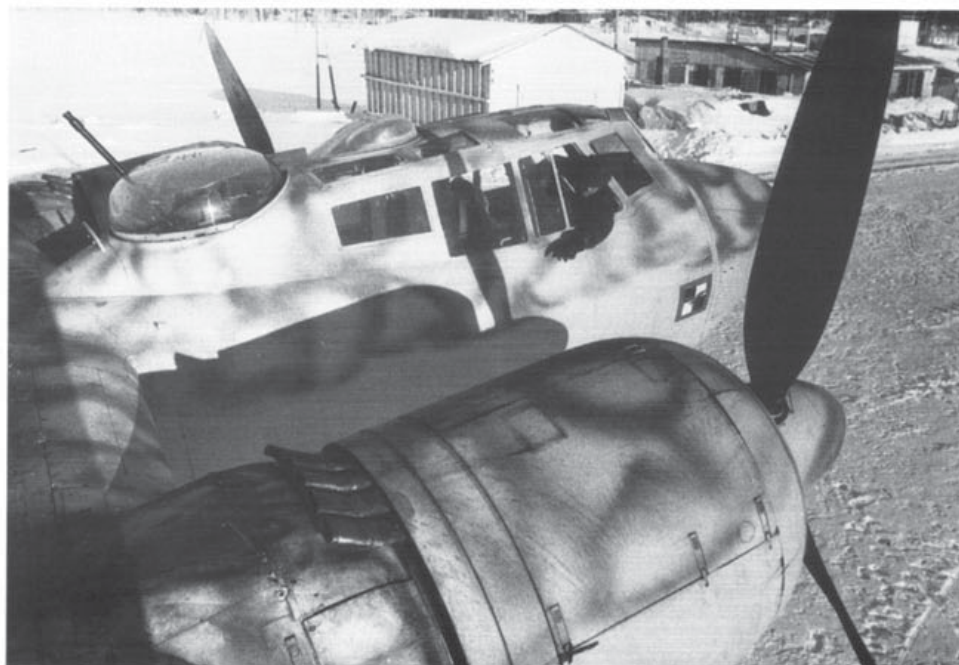
have had a revised cockpit and different armament, Dornier then built Do 217Ks and Ms simultaneously, enabling both versions to enter Luftwaffe service at much the same time. Again KG 2 was the main recipient of the later Do 217s, initial examples of the M-1 being accepted during late 1942.

Only one other Do 217M variant saw Luftwaffe service. This was the Do 217M-11, a missile carrier similar to the Do 217K-3, with the extended wing. It was intended that this version would carry an FX 1400 or Hs 293 semi-recessed into the fuselage but in the event many of the Do 217M-11 airframes were converted to night fighter configuration rather than bombers.

MISSILE CARRIERS

Arguably the most successful operational duty undertaken by the Do 217 was that of 'mother ship' for stand-off missiles. In this

A grey, wavy line pattern over a lighter grey top surface indicates previous use as a night fighter for this Do 217J-2 (N9+AA) pictured at Alakurtti, Finland in March 1944. A unit hack, the aircraft was used by the then Luftflotte 5 commander, Generalleutnant Josef Kammhuber and carries the allocated black/white chequered unit badge with a superimposed eagle and red surround. (Bundesarchiv)





role it was one of the first aircraft in the world to use weapons that heralded an entirely new form of aerial warfare. The primary weapon was the Henschel Hs 293A radio controlled glider bomb.

Utilising a conventional SC 500 lb bomb fitted with a Walter rocket motor and rudimentary wings and tailplane, the Hs 293A was put into volume production in January 1942 and first used in action by Do 217 crews in mid-1943.

In April 1943 II./KG 100 began re-equipping with the Do 217E-5 at Graz, where a second Gruppe, III./KG 100, had also

En route to an ideal night camouflage scheme for its night fighter conversions, Dornier experimented with this three tone 'ripple' pattern on Do 217J-1 (KD+MZ). The shades used on this 'factory defence' scheme and other early Dornier night fighters have been widely interpreted. (Dornier)

formed, in March. In August II Gruppe moved to Cognac to begin operations with the Hs 293 while III Gruppe occupied Marseilles-Istres to operate the Do 217K-2, this unit flying aircraft carrying the SD 1400 X armour-piercing guided bomb commonly known as 'Fritz-X'.

The Do 217E-5 was adapted to take the necessary guidance equipment for controlling the Hs 293A after launching. Essentially this comprised a Telefunken FuG 203b Kehl III transmitter linked to the bomb's FuG 230b Strassburg receiver and a Knuppel or joystick/control box for line-of-sight flight corrections, a task assisted by a flare located in the tail of the weapon. Warm air hoses were built into the Do 217E-5's wings to keep the Hs 293 at a constant temperature to offset any effects from icing or humidity changes, each missile being carried on an

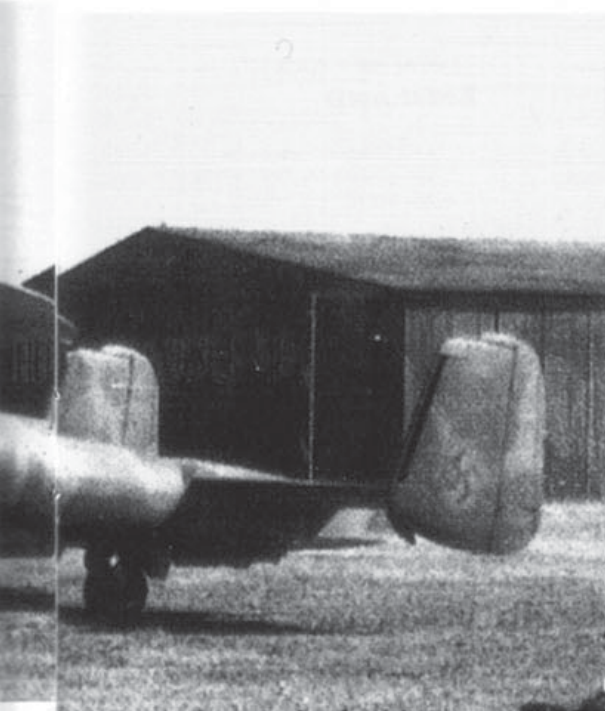
ETC 500/XII wing rack outboard of the engine nacelles.

A similar radio guidance system as that of the Hs 293 was used for the SD 1400, the Do 217K-2's electronics fit being FuG 203a/FuG 230a. The Dornier Do 217K-3 was slightly more versatile in the missile carrier role as it could use either FuG 203c or 203d guidance for control of either a pair of Fritz X or two Hs 293 missiles carried inboard of the engine nacelles..

A working plan for Luftwaffe anti-shipping operations with guided missiles handed the Mediterranean area to units equipped with the Do 217 and the Atlantic to He 177 crews, with the possibility of deploying Ju 88s in a similar role in British coastal waters. Only part of this plan could be implemented.

It fell to II./KG 100's Do 217E-5s at Cognac to score the first confirmed 'kill'





A Do 217J-2 formerly part of NJG 2, at Lonate Pozzola, Italy in May 1943 on transfer to the Regia Aeronautica. The aircraft, which arrived in full Nachtjagd markings including the 'Englandblitz' badge and code 3C+IL, was subsequently allocated the Italian serial number MM 1358. (via G Apostolo)

with an Hs 293 when on 28 August 1943, the unit sent 18 Dorniers against a British naval support group in the Bay of Biscay and sank the sloop *Egret*. Geschwader Kommodore Maj Fritz Auffhammer flew the aircraft responsible for the sinking.

The destroyer *HMCS Athabaskan* was badly damaged by a missile released by the Staffelfkapitan of 5./KG 100, Hptm Wolfgang Vorpahl.

Operations with the Hs 293 over 'the Bay' had actually started three days beforehand and although 14 Do 217s - with an escort of seven Ju 88Cs of 15./KG 40 - managed to launch their missiles, only the sloop *Landguard* was damaged by near misses.

In September II./KG 100 joined its sister III Gruppe at Istres shortly before the Italian surrender was announced on the 8th. This was the moment KG 100's crews had been waiting for, for under the terms of the armistice the Italian fleet was ordered to sail from La Spezia to Malta to surrender - the Luftwaffe was to ensure that as few ships as possible could be used by the Allies.

With the battleship *Roma*, two other battleships, three cruisers and eight destroyers aiming to rendezvous with three more cruisers from Genoa, the target was tempting.

German air reconnaissance reported the fleet's position in the afternoon of 9 September and 11 Do 217K-2s of III./KG

Top right: The barely discernable two letter fin code 'HN' on a 'wave-mirror' finished Do 217E-2 (3E-HN) of 5./KG 6. Dissimilar camouflage patterns were created depending on application method - sprayguns were preferred but brooms often sufficed! (Bundesarchiv) Right: To guard against any shortage of BMW engines, Dornier adapted the Do 217J night fighter to take Junkers Jumo liquid cooled engines and FuG 202 radar under the designation Do 217N. Early machines, similar to this factory test Do 217N-04 (GG+YD), retained the lower gun position. (Dornier)

Dornier Do 217 Operational Units

BOMBER UNITS

KG 2 'Holzhammer'
KG 40
KG 6
KG 66
KG 100
Versuchs.Kdo./KG 200
KG 101
KG 103

Code

U5
F8
3E
Z6
6N
8V/6V
5T
V3

Code

FFS (B) - Flugzeugführerschule (Bomber pilot training school) 4, 5 and 38
FFS (C) - Flugzeugführerschule (multi-engined) 4 & 5
Fl. Techn. Schule 6
Kampfbefehlsschule (Bomber observer school) 2
Kampffliegerschule (Bomber training school) 2 and 3
KSG - Kampfschulgeschwader (Bomber training wing) 1/ KG 103
Nachtjagdschule (Night fighter school) 1 and 101

NIGHT FIGHTER UNITS

NJG 1
NJG 2
NJG 3
NJG 4
NJG 5
NJG 6
NJG 100
NJG 101
NJG 102
Aufkl. Gr.
Nacht 1, 2, 3 and 4

G9
R4
D5
3C
C9
Z2
W7
9W
7J
K7

MISCELLANEOUS UNITS

Kommando (F) Rowehl T5
Luftflotte 2 F5
Luftflotte 5 N9
TGr 5 C3
Verb. Staffel Ob. Sudwest F3
NB: A number of other units including; KG 3; St.G 2; Nachtjagd. Kdo OBS; NAG 102; NJ Kdo/OBS (Heraklion); TVK Werneuchen; the Verbindungsstaffel (liaison squadron) of II Fliegerkorps and Lehr und Erprobungs. Kdo 21, are all known to have operated Do 217s in small numbers.

TRAINING UNITS

NB: School units did not usually have codes allocated
BFS - Blindflugschule (Instrument/blind flying school) 8

100, each carrying a single FX 1400, took off from Istres led by Major Bernhard Jope. Missile launches were made from around 20,000 feet and Uffz Oskar Huhn, the bomb aimer in Lt Heinrich Schmetz's aircraft, steered his Fritz X accurately enough to obtain the first near-midships hit on the *Roma*. Fatally damaged, she sank after a second FX 1400 had struck home. The bat-

tle ship *Italia* was damaged by an FX 1400 striking her bow but was able to make Malta. Schmetz, Kapitän of 11 Staffel for the *Roma* strike, was decorated with the Ritterkruz on 29 October 1944.

KG 100's Dorniers continued to present a threat to the Allied landings at Salerno and Anzio when this unit subsequently used missiles to damage the cruiser *USS Savannah*





Unarmed Do 217J trainers belonging to the former training formation NGJ 102, which became operational in 1944. Numerous Do 217s were used by the Nachtjagd as trainers. (Peter Heck via R Lutz)

and battleship *HMS Warspite*.

Two more sinkings were added to the tally of damaged ships on 29 January 1944 when the cruiser *HMS Spartan* and the Liberty ship *Samuel Huntingdon* were attacked. On 23 January the destroyer *HMS Jervis* was damaged by an Hs 293.

Allied opposition to Luftwaffe attacks, both at sea and in the air, had grown so strong by mid-1944 that further missile sorties were all but out of the question. Nevertheless III./KG 100, then under the command of Heinrich Schmets, recently promoted to Hauptmann, continued to strike Allied invasion ports and other military targets at night.

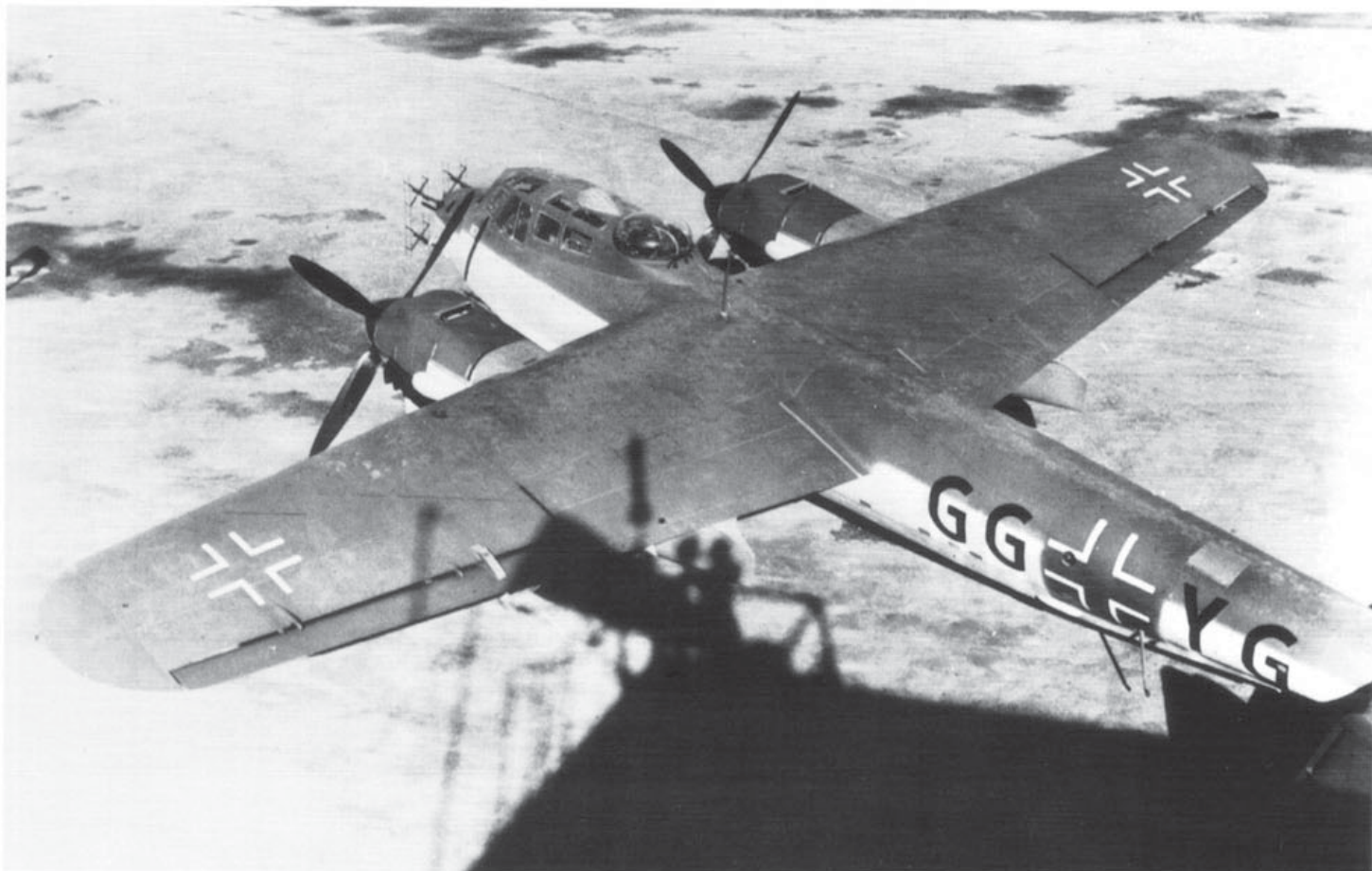
Based at Toulouse-Francal and Orleans-Brice, the unit carried out its last major operation with the Hs 293 on 7 August 1944. Six Do 217E-5s, each with one missile, attempted to destroy an American-held bridge over the Selune river at Pontaubault. The attack failed in its purpose and one aircraft was shot down - but this operation represented the world's first attack by aircraft using 'stand-off' weapons against a land target.

By the end of August 1944 KG 100 had gone from Orleans and by September the unit had been disbanded. Shortly before this occurred, III Gruppe had taken delivery of five examples of the Do 217R which was, alphabetically, the final variant of the Do 217 line to see operational service.

An order of battle dated 20 August listed III./KG 100 with just five serviceable Do

Below: For Dornier night fighters to be as effective as their trusty Bf 110s and Ju 88s, the Nachtjagd recommended a weight saving programme. Obviously unable to turn a medium bomber into a lightweight fighter without a major redesign, Dornier faired over the ventral fuselage step to reduce drag and produced the Do 217N-2, the first of which was coded PE+AW. (Dornier)





With the control tower duty crew casting a shadow across it, the Do 217N-07 (GG+YG) was also used to test the FuG 202 Lichtenstein BC radar which became so vital to the successful interception of enemy bombers at night. (Dornier)

217s out of its normal complement of 30 aircraft.

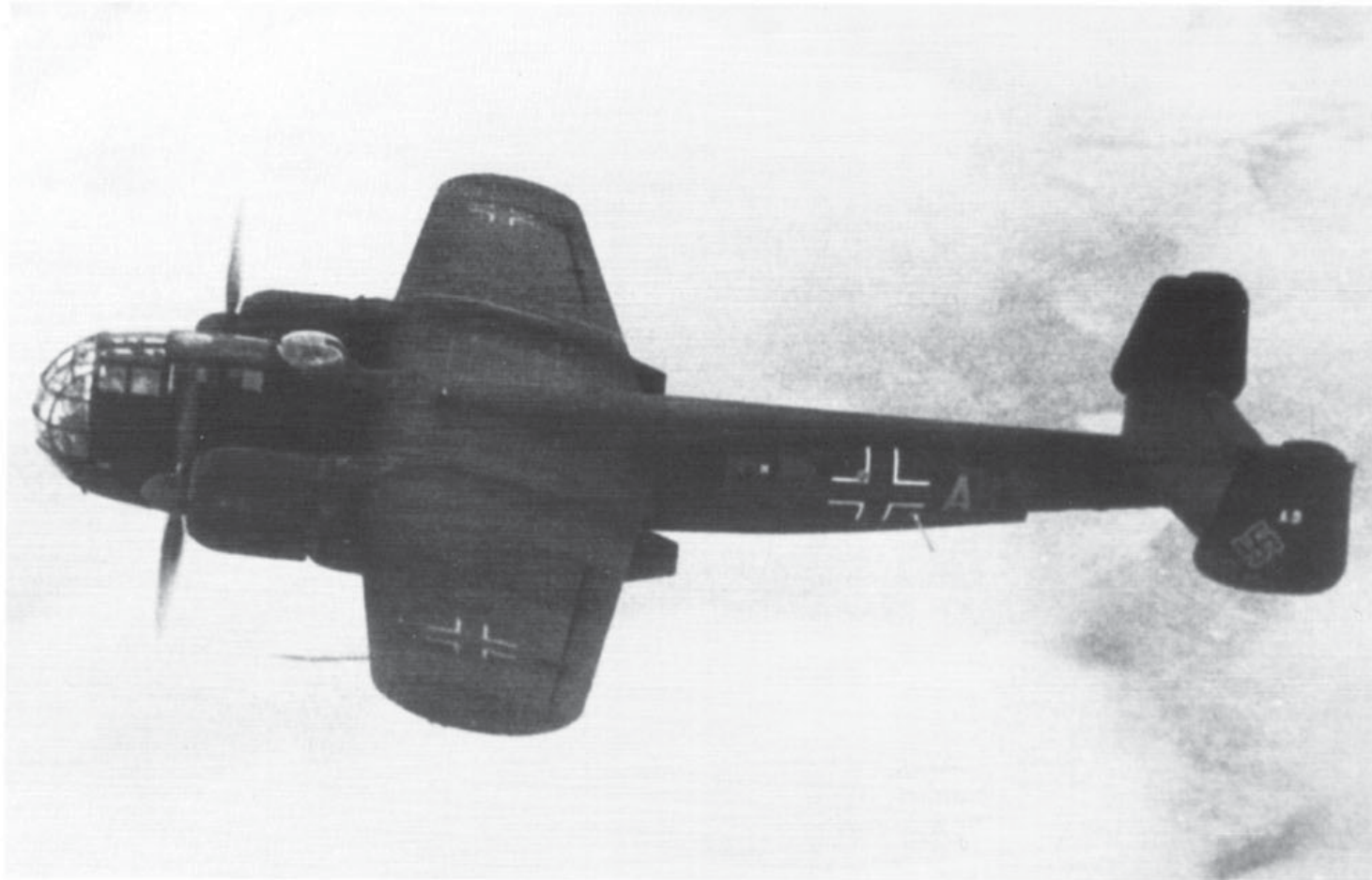
A conversion of the stillborn Do 317A-0 of which six were completed, following the first flight of the prototype on 8 September 1943, the Do 217R was primarily intended as a missile carrier, with a single Hs 293 rack under the fuselage. Armament was two MG 81 and two MG 131 machine guns, plus a 15-mm MG 151 cannon and the powerplants were Daimler-Benz DB 603s of 1,750 hp.

It is doubtful if KG 100 had time to use the Do 217R operationally, for within weeks, the Hs 293 missiles were crated up and sent back to Germany by rail - but they were used one last time by a Do 217 unit.

Desperate to stem the Russian advance into Germany in the spring of 1945, Versuchskommando /KG 200 readied 12 Do 217s for an attack on bridges spanning the river Oder. Carried out on 12 April 1945, the operation was not deemed to be a great success, although a number of hits with the missile were claimed.



Top right: A Do 217J-1 bearing the 'Englandblitz' badge of the Nachtjagd undergoing armament maintenance and exhibiting the blast tubes for the 20-mm MG FF cannon mounted below the masts for the radar aerials. Right: Found by Allied troops at Straubing, Germany in May 1945 this Do 217N-1 bears radio call letters rather than operational codes - which does not necessarily indicate a second line machine. With their backs to the wall the Germans then had more pressing priorities than painting unit identity on aircraft. Note the open bomb bay, fuselage hatch and sprung Zeus fasteners holding the machine gun ammunition access doors in place. (J. V. Crow)

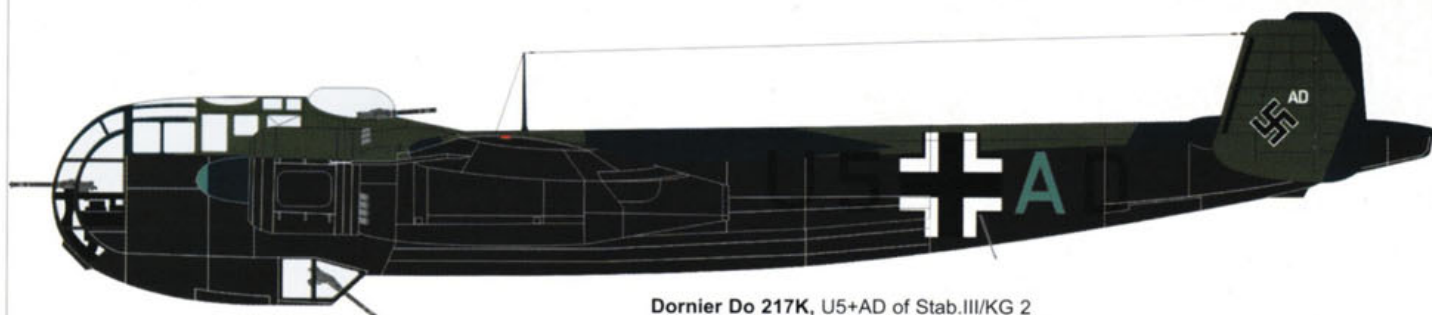


Above: All but anonymous in their dull green and black paintwork, the Do 217Ks of KG 2 remained a threat - albeit a small one - to towns and cities in the British Isles until mid-1944. As was common, this Do 217K coded 'A' has its tail-wheel doors removed. (Bundesarchiv) Right: The Do 217M-1 (W. Nr. 56051/U5+DK) of 2./KG 2 which crashed on the outskirts of Cambridge on the night of 21/22 February 1944 was the first example of this Dornier variant to be examined by the RAF. Abandoned by Ofw Stemann's crew over London the Dornier had flown on until it ran out of fuel. In this instance the rudder ID marking was a numeral rather than a letter and the tail unit had been taken from W. Nr. 5574, a Do 217E-4. (RAF Museum via M J F Bowyer) Below: A Dornier Do 217K-1 (W. Nr. 4446) of KG 2 about to taxi out for a sortie. The large presentation of the individual code letter 'G' on the rudder reflected a markings development designed to aid air-to-air identification at night. (Bundesarchiv via M J F Bowyer)

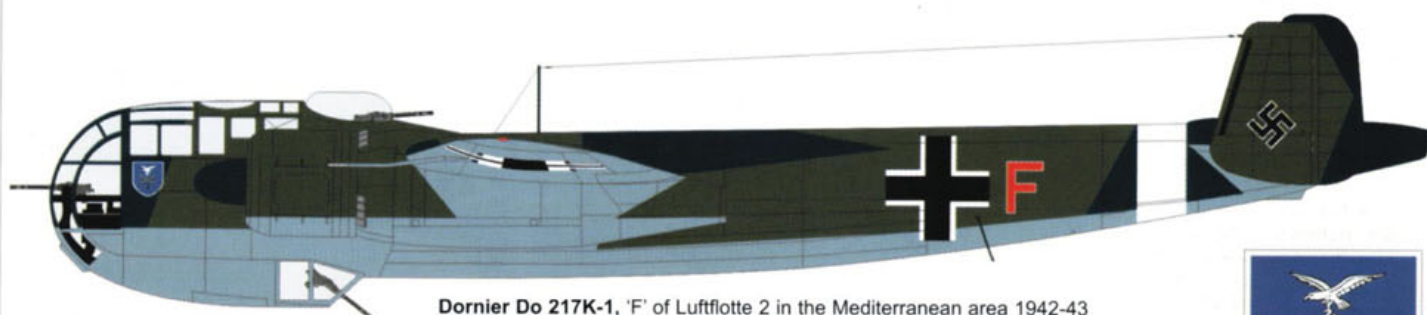




Dornier Do 217K, U5+AA of Stab/KG 2, Holland, 1943



Dornier Do 217K, U5+AD of Stab.III/KG 2



Dornier Do 217K-1, 'F' of Luftflotte 2 in the Mediterranean area 1942-43



Luftflotte 2
badge

THE OLD ROUTINE

Less exotic weapons continued to be released by those Dornier 217s maintaining the bomber offensive against England and although KG 2 remained the only Geschwader to be equipped solely with Dornier bombers, including the Do 217K and M, this later variant also served with 15./KG 6 which, in April 1943, became I./KG 66. This latter unit, formed at Chartres, was a special pathfinder Gruppe initially operating Do 217K-1s. Dietrich Peltz, appointed as Angriffsführer England that month, was charged with building a revitalised bomber force, a primary element of which was to have skilled crews handling target marking for the 'main force'. In the event the Do 217 played a relatively small part as a pathfinder, I./KG 66 mainly being equipped with the Ju 88S and Ju 188.

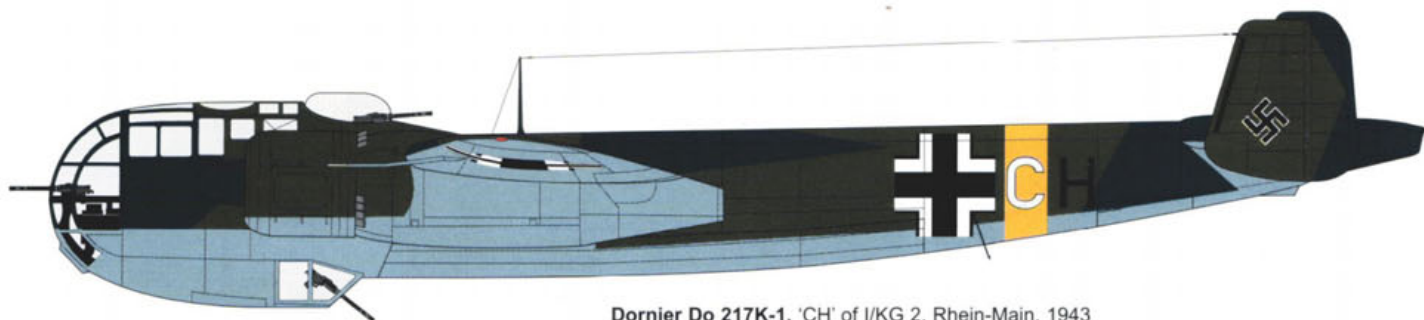
OPERATION STEINBOCK

Dornier Do 217s of the Holzhammer Geschwader joined other bomber units in a final series of air raids - large by Luftwaffe standards - on Britain when Operation Steinbock began on 21/22 January 1944.

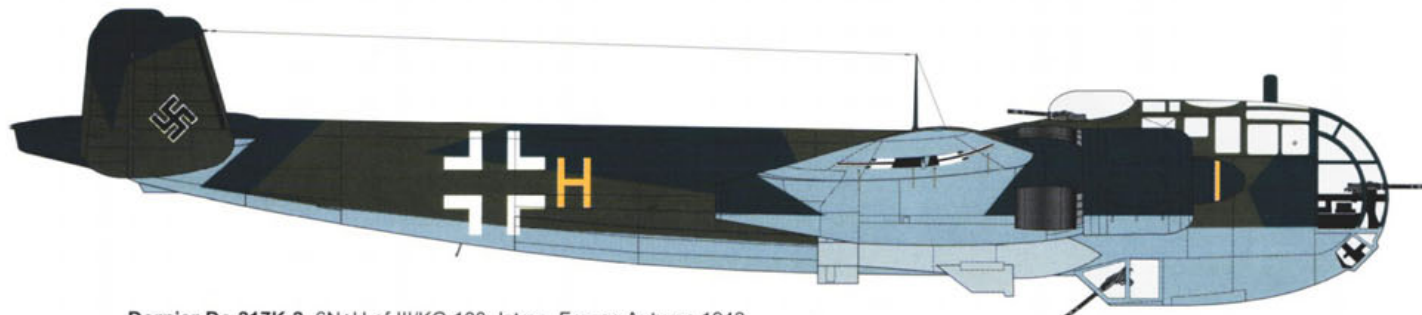
Stab, I and III./KG 2 and I./KG 66 fielded about 90 Do 217Ks and Ms to contribute to the total 447 sorties flown by He 177s, Ju



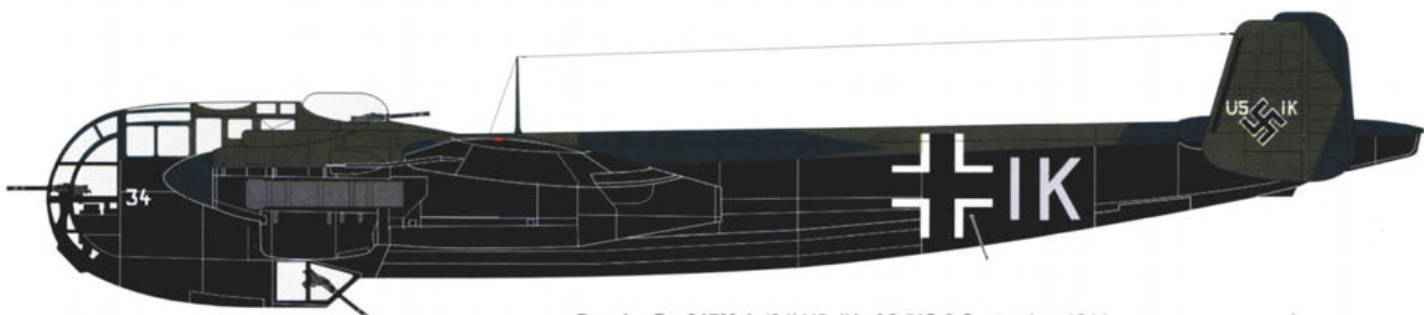
Upper surface plan view
of Dornier Do 217E-2
3E+HN of 5./KG 6



Dornier Do 217K-1, 'CH' of I/KG 2, Rhein-Main, 1943



Dornier Do 217K-2, 6N+H of III/KG 100, Istres, France Autumn 1943



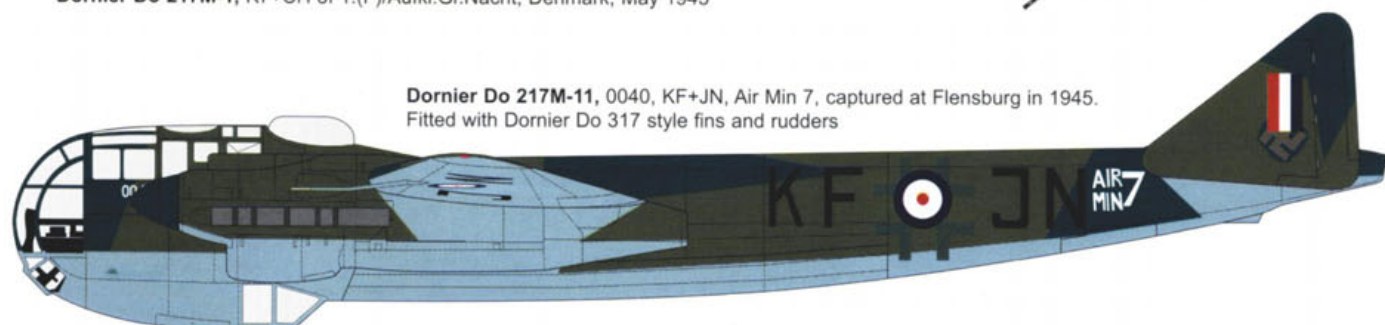
Dornier Do 217M-1, '34' U5+IK of 2./KG 2 September 1944



Dornier Do 217M-1, K7+LK of 4.(F)/Aufkl.Gr.Nacht, Russia, 1944



Dornier Do 217M-1, K7+CH of 1.(F)/Aufkl.Gr.Nacht, Denmark, May 1945



Dornier Do 217M-11, 0040, KF+JN, Air Min 7, captured at Flensburg in 1945.
Fitted with Dornier Do 317 style fins and rudders

In standard form the Do 217M-1 was powered by DB 601 engines with four-bladed propellers. The structural differences between this and the radial-engined Do 217K were minimal, allowing Dornier to build both simultaneously. (MAP)

88s and Ju 188s plus Me 410s and Fw 190s in the first of these over-ambitious operations.

Despite being led by pathfinders and covering its tracks with ample quantities of Duppel (Window) to blind enemy radar, the German force attacking London had very little success, the bombing being scattered over much of south east England.

While Steinbock or the 'Little Blitz' as it was known in Britain, lasted until the spring of 1944, it was clear to both sides that the Luftwaffe bomber force had surrendered any edge it may have enjoyed in 1940/41. KG 2 lost at least five aircraft to RAF night fighter interception during the period.

KG 100 had two of its Do 217K-3s destroyed by Mosquitos of No 406 Squadron on the night of 29/30 April when III. Gruppe was briefed to use its Fritz X guided bombs against Allied shipping in Plymouth harbour. No ships were apparently hit by the bombs and none damaged.

After 6 June 1944 III./KG 100 remained on what became the 'invasion front' to fly its



Do 217Ks in the face of overwhelming enemy air superiority. Handed the daunting task of striking at Allied shipping, the Gruppe suffered substantial losses, with little recorded success.

The Dornier crews nevertheless carried out their assignment with determination and at least 22 individuals who served with these units and flew a Do 217 for all or part of their service, were awarded the Knight's Cross. Under a broadly interpreted award

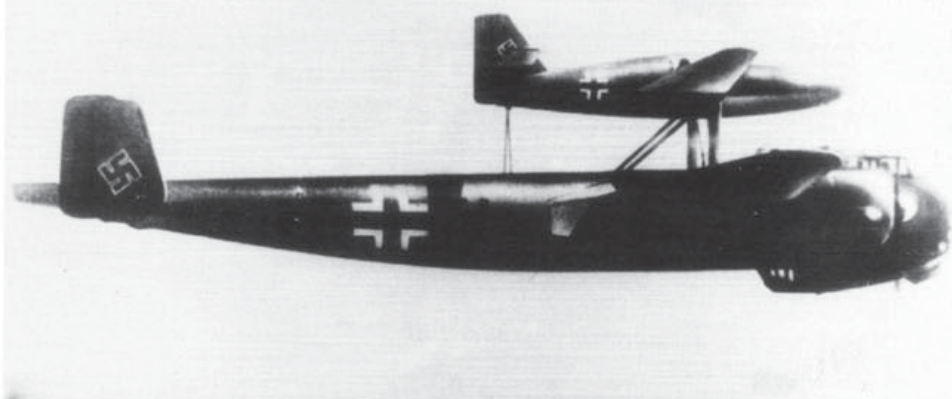
system, bomber crewmen were usually decorated for completing a number of operational sorties or for performing a single outstanding feat of arms.

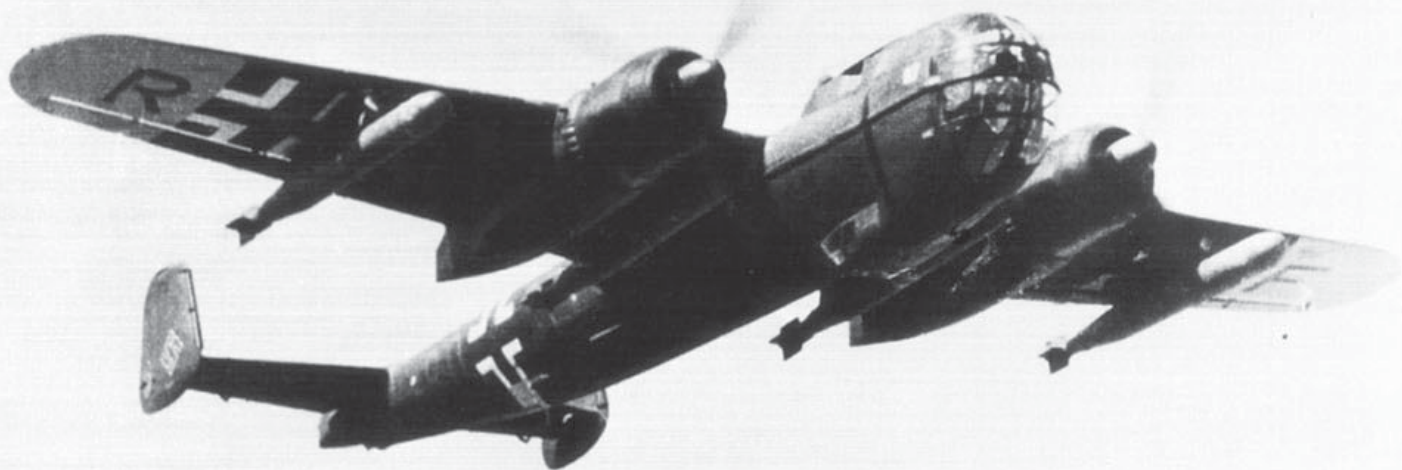
The first Do 217M to fall into British hands did so on the first 21/22 January Steinbock night raid on London. After being abandoned by its crew near the capital the aircraft flew on to eventually crash land near Cambridge. Found to be largely intact, it was disassembled and taken by road to Farnborough for detailed examination.

NIGHT FIGHTER DEVELOPMENTS

Although the Do 217N-1 was based on the

Left: Medium bombers were useful test beds as they offered twin engine reliability, good weight lifting capability and useful range. Dornier 217s consequently featured as 'mother ships' for a number of advanced weapons including the diminutive Me 328 pulse jet fighter, the prototype of which (RL+TY) was carried aloft on a special dorsal cradle on a Do 217E coded JT+FL. (Dornier) Below: A significant redesign that achieved little in the way of a performance gain, the Do 217K-01 nevertheless introduced a roomier cockpit and faster firing defensive firepower. Like many production Dorniers, it retains the tail brake housing. (Dornier)





Above: The Dornier Do 217E's reliable load carrying capability was perpetuated in the later series of bombers. Among the munitions tested was the LT F5b aerial torpedo, using Do 217K-07 (W.Nr. 4407/RD+JF) to lift a potentially formidable load of four. (Dornier)

updated Do 217M-1 bomber, its outward appearance was similar to the earlier Do 217Js apart from the DB 603A engines, as all Dornier night fighters left the production line with the stepped windscreen of the original bomber design.

Radar fit was FuG 202 or FuG 212. The similarity of the Do 217N-1 to the Do 217J extended to the less than useful rear ventral gun position which mounted a single MG 131. Nose armament was four MG 151/20 cannon and four MG 17 machine guns and a single MG 131 was mounted in the dorsal turret.

Dornier supplied a wooden fairing that could be fitted in place of the ventral glazed gun position and a cover for the dorsal



Above: The increased-span wing of the Do 217K-2 offset the weight of the Hs 293 and Fritz X remotely controlled bombs, the weapons that arguably gave the type its greatest claim to fame. W. Nr. 4572 has the RF2C remote sighting periscope in the cockpit roof. (Dornier) Below: Despite a universal use of mainwheel mudguards Dornier bombers had their rear fuselage paintwork regularly spattered by mud and dust kicked up by the tyres. To prevent equipment malfunction groundcrews cleaned delicate areas such as the FuG 10 radio aerial on the port side. Do 217K coded 'Q' of KG 2 is shown. (Bundesarchiv)



mounting ring once the turret dome was removed. Work on these drag and weight reducing modifications was done by Luftwaffe repair depots, the resulting aircraft being known as Do 217N-1/U1, the suffix standing for Umsatz or Modification 1.

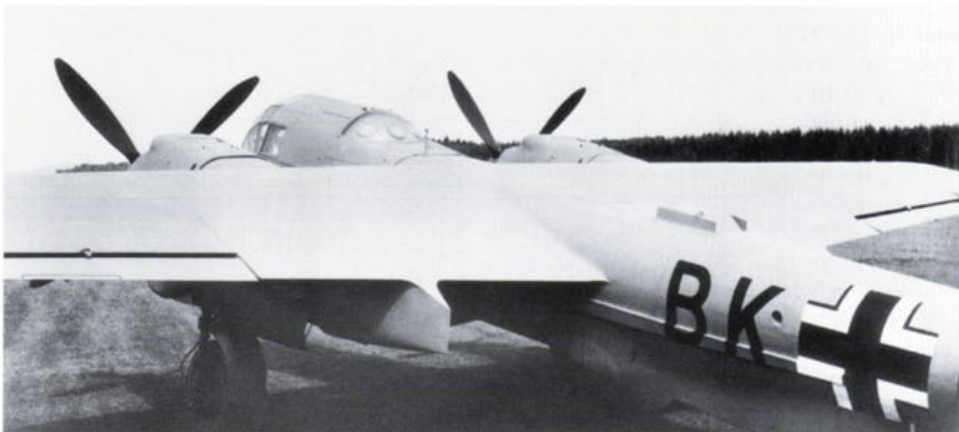
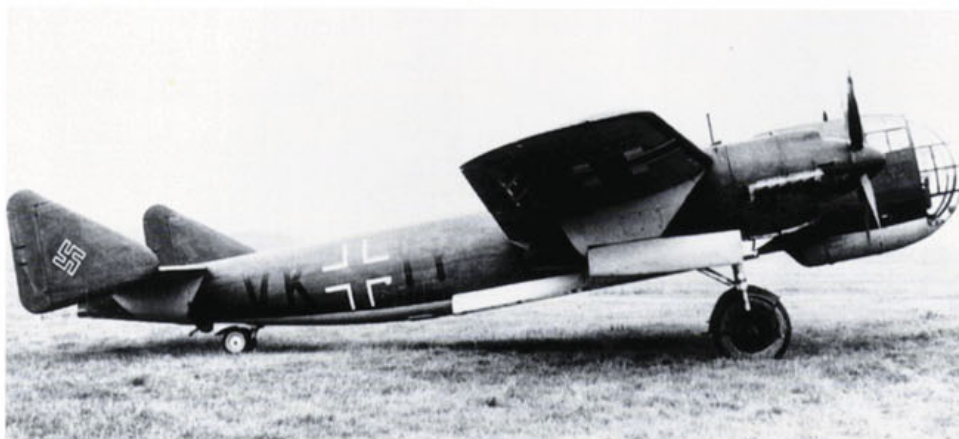
Far more lethal than any number of forward firing guns for attacking enemy bombers at night was a Schrage Musik battery of upwards-firing cannon. A weapon pioneered by Dornier, it was perpetuated on the Do 217N-1/U3 which enabled the installation of two or four MG 151/20 cannon, either combination proving highly effective in combat. First recipients of the Do 217N-1 were 4./NJG 1 and 4./NJG 3, both units having aircraft operational by April 1943.

Thereafter the Do 217N-1 was used by: Erg./NJG 2, I, II and IV./NJG 3, I./NJG 4, II and IV./NJG 5, plus NJG 100, 101 and 102. The armed services experimental detachment (TVK) at Werneuchen also had some examples.

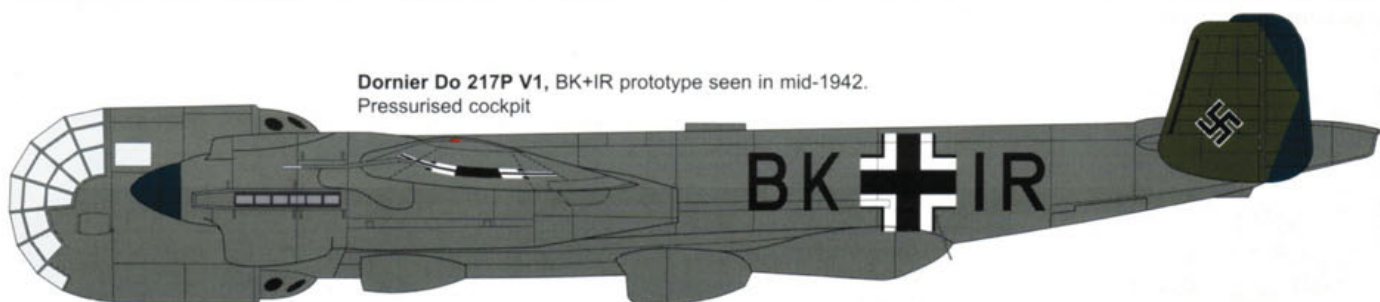
ULTIMATE VERSION

The Do 217N-1 was followed by the ultimate Dornier night fighter, the Do 217N-2. This variant dispensed with the dorsal turret and ventral gun position entirely, the substituted fairings altering the lower fuselage contours and bringing the aircraft's loaded weight down to a still-substantial 29,100 lb.

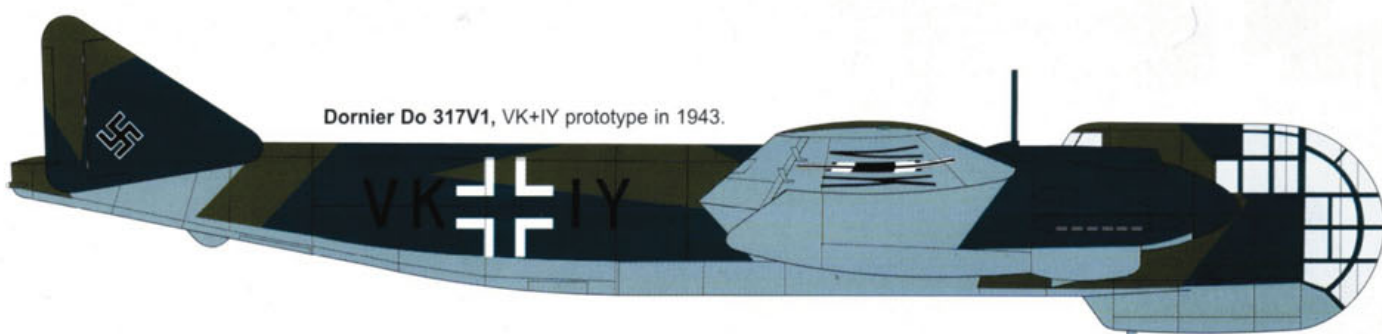
Top right: Do 217V3, the prototype Do 317A (VK+IY) was an attempt to involve Dornier in the Luftwaffe's ill-fated 'Bomber B' programme. Six Do 317s were built although no contract materialised at a time when the Reich needed only fighters for defence. (MAP) Centre: From the front the Do 317 (VK-IY) was similar to its Do 217 predecessor although detail changes were made. The V-1 first flew in 1943 but was abandoned later that year. (Dornier via P Jarrett) Right: Some of the major changes made to the Do 217P V-1 included a 'sealed' cockpit canopy and a third engine in the fuselage to drive the supercharger unit. The ventral air intake for the engine can be seen in this view. (Dornier via Jarrett)

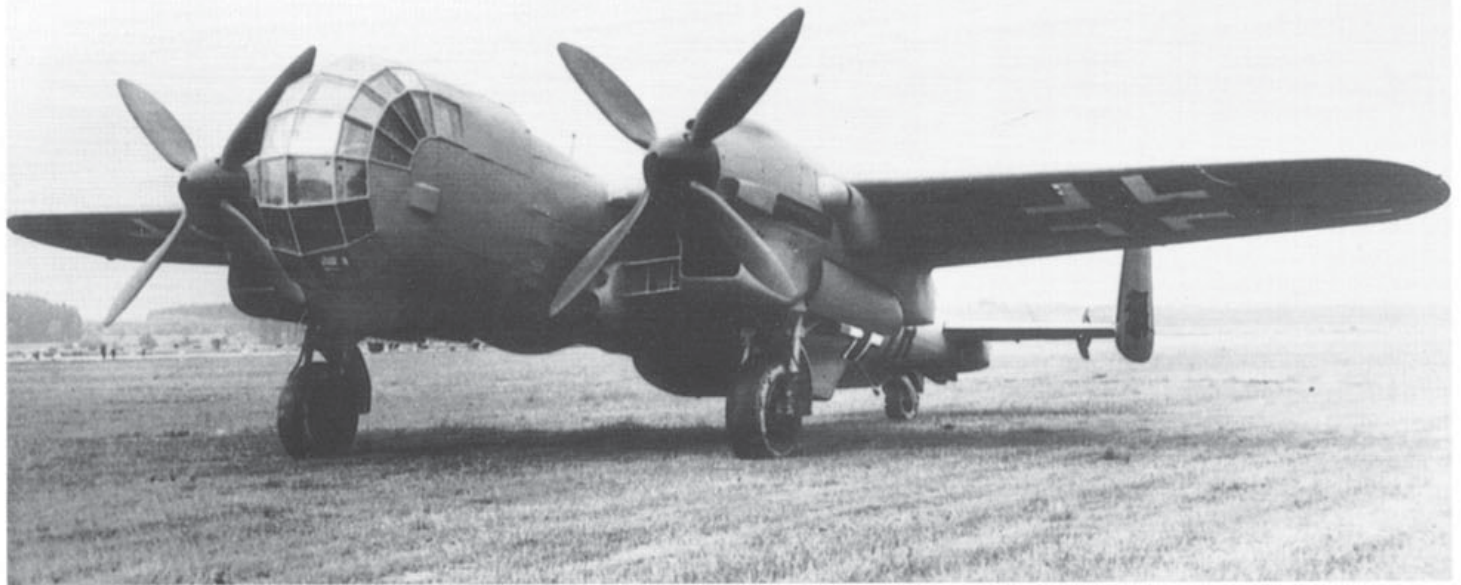


Dornier Do 217P V1, BK+IR prototype seen in mid-1942.
Pressurised cockpit



Dornier Do 317V1, VK+IY prototype in 1943.





Award dates of the Ritterkreuz and Eichenlaub to aircrew associated with Do 217 units

KG2

Abrahamczik, Rudolf (14./KG 2) 29 Feb 1944
 Bornschein, Walter (4./KG 2) 24 Sept 1942
 Bradel, Walter (9./KG 2) 17 Sept 1941
 Broich, Peter (3. and 10./KG 2) 10 Oct 1942
 Czernik, Gerhard (6./KG 2) 16 Mar 1941
 Fink, Johann, Dipl-Ing (KG 2) 20 June 1940
 Genzow, Joachim (4./KG 2) 23 March 1941
 Graeber, Heinz (15./KG 2) 30 Sept 1943
 Halensleben, Rudolf von (KG 2) 29 Oct 1943?
 Hunger, Heinrich (Stab./KG 2) 5 July 1941
 Kessel, Karl (KG 2) 24 Jan 1944
 Kindler, Alfred (6./KG 2) 24 Sept 1942
 Magg, Alois (9./KG 2) 9 May 1944
 Meyer, Heinrich (I./KG 2) 15 Oct 1942
 Sengschmidt, Fritz (I./KG 2) 24 Sept 1942
 Seyfarth, Kurt (Stab./KG 2) 5 Sept 1944
 Smittner, Wilhelm (15./KG 2) 14 Sept 1942;
 EL 18 Nov 44 (p)
 Steudel, Josef (III./KG 2) 29 Oct 1944
 Weitkus, Paul (II./KG 2 and KG 53) 18 Sept 1941

KG 100:

Jope, Bernard (KG 40 & KG 100) 30 Sept 1940; EL 24 March 1944
 Schmetz, Heinrich, (KG 4, KG 30 & 11./KG 100) 29 October 44
 Schmidt, Hermann (I./KG 100 & I./KG 66) 20 Apr 1944
 Scholz, Siegreid (2./KG 100) 24 March 1943 (p)

(p) posthumous award

While this figure was considerably better than a Do 217M bomber, which tipped the scales at 36,817 lb in loaded condition, it was still about 300 lb heavier than the Ju 88G-6.

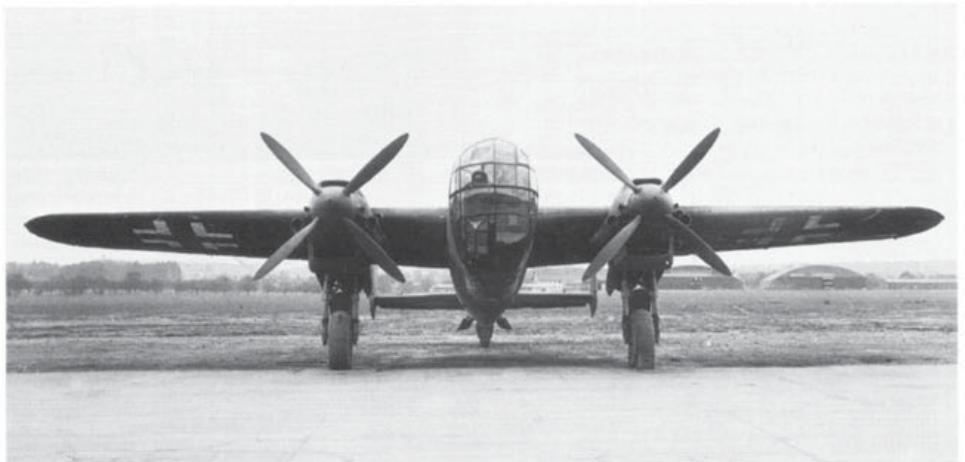
Standard armament of the Do 217N-2 was similar to that of the Do 217N-1, a four-cannon Schrage Musik installation adding the suffix /R22. The aircraft was fitted with FuG 220 Lichtenstein SN-2 radar as well as FuG 202 or FuG 212. Service use of the Do 217N-2 by the Nachtjagd was, as with earlier variants, spread across the force in small numbers. The main user units were NJG 3 and NJG 4, with NJG 1, 2, 5 and 6 also receiving examples.

Perhaps the most ambitious company project based on the Do 217 bomber was a proposed high altitude reconnaissance variant, the Do 217P V-1 (BK-IR) which returned some impressive performance figures. (MAP)

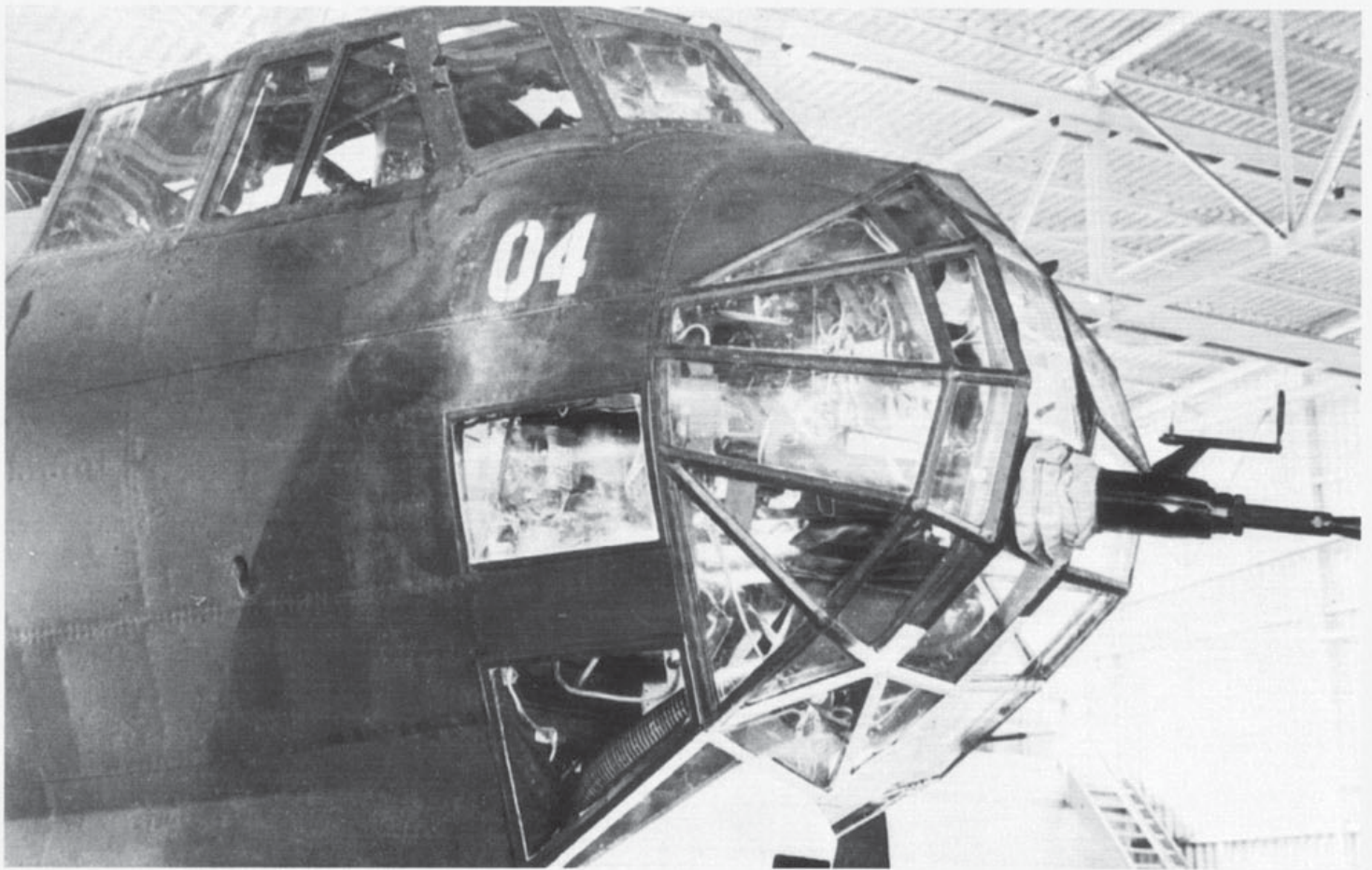
EXPERIMENTAL VARIANTS

Apart from the standard Do 217s retained by Dornier to test numerous systems, the company built the experimental Do 217P which aimed to offer a high altitude reconnaissance and bombing capability in a single airframe. A reconfigured Do 217E-2, the Do 217P V1 had a supercharger system driven by a DB 605T engine mounted in the fuselage.

Continued on page 32



Above right: The elegant lines of the Dornier Do 217 were lost or gained with the M model, depending on the eye of the beholder. By modifying the aircraft to this configuration, Dornier extended the line to partially make good a general shortfall of bombers to equip the Kampfgeschwader. (Dornier) Right: Large underwing radiators were fitted to the fully pressurised and highly modified Do 217P V-1 which was unarmed. Deeper and squarer air intakes were also incorporated on the DB 603B engines. (Dornier via Jarrett)



Dornier Do 217 In detail

Pictures from Bundesarchiv and Dornier GmbH files

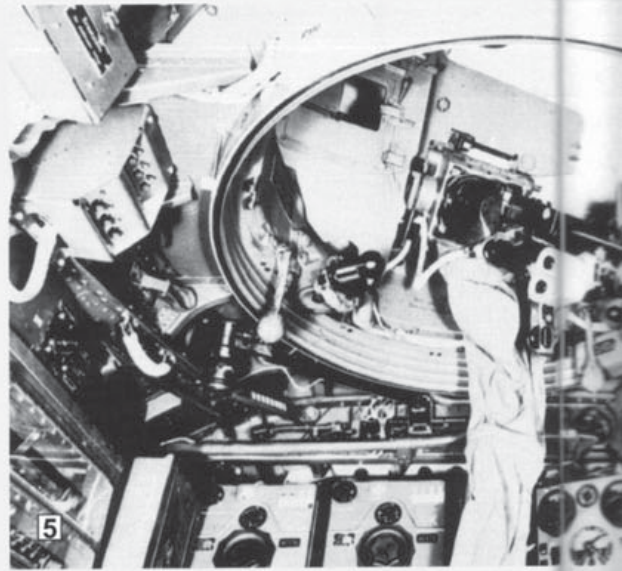
Continued on pages 30, 31 and 32

Additional scanning windows were provided in the starboard side of the Do 217E's glazed nose. A 20-mm MG FF cannon is fitted, complete with its 'ring and bead' sight. (via Griehl) Below: Do 217E nose close up reveals the 87 octane fuel rating triangle, the 'teardrop' astro-hatch and one of two lateral firing MG 15 machine guns. Although they looked like an afterthought, these cockpit guns had a good field of fire up and over the wing. (Bundesarchiv)





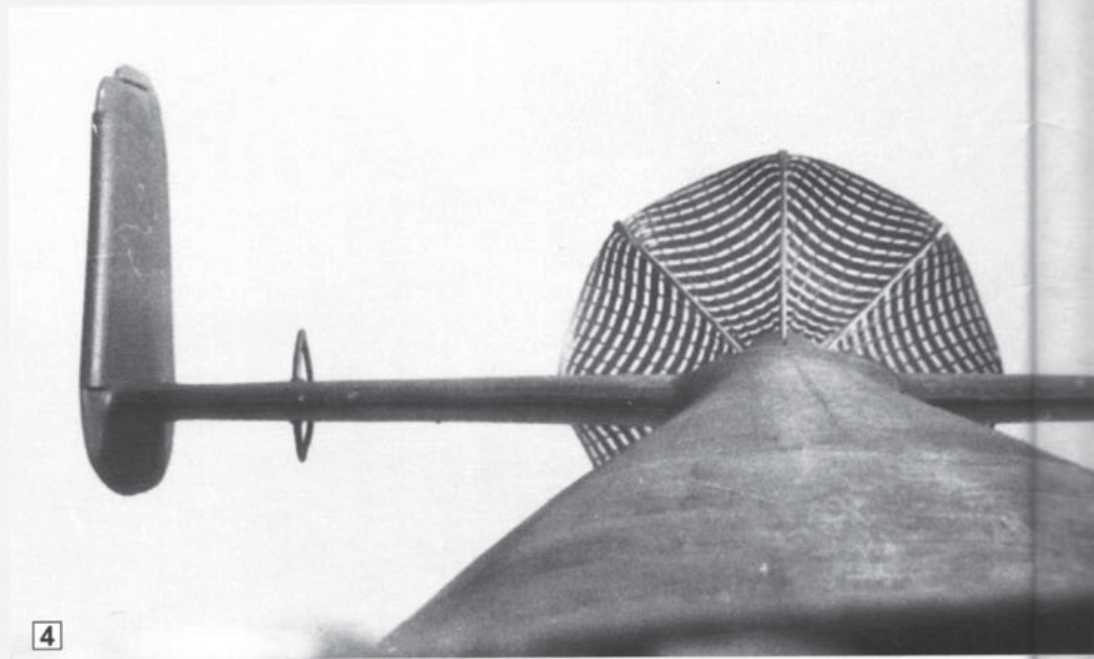
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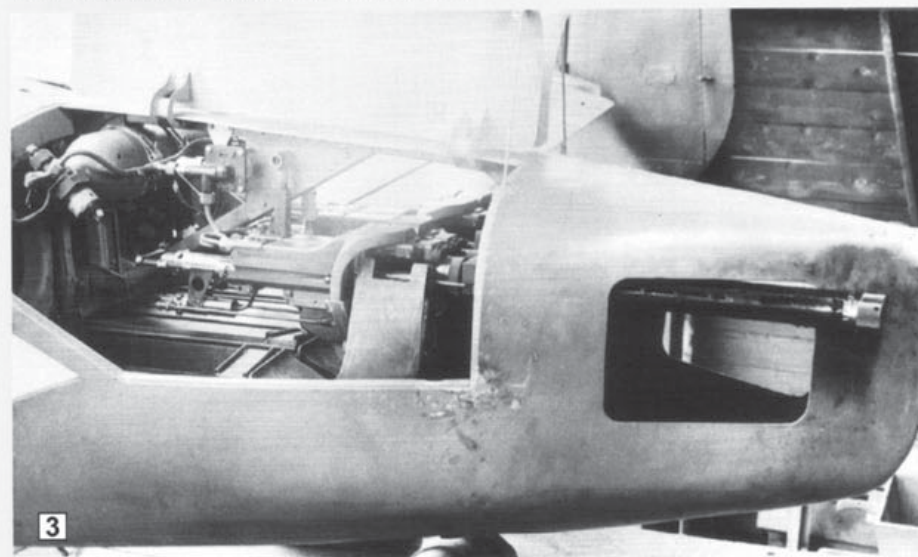


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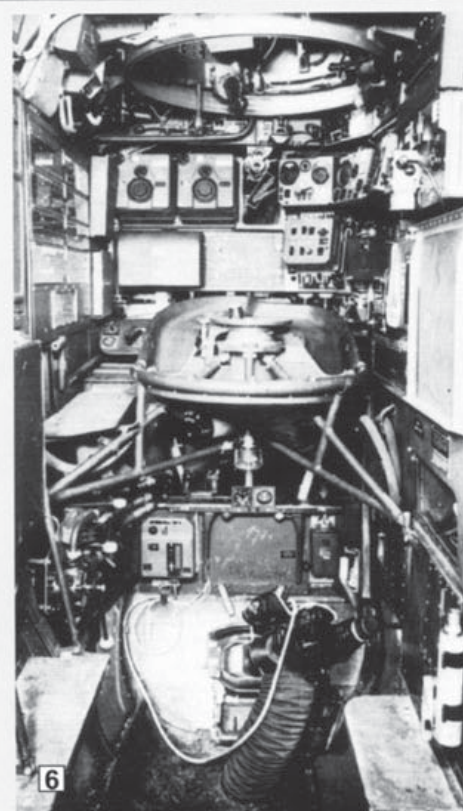


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1. The quite narrow, 'single pilot' cockpit of the Do 217 was not untypical in German bombers, few of which boasted dual controls although the aircraft could however be flown by the observer in an emergency. The master compass is on the right below the instrument panel. (via Griehl). 2. On the right side of the Do 217E cockpit behind the compass in its angled housing was the main instrument panel with engine, temperature and pressure gauges clearly displayed. (Dornier via Griehl) 3. Potentially much more useful on the Do 217 from the combat point of view was to substitute the dive brakes with some extreme tail defence. Dornier devised a four-gun tail 'stinger' consisting of twin 81Z combinations which could be fitted in place of the long tail brake housing. 4. Having worked hard to comply with an official edict to incorporate an effective dive brake on the Do 217, Dornier developed two types. Neither proved ideal for such a heavy aircraft although this Perlon parachute brake could be used to kill speed in flight or during a fast landing.



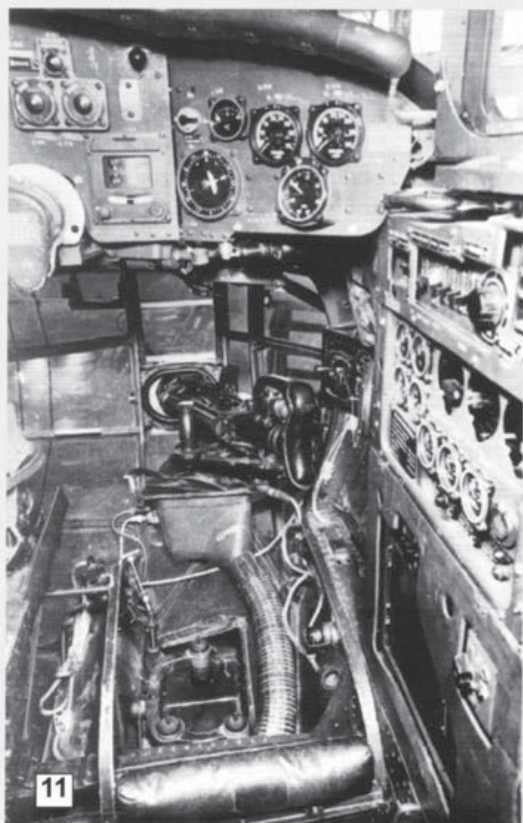
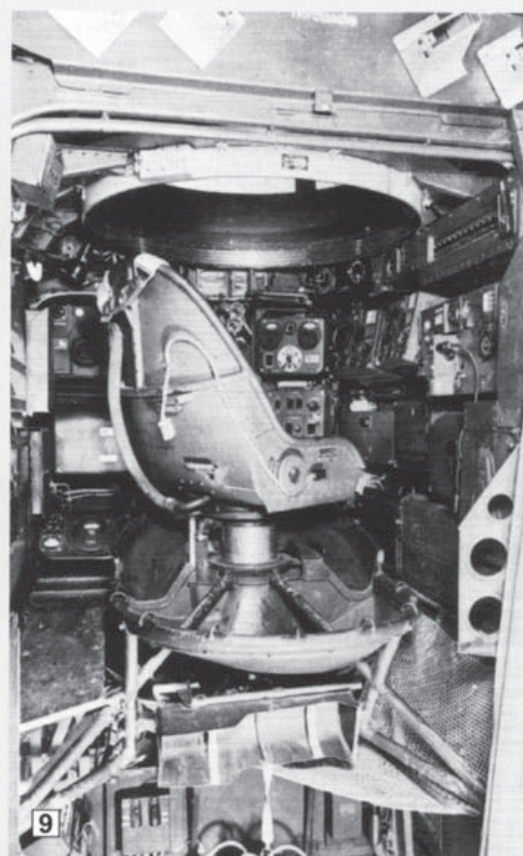
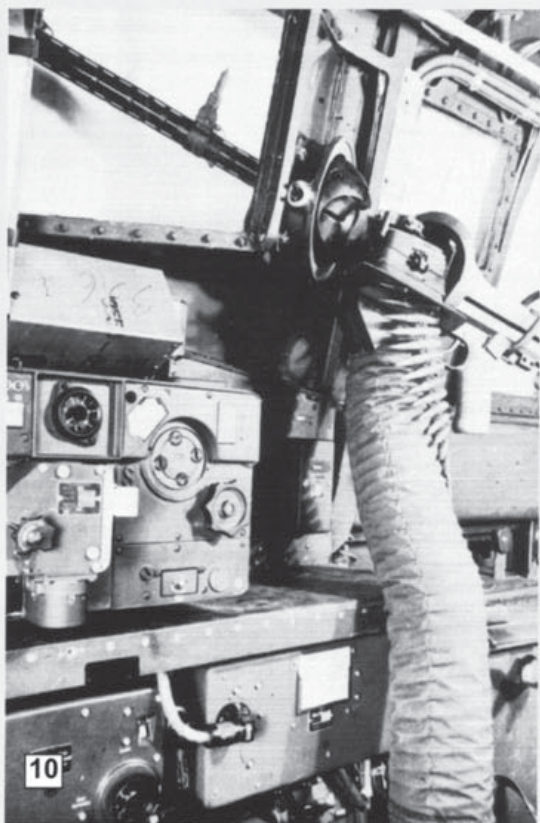
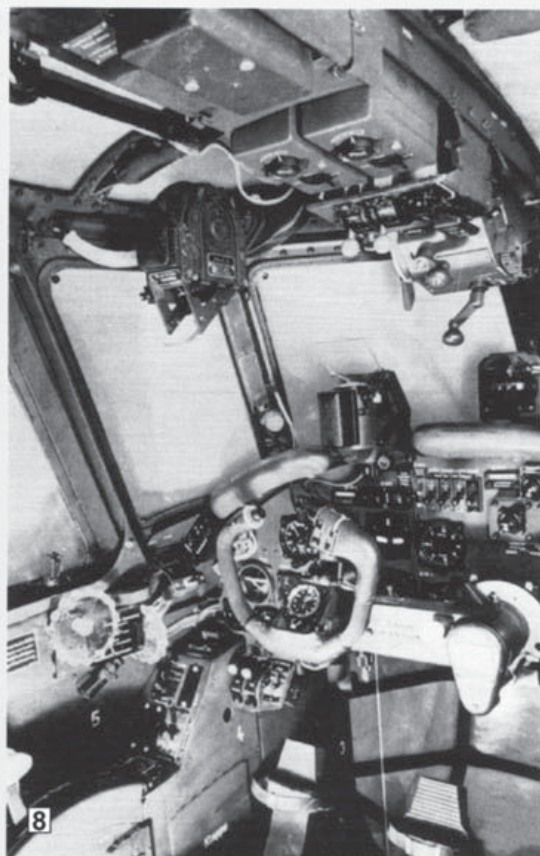
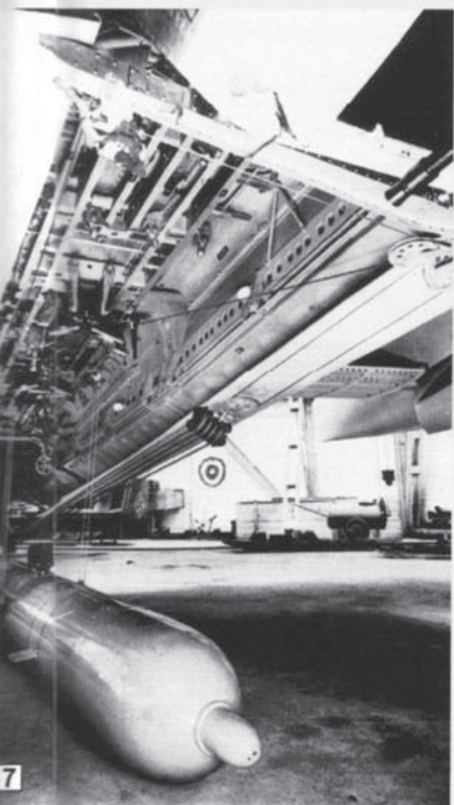
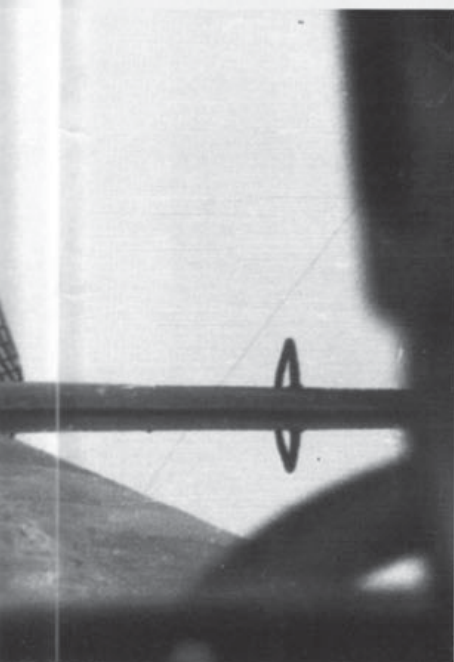
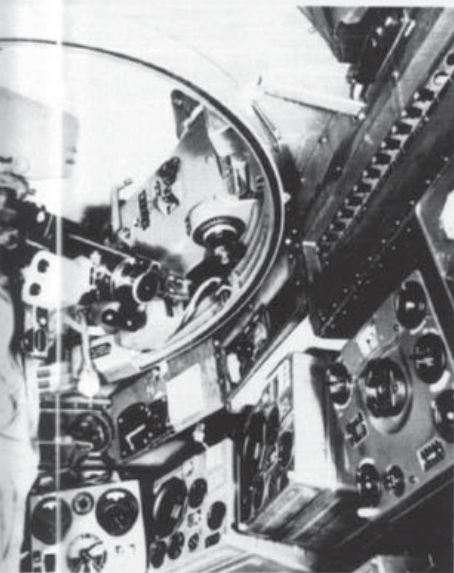
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5. With its empty spent cartridge chute hanging limp, the EDL turret with a single MG 131 turret gun introduced on the Do 217E-2 shows how even this ultra-slim weapon took up a good deal of space. 6. With the dorsal turret gunner's seat removed the relative position of the dorsal and ventral MG 15 positions can be appreciated, as can the limited field of fire from the latter. 7. The Do 217E could accommodate a torpedo if a supplementary bay behind the main bomb bay was utilised. The weapon was loaded via a system of winches and pulleys shown here in the lifting position. (Dornier via Griehl) 8. German bomber pilots had a generally very good view from their cockpits and the Do 217 was no exception. The Do 217E-1 had a clearly laid-out instrument panel, comfortable 'half wheel' control column grip and supplementary instruments set into neat sidewall consoles. (Dornier via Griehl) 9. A longer view of the rear turret position in a Do 217E. The gunner's armoured seat was all but 'suspended' over the dorsal gun well on the network of bars and brackets shown. (Dornier via Griehl) 10. The lateral MG 15 machine gun with its distinctive spent cartridge trunking and belted ammunition on the port side of the Do 217E's cockpit canopy. The gun covered the side and upper quarters of the aircraft from angled windows on each side. (Dornier via Griehl) 11. Forward firing guns on the Dornier Do 217E could be operated from one of a number of positions in the optical nose panels. Although there was a choice of locations for the hand held guns, there was precious little room for the gunner to work. Note the curved leather shoulder pad on the 'free' MG FF cannon. (Dornier via Griehl)

Looking aft, the Do 217E-1 bomb bay with two SC 500 and two SC 250 bombs in place. For normal operations the Do 217 was one of the few German bombers designed to carry a substantial payload entirely internally. (Dornier via Griehl)

Continued from page 28

Making its first flight in June 1942 the aircraft attained an altitude of 43,965 ft, service ceiling later being established at an impressive 52,597 ft. The Do 217P V2 and V3 were followed by three Do 217P-0 pre-production aircraft although lacking any production order from the Luftwaffe, no further examples were built.

After the 1943 cancellation of the Do 317, put forward as an insurance against the failure of the Ju 288 and Fw 191 under the ill-fated 'Bomber B' programme, the few aircraft completed were converted into the Do 217R. Production of the Do 217 was terminated by June 1944, the company's full resources then being switched to the Do 335 fighter.

The almost total replacement of the Do 217 with other types by the last year of the war is shown by a Luftwaffe Order of Battle for 10 January 1945.

The only Dorniers then in front line service were with Fernaufklarungsgruppe Nacht, which flew sorties under the direction of Luftflotte 4 over Hungary and Yugoslavia and at the behest of Luftflotte 6, responsible for East Prussia.

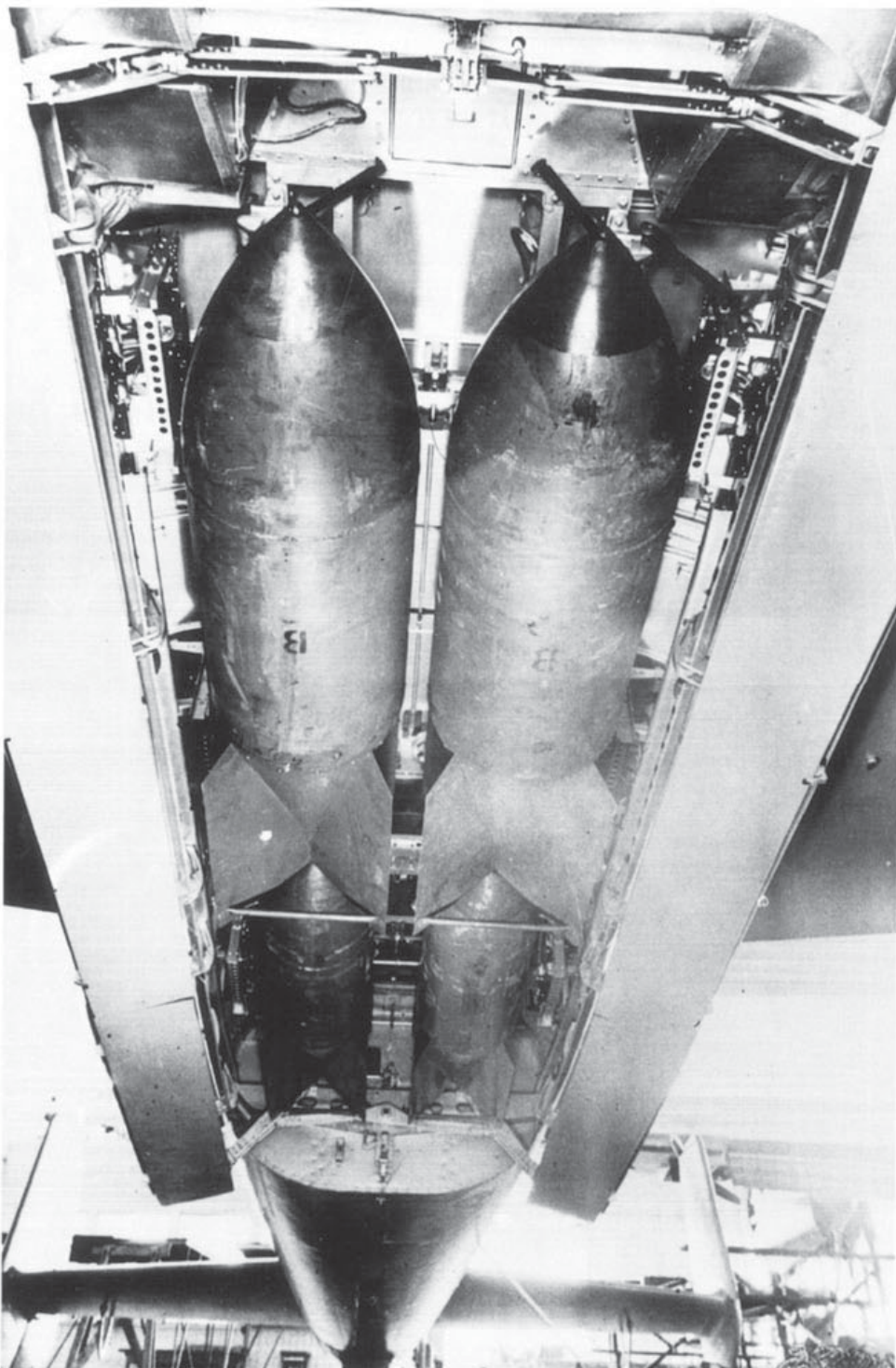
This was not the complete picture, as some Do 217s remained on the strength of KG 200, the night fighter units and training schools, plus some headquarters and liaison units smaller even than Staffel size.

Of the projected developments of the basic Do 217 design, the Do 317B would have had the Do 317A fuselage mated to long span wings, remotely controlled armament and DB 610 engines.

This project was abandoned in 1943 but a Do 417 derivative was studied. Radically different to its predecessors, the Do 417 was to have had a single fin (in both A and B versions) and remotely controlled armament, including a tail turret. The Do 417A was envisaged as having BMW engines, with the DB 603 powering the Do 417B; neither went beyond the drawing board stage.

By the time the war ended the majority of the 1,887 Do 217s accepted by the Luftwaffe (out of a total of approximately 1,998 built) had been expended on operations; no airframe is known to exist today although some components still come to light when crash sites are excavated. These sometimes yield poignant reminders of the wartime forays of the Kampfgeschwaderen, particularly when they can confirm the last resting place of crewmen who have been 'missing in action' for over 50 years.

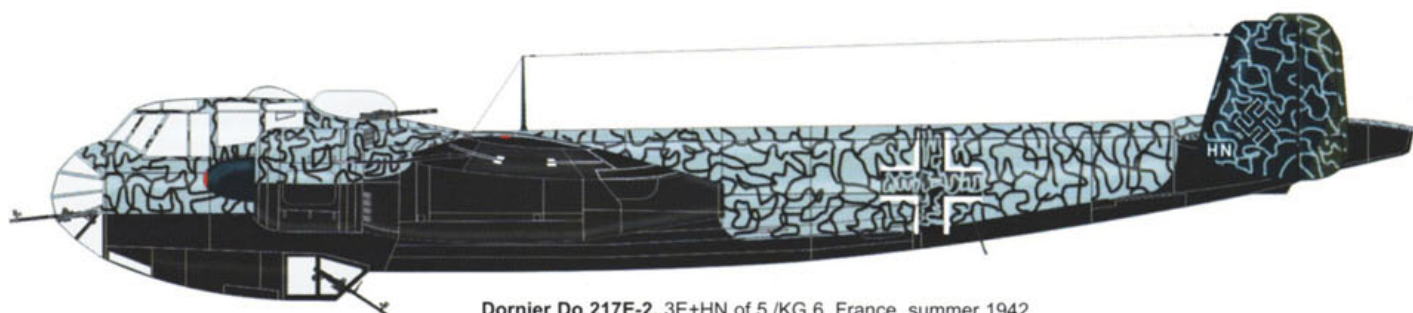
One such was gunner Obfw Heinrich Richter of 8./KG 2 whose remains were found in the wreckage of a Do 217E-4, brought down on a raid on Teeside on 15 January 1942. Richter, previously confused with his crew's radio operator Unteroffizier Hans Maneke, was remembered at a ceremony at St Peter's Church, Middlesbrough, located about 400 yards from where his Dornier crashed. Richter was interred at Thornaby Cemetery on 14 October 1998.



Dornier Do 217 kits and accessories

Scale	Type	Manufacturer	Reference	Remarks
1:72	Dornier Do 217E	Airfix	4020	Injection moulded kit
1:72	Dornier Do 217K-1 + Hs293	Italeri	069	Injection moulded kit
1:72	Dornier Do 217K-1	Italeri	105	Injection moulded kit
1:72	Dornier Do 217N-1	Italeri	125	Injection moulded kit
1:72	Dornier Do 217M	Airkit	C024	Cockpit instrumentation for late bomber version
1:72	Dornier Do 217N	Airkit	C025	Cockpit instrumentation for night fighter
1:72	Dornier Do 217Z-2	Airwaves	3064	Conversion with Fritz X bomb
1:72	Dornier Do 217K/N	Eduard	72200	Detail parts set
1:72	Dornier Do 217K	Squadron/Signal	9171	Canopy
1:48	Dornier Do 217N-1/J	MPM	48015	Complete kit
1:48	Dornier Do 217K	MPM	48016	Complete kit
1:48	Dornier Do 217E	MPM	48019	Complete kit
1:48	Dornier Do 217E	Monogram/Revell		Kit should be available in 2000

Engines and Things produce complete kits in 1:72 and 1:48th scale for either the BMW-801 radial (Dornier Do 217E 1-5) or the Daimler Benz 603 V-12 in line engine (Dornier Do 217M/N) that can be fitted into any kit in scale.



Dornier Do 217E-2, 3E+HN of 5./KG 6, France, summer 1942



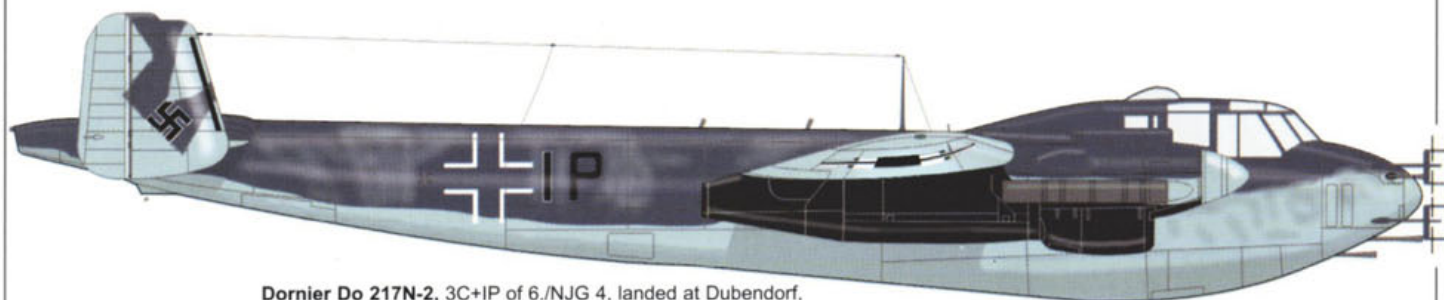
Dornier Do 217E-2, 'A' of KG 100. Used for training purposes. 1944-45



Dornier Do 217M-1, U5+LK of 2./KG 2, Operation Steinbeck, October 1944



Dornier Do 217M-1, 56051, U5+DK of 2./KG 2, Operation Steinbeck, October 1944. Crashed near Cambridge



Dornier Do 217N-2, 3C+IP of 6./NJG 4, landed at Dubendorf, Switzerland and interned, 1944.



Dornier Do 217N-2, KG+NI of NJG 1, in 1943



With VE-Day, examples of all the leading German aircraft types were evaluated by the RAF including this Do 217M-1 (W. Nr. 6158) of KG 2 which became 'Air Ministry 107'. Three Do 217Ms came within this temporary designation system for captured aircraft but none were preserved. (Dornier)



OTHER WARPAINT SERIES TITLES

Bristol Beaufighter £6.95, Hawker Siddeley Buccaneer £7.50, Junkers Ju 87 Stuka £7.50, North American F-100 Super Sabre £7.50, Hawker Typhoon £7.50, Avro Shackleton £7.50, Junkers Ju 88 £7.50, Hawker Hunter £11.50, F4F Wildcat/Martlet £7.50, Vickers Wellington £7.50, DH Sea Vixen £7.50, Fairey Swordfish £8.50, Fw 200 Condor £7.50, BAC Lightning £11.50, Short Stirling £7.50, Hawker Sea Fury £7.50, Gloster Javelin £9.50, Douglas Skyraider £8.50, de Havilland Hornet and Sea Hornet £9.50, Supermarine Seafire (Griffon engined variants) £9.50, Armstrong Whitworth Whitley £8.50, Gloster Meteor £16.50, P-47 Thunderbolt £18.50

A number of these titles are at times out of print and readers are advised to check with the publishers before ordering

Left: Dornier Do 217s of KG 2 taxiing for take off during the later stages of the blitz on England. Note the Jumo-engined Dornier Do 217A-0 second in line (Bundesarchiv)

Dornier Do 217 Technical Data

DORNIER Do 217E-2

Type: Medium/heavy bomber

Powerplant: Two BMW 801ML 14-cylinder air-cooled radial engines

Accommodation: Crew of four comprising: pilot, navigator/flight engineer, radio operator/gunner and bomb aimer/gunner

Dimensions:
span 62 ft 4 in (19m)
length 56 ft 8.5 in (18.2m)
height 16 ft 6 in (5.03m)

Weights:
empty 19,522 lb (8,950kg)
normal loaded 33,075 lb (15,000kg)

Performance:
maximum speed 320 mph (516km/hr) at 17,045 ft (5,500m); cruising speed 258 mph (416km/hr); normal range 1,429 miles (2,300 km); service ceiling 29,529 ft (9,000m)

Armament: Maximum bomb load 8,818 lb (4,000 kg) on internal and external racks. Typical internal load of eight 551 lb (250kg) and four 1,102 lb (500 kg), or two 2,205 lb (1,000kg) and two 551 lb (250kg) bombs. One fixed forward-firing 15-mm MG 151 cannon in lower port nose, one 13-mm MG 131 machine gun in dorsal turret; one free-mounted 13-mm MG 131 machine gun in ventral

step firing aft; one free-mounted 7.9-mm MG 15 machine gun firing forward and two free-mounted 7.9-mm MG 15 machine guns in lateral, cockpit side positions.

DORNIER Do 217M-1

Type: Medium/heavy bomber

Powerplant: two 1,175 hp Daimler-Benz DB 603A 12-cylinder liquid-cooled engines

Accommodation: crew of four comprising pilot, navigator/flight engineer, radio operator/gunner and bomb aimer/gunner:

Dimensions:
span 62 ft 4 in (19 m)
length 55 ft 5.25 in (16.98 m)
height 16 ft 6 in (5.03m)

Weights:
empty 19,845 lb (9,000 kg)
maximum loaded 36,823 lb (16,700 kg)

Performance:
maximum speed: 348 mph (560 km/h) at 18,700 ft (5,700 m) cruising speed 248 mph (400 km/h) ceiling: 31,170 ft (9,500 m) range: 1,335 miles (2,150 km)

Armament: Maximum bomb load of 8,818 lb (4,000 kg) utilising external racks; 5,550 lb (2,517 kg) internally.

Two 7.9-mm MG 81 machine guns in nose;

one 13-mm MG 131 in dorsal turret; one MG 131 in ventral step and two 7.9-mm MG 81 machine guns in lateral positions.

DORNIER Do 217N-2

Type: Night fighter and intruder

Powerplant: Two Daimler-Benz DB 603A 12-cylinder liquid-cooled engines

Accommodation: Crew of four comprising pilot, navigator/radar operator and flight engineer/gunner

Dimensions:
span 62 ft 4 in (19 m)
length (including radar aerials) 62 ft (19 m)
height 16 ft 4.75 in (5.03 m)

Weights:
empty 22,665 lb (10,280 kg)
maximum loaded 29,101 lb (13,200 kg)
Performance: maximum speed 267 mph (429 km/h); cruising speed 264 mph (424 km/h); ceiling 29,200 ft (8,840 m); range 1,090 miles (1,753 km)

Armament: Four 20-mm MG 151 cannon and four 7.9-mm MG 17 machine guns in fuselage nose plus two or four 20-mm MG FF cannon in 70 degree angle Shrage Musik fuselage installation.