

# Macchi C.202

## in action



DON GREER '80

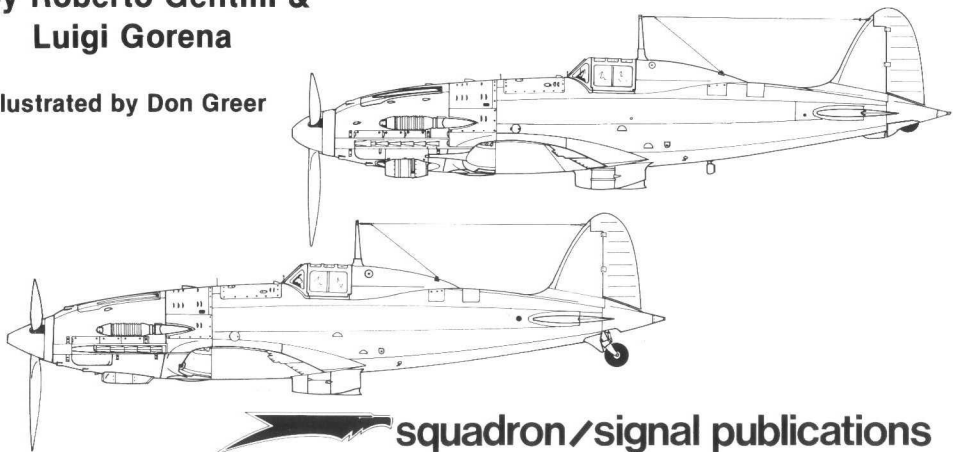


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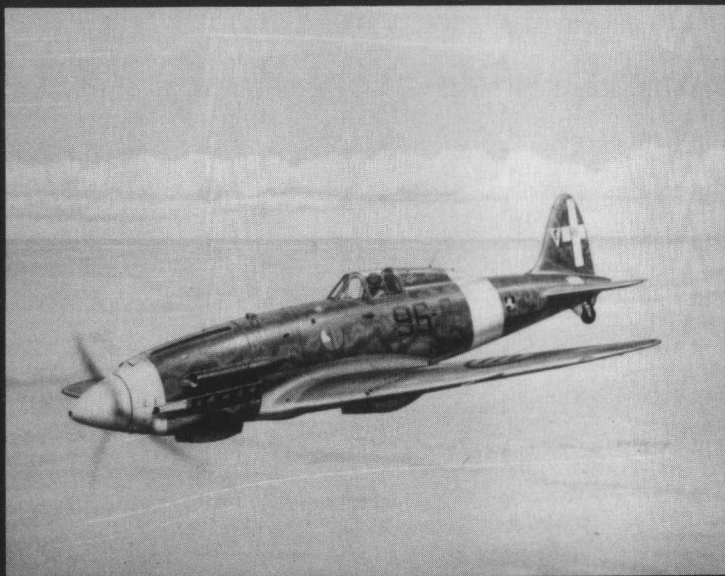
# *Macchi* C. 202 in action

by Roberto Gentilli &  
Luigi Gorena

illustrated by Don Greer



 squadron / signal publications



(Cover) This early *Serie I Folgore* of 9°Gruppo cruises to its new habitat, the Libyan desert. Still in European camouflage, this example also retains the non-filtered supercharger intake.



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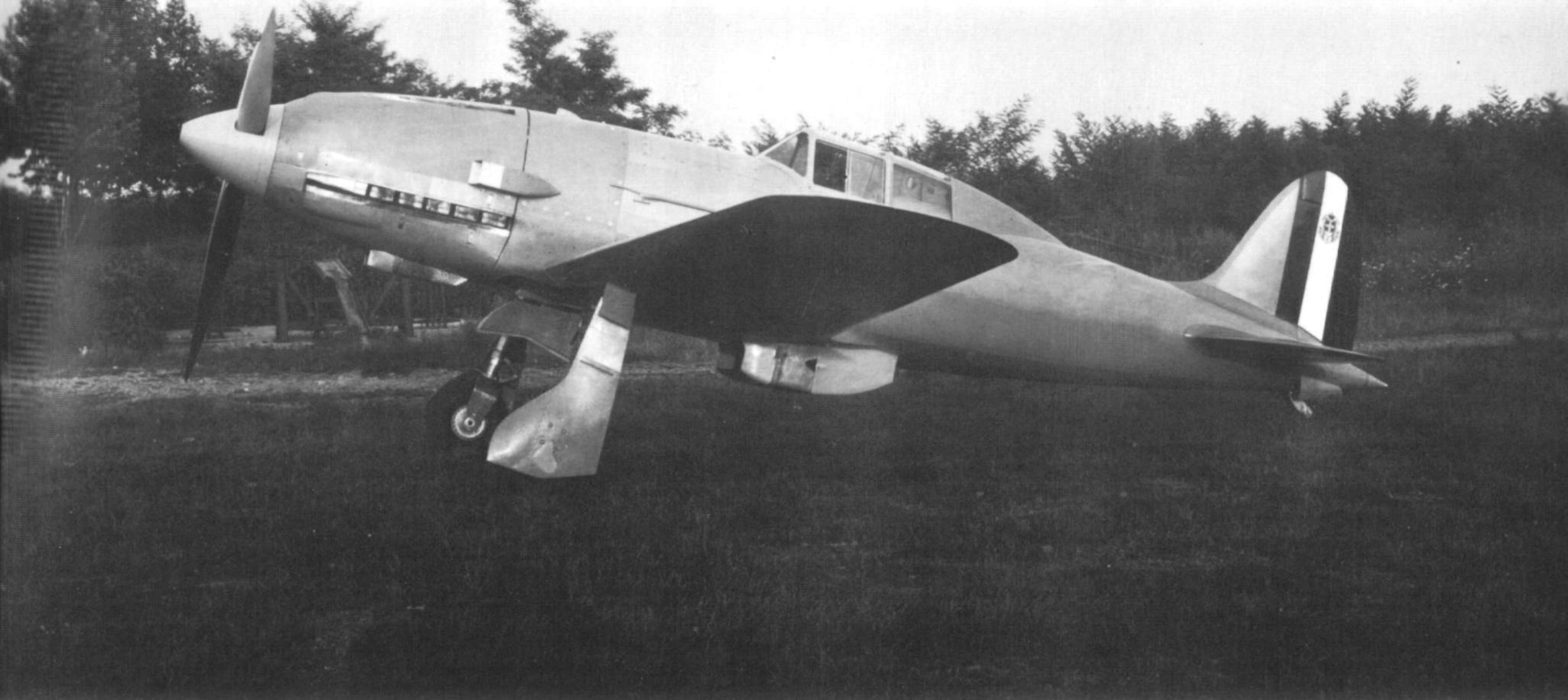
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(Facing Page) Easily among the most graceful aircraft ever built, four mid-production Macchi C.202s strike a classic pose against the Western Desert sky. These 3°Stormo *Folgores* wait for the scramble, the pilot's parachute on the wingtip, harness straps hanging over the cockpit edge.









The sole C.202 prototype, M.M.445, as it first appeared, overall natural metal except for the pre-war green, white, red tail stripes. The short supercharger intake was later changed in shape and length. The windows set into the headrest 'hump' and the retracting tailwheel were deleted from production *Folgores*.



## Introduction

In the second half of the 1930s, as a new war loomed on Europe's horizon, the *Regia Aeronautica*, the Italian Air Force, found itself beset by serious problems. Having long thought itself to be one of the great war machines in history, the prospect of fighting Britain and France forced the *Regia Aeronautica (RA)* to face up to its weaknesses. Italian aviation held the world records for height, distance and, until 1939, for speed. For the 1931 Maneuvers at Ferrara, over 800 aircraft had been assembled, at a time when many other major air forces couldn't lay claim to near that number of all types. From 1936 to 1939 Italian fighters and bombers had fought with great success (albeit against second-rate opposition) in the skies over Spain. All this led to a false sense of satisfaction with the equipment of the *RA*, with the CR.32 biplane fighters (equivalent to the Hawker Fury or Curtiss P-6E) and three-engine bombers such as the SM.79 and SM.81 (of the same vintage as the Ju52), satisfaction that was only tarnished by the realization that other air forces were now equipping with superior aircraft.

In 1939, a series of more modern fighters began to arrive at the *RA's Squadriglie* but they were hardly up to world standards. The Fiat CR.42 and G.50 and the Macchi C.200

The Macchi C.200 fighter from which the C.202 was derived. The fuselage was entirely new on the newer fighter, but the wings, tailplanes and rudder were the same as the C.200's. This is an early *Saetta* (Thunderbolt) with sliding canopy, retracting tailwheel and pre-war 54° *Stormo* markings.



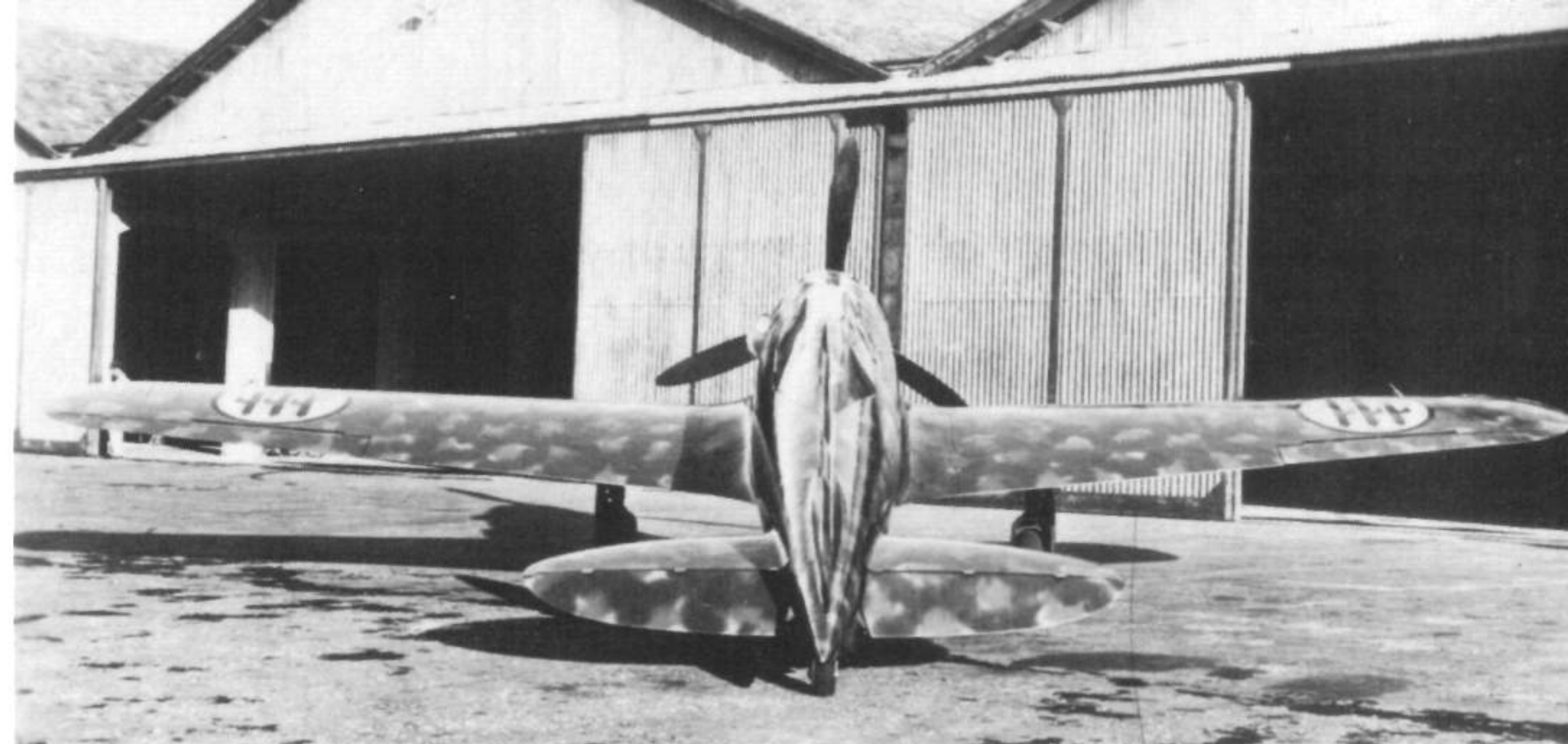
were all powered by the 800hp Fiat A74 R.C. 38 air-cooled radial engine. All were virtually obsolete at the time of their introduction. Throughout the late '30s, the progress of aviation technology had been rapid, particularly in Germany and Great Britain. This showed itself most visibly in the new-generation fighters entering service in those countries, the Bf109 and Spitfire. In contrast with the 'new' Italian fighters, these were powered by in-line, water-cooled engines, which made possible greater streamlining and offered greater power than the radials then available.

Coming to the harsh realization that the *RA* was woefully obsolete by world standards, Mussolini forced the resignation of the Chief of the Air Staff and installed a new Chief, Francesco Pricolo. Fiat had been working on an indigenous in-line engine (the A38) for two years without any success. At the same time, that company had bought reproduction rights to the German DB601, as a backup. One of Pricolo's first acts, in January 1940, was to cancel the A38 program and order Fiat to begin tooling for mass-production of the DB601. Four complete engines were meanwhile rushed from Germany, two for Macchi and two for Reggiane which were both working on in-line engine fighters. Less than seven months later, on 10 August 1940, the prototype Macchi C.202 flew at Lonate Pozzolo, near Varese, piloted by Macchi test pilot Guido Carestiato.

Aeronautica Macchi (frequently shortened to AerMacchi) was already a well known manufacturer. As Nieuport-Macchi, it had built Nieuport and Hanriot fighters during World War I. Between the wars, it had gained fame as the builder of record-breaking seaplanes, competing for, and sometimes winning, the coveted Schneider Trophy. The all-metal MC.72 floatplane held the world speed record of 441mph between 1935 and 1939. The C.200 *Saetta* fighter, which first flew on 24 December 1937, was a direct descendent of these prize-winning floatplanes.

The C.200, though underpowered with its 800hp radial, was a superb 'pilot's' aircraft, with excellent maneuverability and lightness of controls. When Macchi was instructed to create a fighter around the imported German in-line engine, as many of the C.200's components as possible were retained. The C.200's wings, landing gear, vertical tail and tailplanes were mated to an all-new fuselage. The variable-pitch, fully-feathering, constant-speed Piaggio P.1001 propeller was housed in a pointed spinner. The DB601A 1175hp engine was mounted on welded steel tube bearers. Two synchronized Breda-SAFAT 12.7mm machine guns were housed above the engine, featuring boxes for the collection of empty brass and belt links, as was common on Italian fighters. The oil cooler was below the engine, the radiator was under the cockpit, which was set further back than was usual on fighters of that era. This caused difficulties while taxiing but caused no problems in flight. The oval-selection fuselage had four main duralumin spars over stamped metal frames. The fuselage was covered with 'avional' duralumin, housing two self-sealing fuel tanks, one of 71.3 gal. behind the engine, the other of 21.1 gal. behind the pilot. The cockpit had a side opening canopy with sliding side window panes. Two windows for rear visibility were set into the prominent headrest fairing. The wings were built in three sections, the center-section integral with the fuselage. The leading edge was a separate component, bolting to the main strength 'box'. The entire trailing edge was hinged, with fabric covered ailerons outboard and all-metal split flaps inboard. The port wing was 8in. shorter than the other to counteract torque, a rather sophisticated solution to an old problem. Two additional fuel tanks of 10.5 gal. each were housed in the wing roots. The variable incidence tailplane and fin were all-metal with fabric-covered rudder and elevators. Landing gear retraction was hydraulic, flaps completely covering the wheel wells. The result was a graceful, elegant aircraft, made up of subtle, sculptural curves, more fit to its racing ancestors than to the needs of wartime mass-production.

The initial C.202 prototype, serialled M.M.445 (M.M. = *Matricola Militare*, Military Serial; 445 being from the series 7-999 reserved for prototypes), first flew a full two months after Italy's entry into the war in June 1940. It was immediately flown to the *RA*'s main test field at Guidonia, near Rome. There it met an enthusiastic reception from test pilots, who gave it high marks. It had the qualities the *RA* needed; speed of over 375mph (60mph faster than any fighter then in *RA* service), climb to 18,000ft. in less than six minutes while retaining the maneuverability that Italian pilots demanded. Based on the glowing reports from Guidonia, the C.202 was immediately ordered into production.

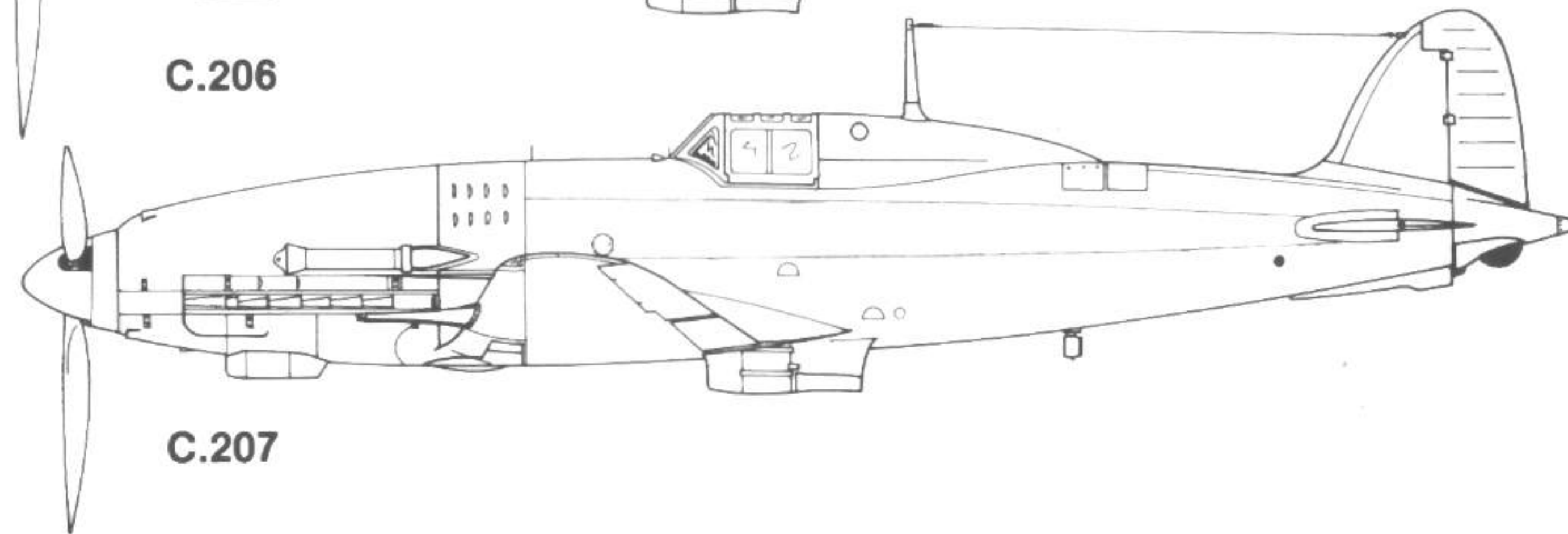
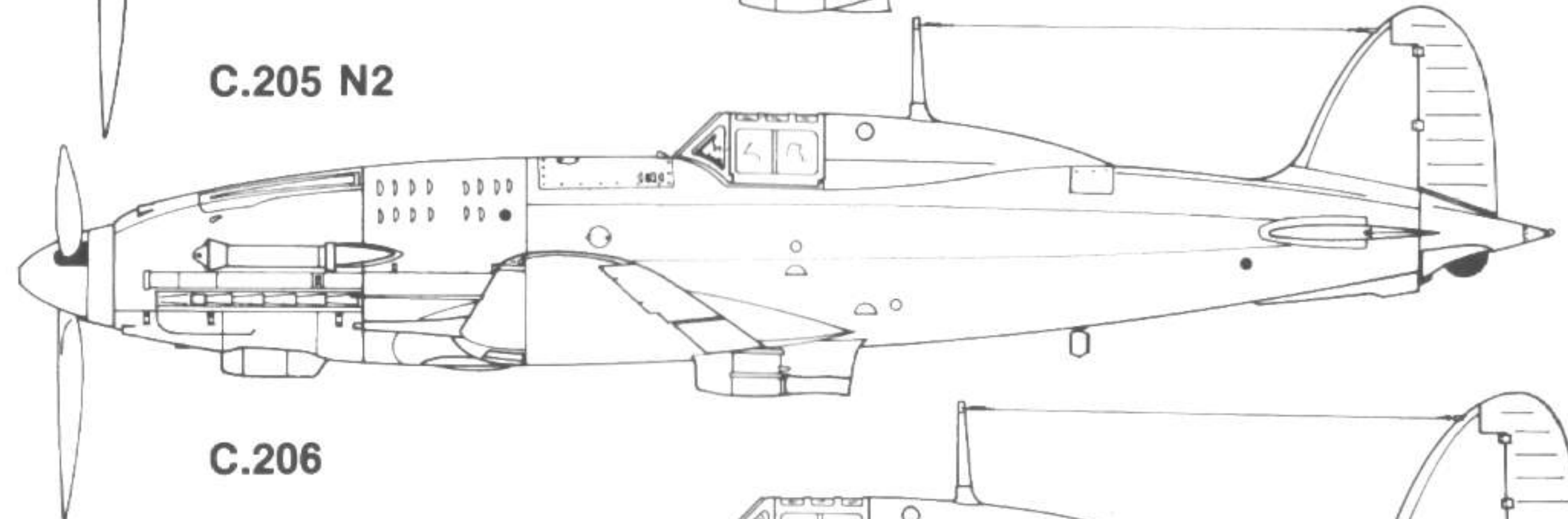
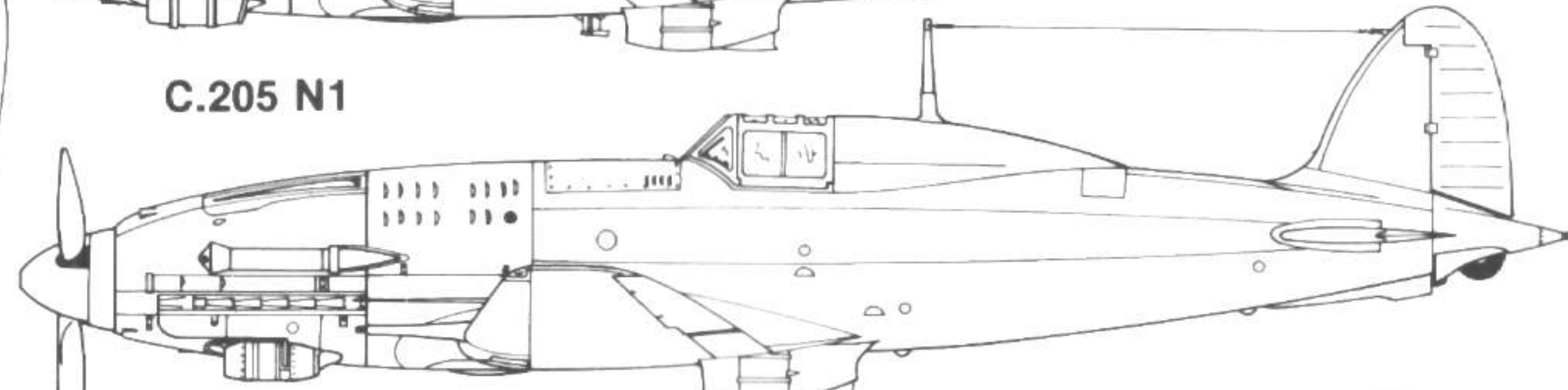
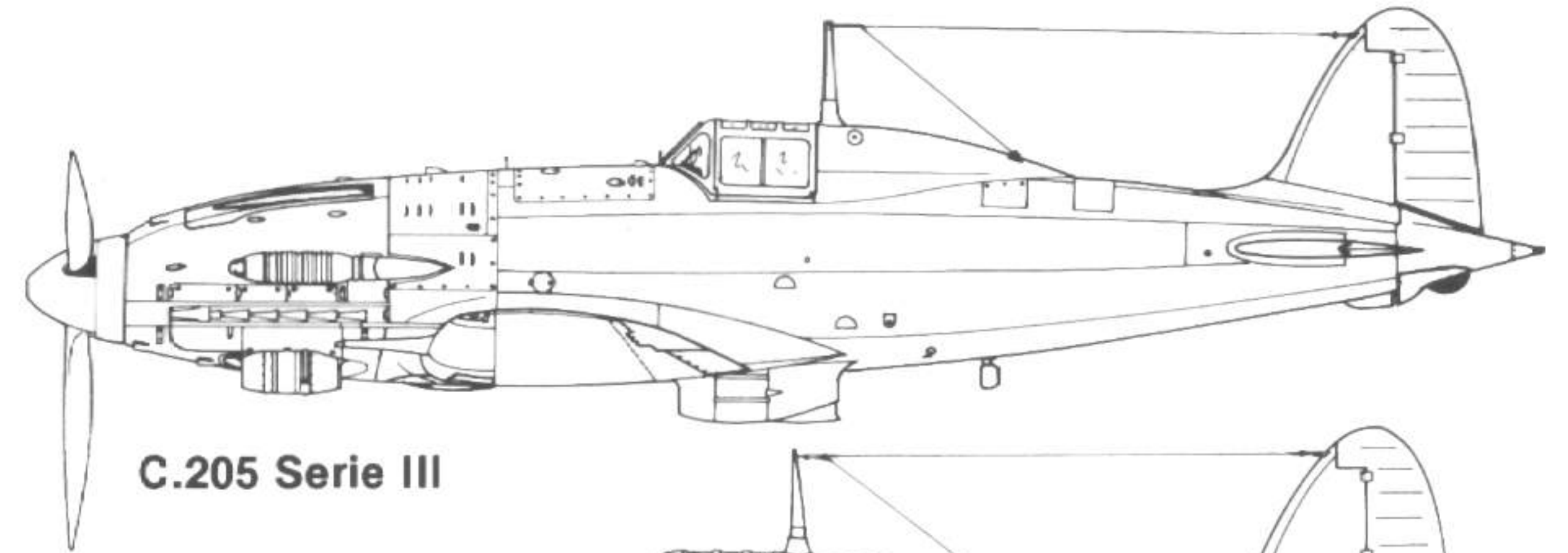
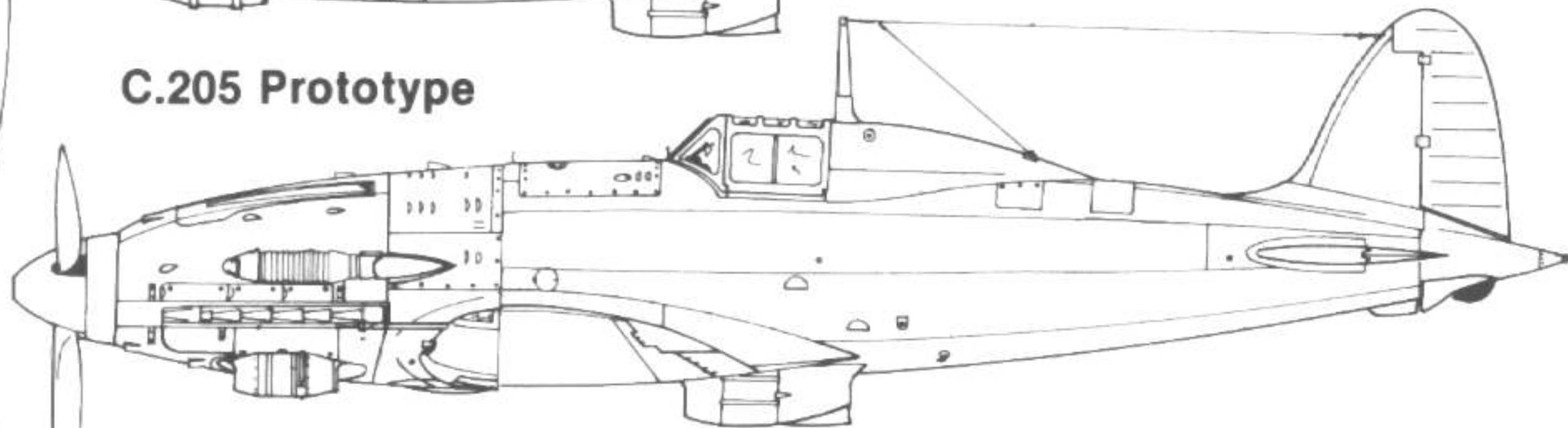
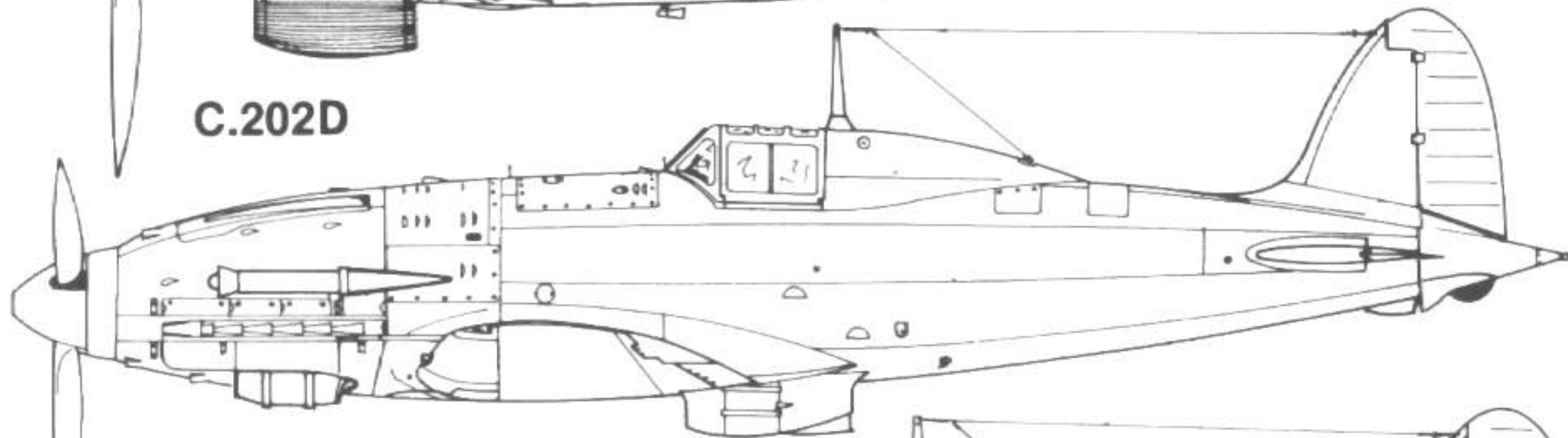
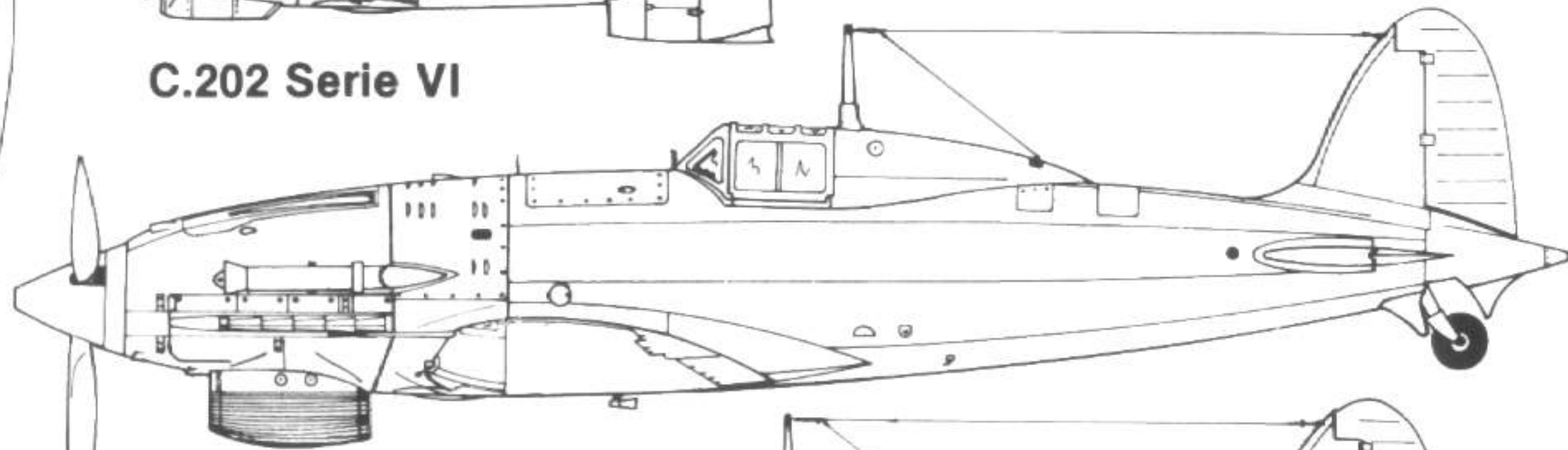
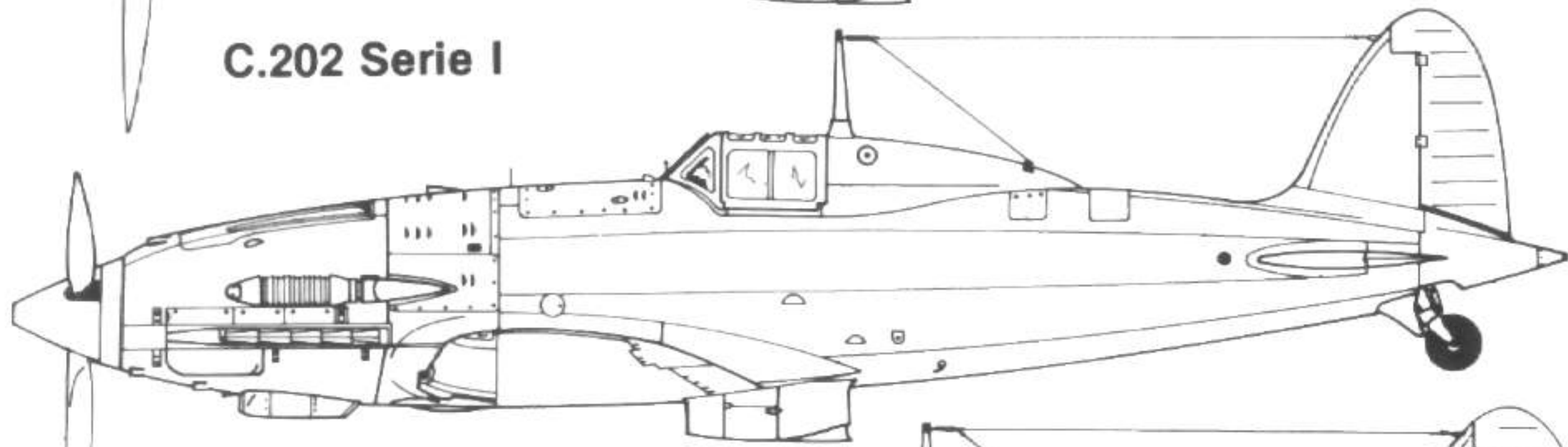
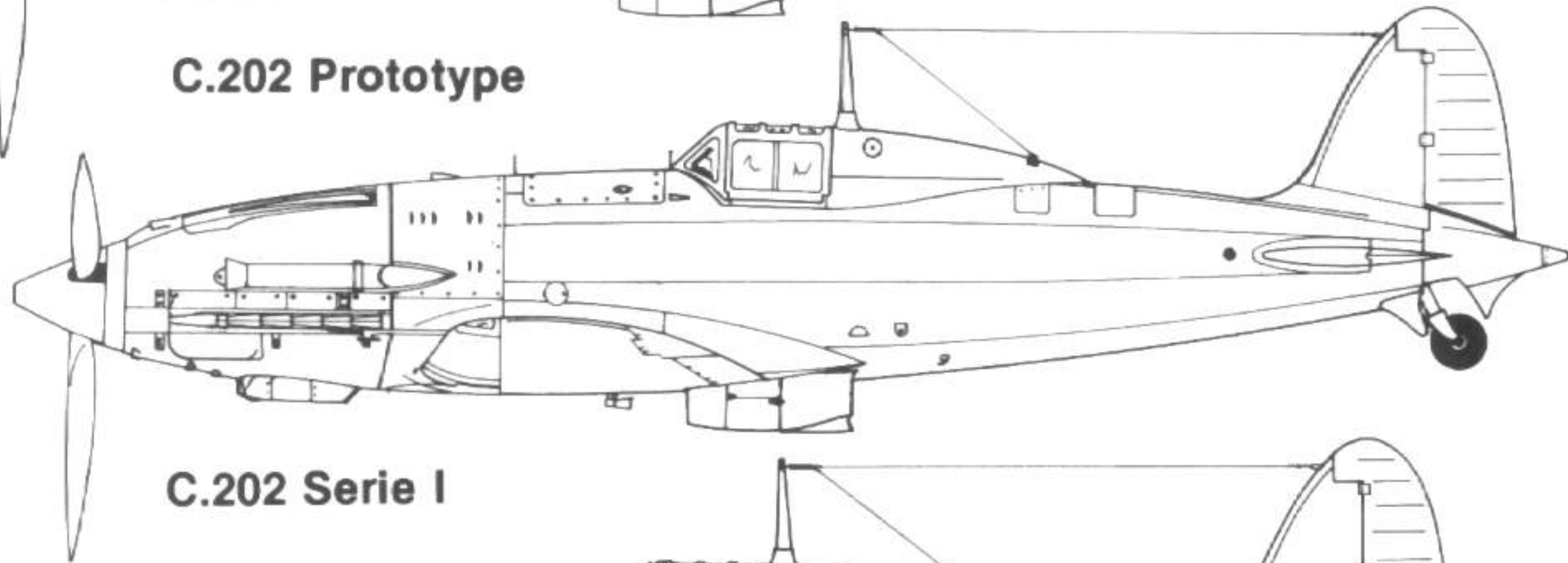
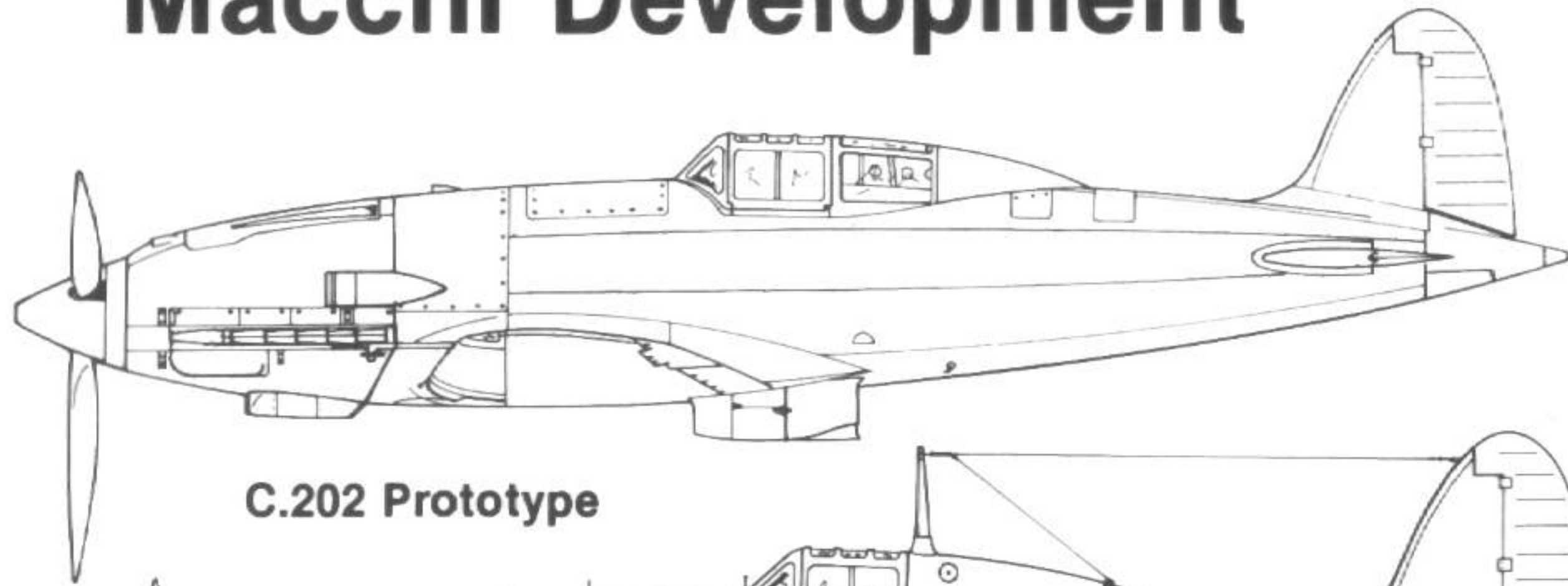


(Above & Below) The prototype in its final form, with long, circular-section supercharger intake and sporting a brown, green and sand dapple camouflage. The fasces insignia on its wings are black and white, the colors reversed on the upper and lower surfaces. In the photo below, the engine is being warmed up. In the cockpit is Comm. Guido Carestiato, Macchi's chief test pilot.





# Macchi Development



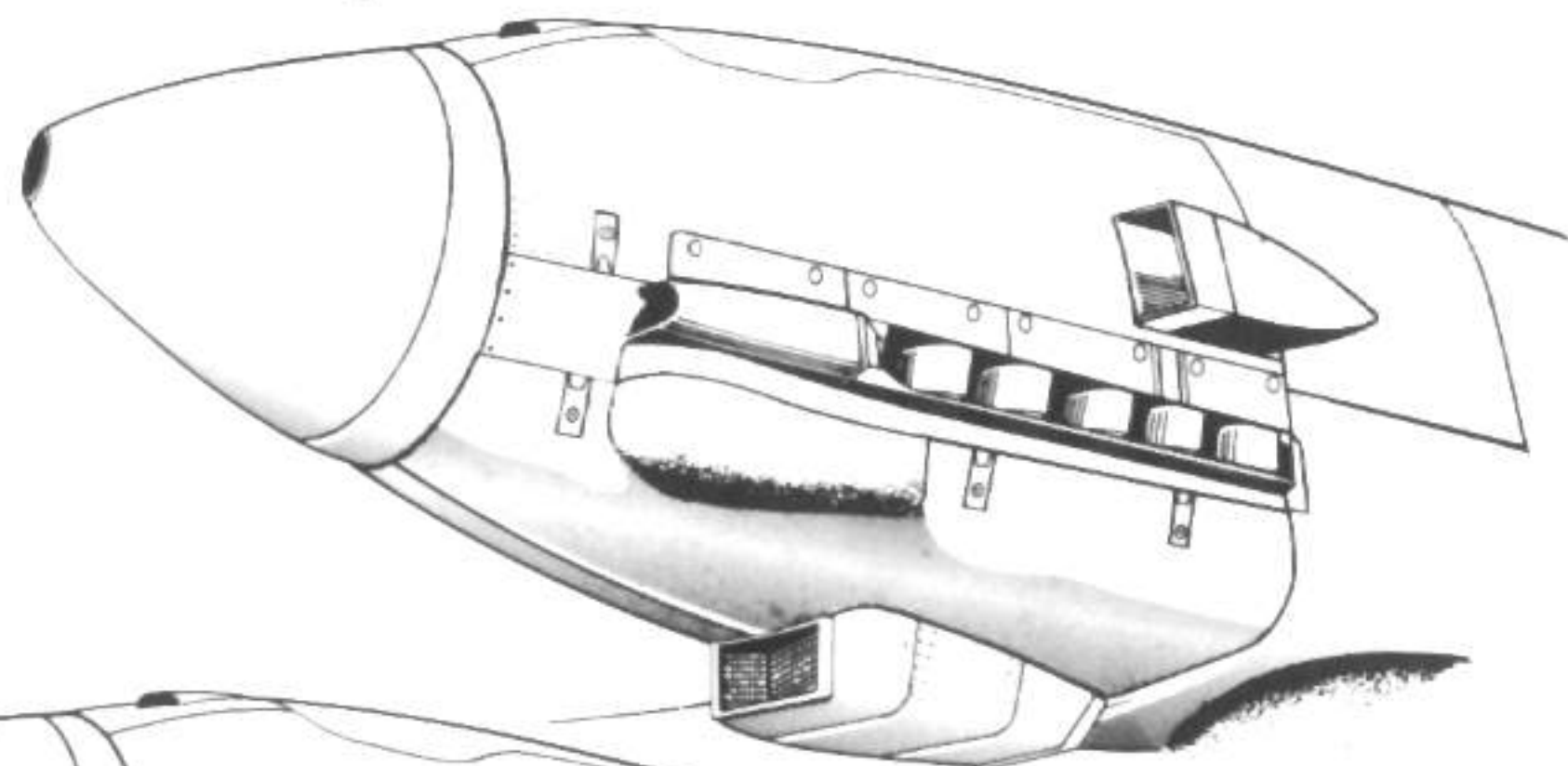




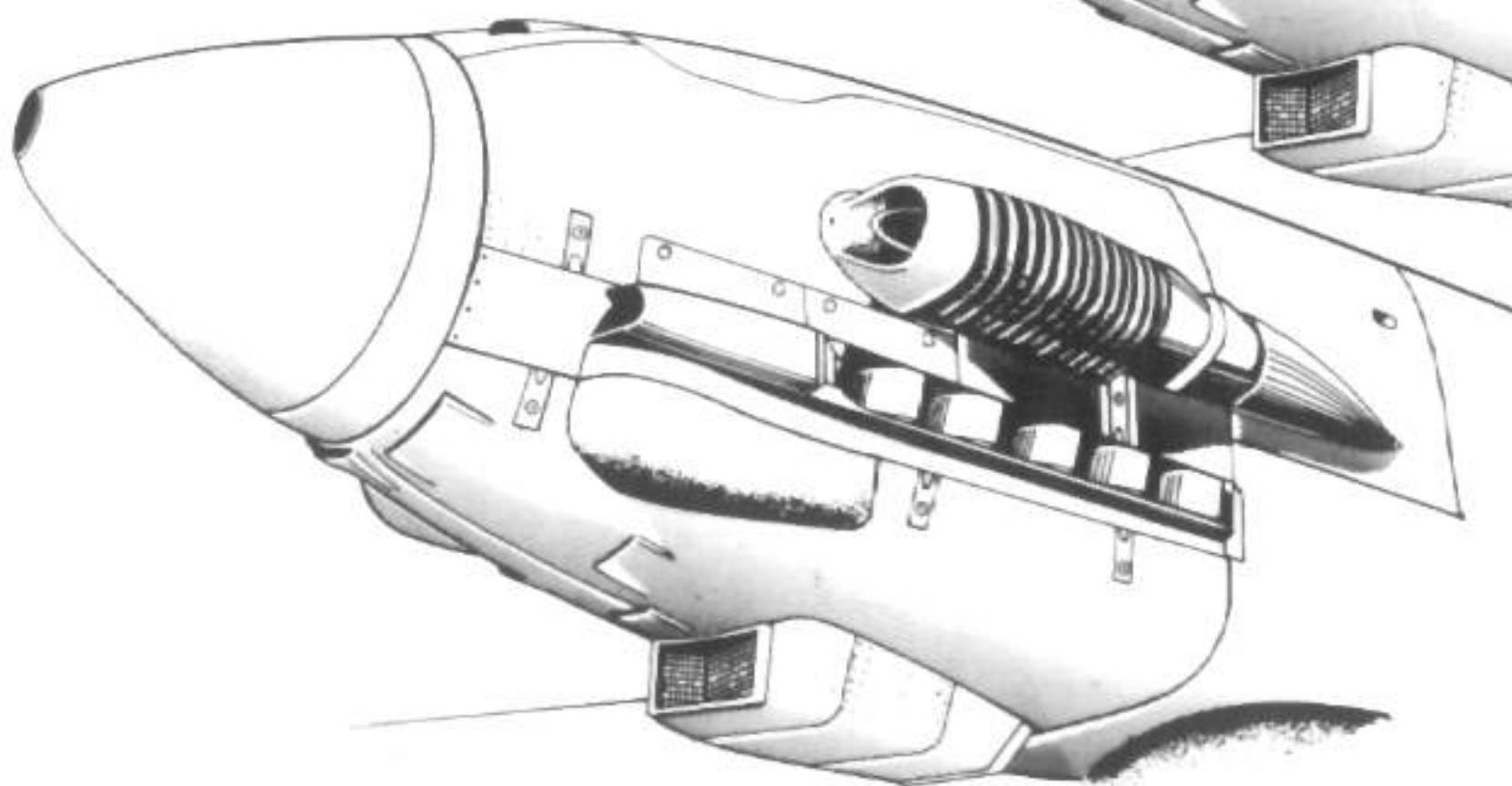
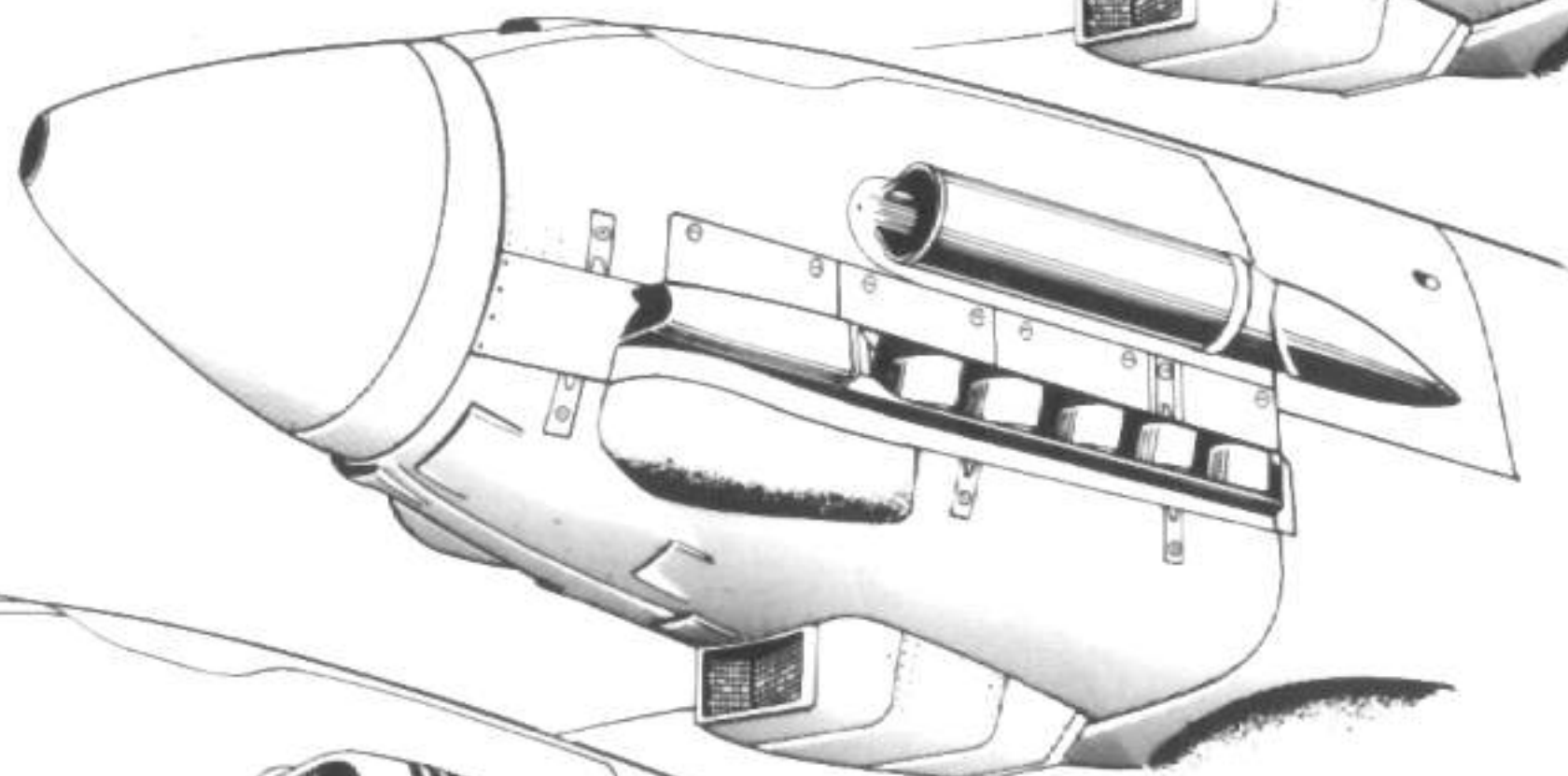
A factory fresh *Serie III* C.202, showing early production standard, with fixed tailwheel and indentations in the headrest for rear vision. The first few *Folgore*s had a short radio mast replaced by the longer style seen here. A sand filter for the supercharger intake soon replaced the straight tube and was retrofitted to nearly all existing airframes. The spinner and front cowling are painted yellow, standard in 1941. The white fuselage band and white cross with the coat of arms of Savoy was a consistent marking throughout the war.

## C.202 Nose Development

Prototype



Early Production



Later Production  
with sand filter



M.M.7806, another *Serie III Folgore*, with sand filter and desert camouflage of sand and green with gray undersides. The camouflage here covers the spinner, which is unusual. The A.S. marking on the tailwheel and under the serial indicated the tropical modification, standing for *Africa Settentrionale* (North Africa).

## C.202 in Production

Tooling for production of the Macchi C.202 was begun not only by Macchi but also by Breda, Milan, and by SAI-Ambrosini, Passignano, both already license-building the C.200. (Reggiane was ordered to produce the Re.2001, its DB601-powered contender, which had proved somewhat slower than the C.202 but otherwise as good.)

Production was authorized through 15 production orders (*Serie*). These were:

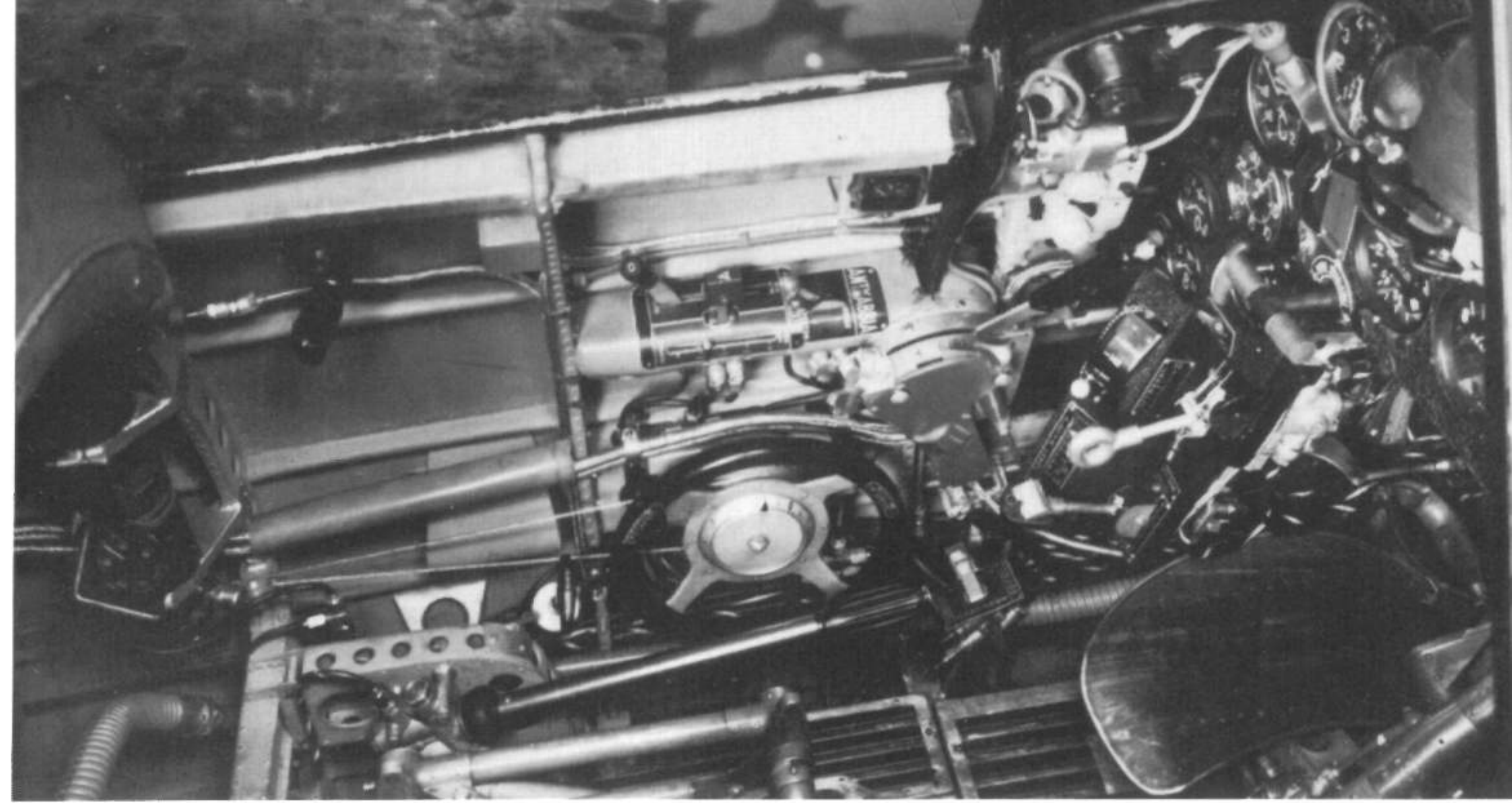
	Builder and period	Quantity	Serials
<i>Serie I</i>	Breda, July 41-March 42	100	M.M.7859-7958
<i>Serie II</i>	Macchi, May-June 1941	10	M.M.7709-7718
<i>Serie III</i>	Macchi, June 41-April 42	140	M.M.7719-7858
<i>Serie IV</i>	SAI-Ambrosini, May-July 1942	50	7959-8008
<i>Serie V</i>	Breda, Nov. 41-April 42	50	M.M.7409-7458
<i>Serie VI</i>	Breda, March 42-July 42	50	M.M.8339-8388
<i>Serie VII</i>	Macchi, April 42-July 42	100	M.M.9025-9124
<i>Serie VIII</i>	Breda, 1942	50	M.M.8081-8130
<i>Serie IX</i>	Macchi, 1942	100	M.M.9389-9488
<i>Serie X</i>	Breda, July 42-Sept. 42	100	M.M.9500-9599
<i>Serie XI</i>	Breda, 1942-43	200	M.M.6560-6609 M.M.9602-9751
<i>Serie XII</i>	Breda, April 43-August 43	150	M.M.91803-99952
<i>Serie XIII</i>	Macchi, April 43-August 43	50	M.M.91953-92002
<i>Serie XIV</i>	SAI-Ambrosini	50	M.M.92003-92052
<i>Serie XV</i>	Breda	100	M.M.92053-92152

By no means were all the authorized aircraft completed before the Armistice, 9 September 1943. Macchi never finished its *Serie XIII*, Breda finished its *Serie XII* only after the Armistice, under German control. SAI-Ambrosini probably didn't build more than the 50 C.202s of *Serie IV*, though these records were destroyed during the war. Therefore, total C.202 production was approximately 1150 units.

Production C.202s differed from the prototype in having a fixed tailwheel, in replacing the rear-vision windows in the headrest fairing by scalloped cut-outs and in replacing the steel-tube engine bearers with light alloy forgings. The long supercharger intake that replaced the square-section, short intake on the prototype was retained on early production models. This was in turn replaced shortly by a sand-filtered intake.

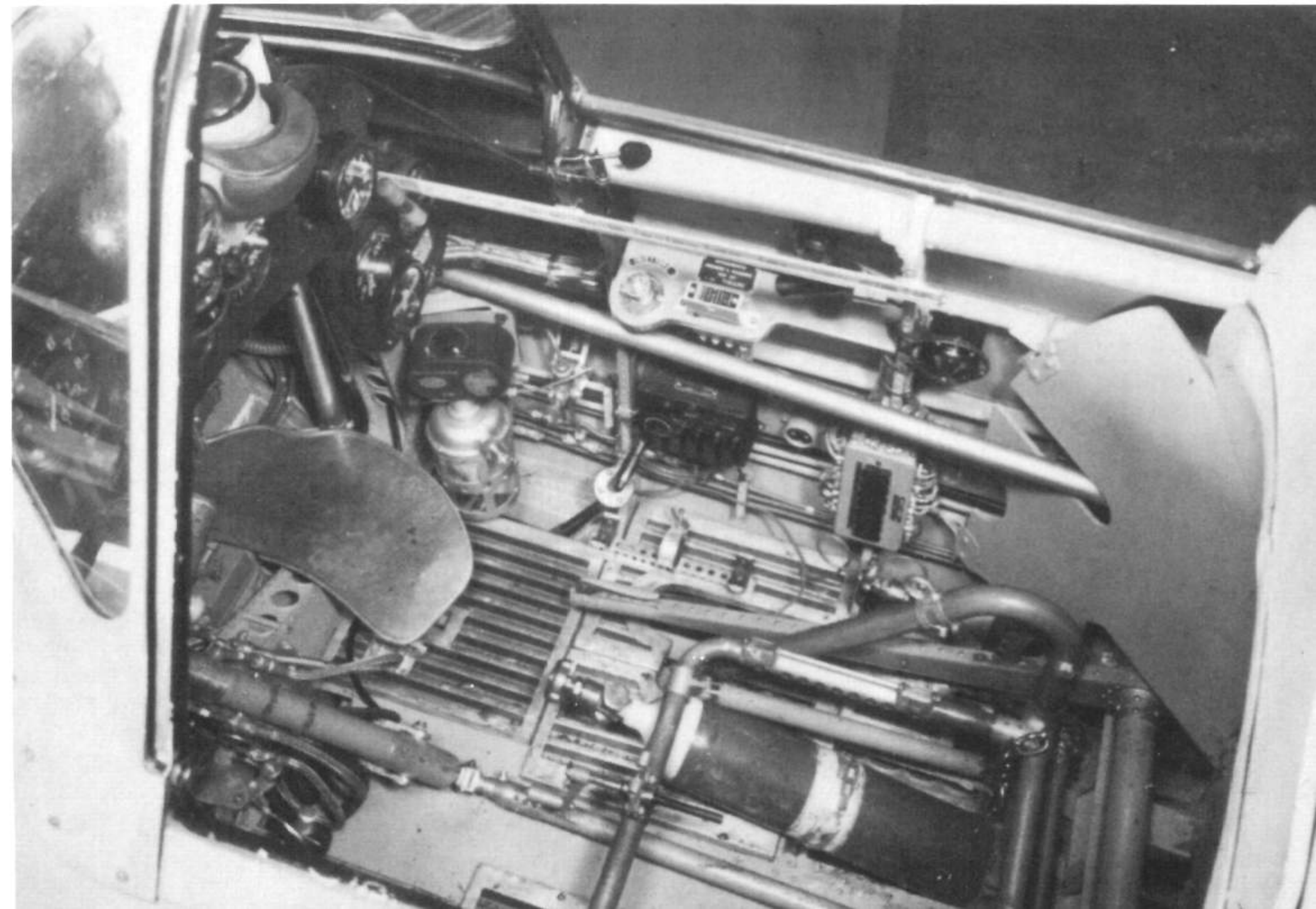
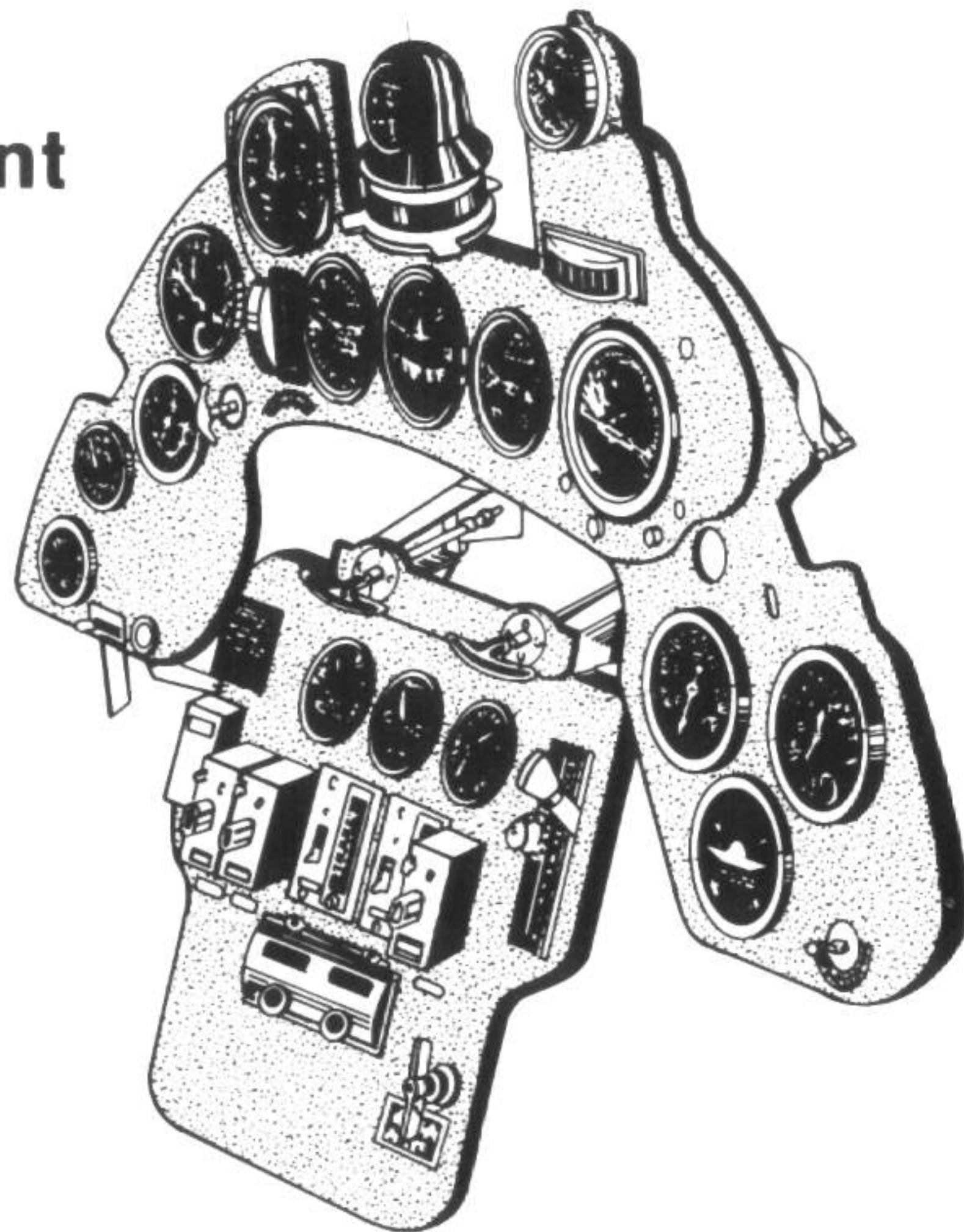
The first production fighters were powered by German-built DB601s, 400 of which were supplied. Alfa-Romeo began the license production of the 601 at its Pomigliano d'Arco works, initially using German-supplied semi-prepared components. The first totally Italian-built motors, dubbed RA 1000R.C.41, came off Alfa's lines in the summer of 1941, 2000 eventually being produced.





(Left) C.202 instrument panel, with reflector gunsight. This is a later variant as it has recharging handles for the wing guns. (Above) Left side of cockpit, showing oxygen bottle behind the seat position (the seat itself has been removed), tailplane trim wheel, sand filter control, throttle (which on Italian aircraft was pulled to open), flap and landing gear controls. This is an early model without pilot armor. (Below) Right side of cockpit, primarily devoted to fuse boxes. This is a later model with head and 'kidney' armor.

## C.202 Instrument Panel







## C.202 in Combat

The first production C.202s, from the Macchi-built *Serie II* and *III*, were delivered in July 1941. By that time, Italy had been at war a year, a period of sharp reverses. The 'new' fighters of 1939 simply couldn't hold their own against the D520s, Hurricanes and Spitfires they encountered over France, England, Greece and North Africa. It was only the arrival of Luftwaffe units in North Africa that broke the total RAF air superiority there. The demoralized RA pilots, with their obsolete CR.42s, G.50s and C.200s were assigned to secondary duties: escorting Stukas, convoy protection and point defense.

4°*Stormo*, wearing the Prancing Horse of WWI ace Francesco Baracca, had been decimated in Libya during Wavell's offensive. Still flying C.200s, it then briefly flew over Yugoslavia before being returned to its homefield of Gorizia. There 4°*Stormo's* 9°*Gruppo* began conversion to the C.202 *Folgore* (literally Lightning - Italian warplanes were given official nicknames that were rarely, if ever, used by pilots). 9°*Gruppo* spent the summer of 1941 becoming accustomed to the new fighter and working out its bugs. At the end of September, it moved down to Comiso, Sicily, where it joined its mate, 10°*Gruppo*, still in C.200s, for the attack on Malta.

On 30 September, C.202s drew first blood when Lt. Frigerio shot down one of a flight of Hurricanes strafing Comiso. Later that same day, 12 C.202s escorted a Cant Z.506 floatplane trying to rescue the downed British pilot, encountering seven more Hurricanes,

**A line-up of 4°*Stormo's* 9°*Gruppo*, the first unit to completely re-equip with the new fighter, ready to be reviewed by Mussolini at Ciampino-Rome, 25 September 1941. Five days later this unit took the C.202 into action for the first time over Comiso, Sicily. The early date of the photo is confirmed by the yellow nose, three color camouflage and non-filtered supercharger intakes.**

claiming two. Through October and November, 9°*Gruppo* fought over Malta in an aircraft that was, at last, superior in every respect to the Hurricane.

8°*Gruppo* of 2°*Stormo*, a unit that had been assigned to the defense of Libya from pre-war days, received six C.202s on 8 October 1941, but one week later turned them over to 1°*Stormo*. The unlucky 8°*Gruppo* fought on with C.200s until the end of the war. 1°*Stormo's* 17°*Gruppo* received *Folgores* on its homefield of Campofornido in North-eastern Italy. Moving down to Ciampino, Rome, its C.202s were fitted with sandfilters for desert operations.

While that modification was being affected, the British launched Operation Crusader, 18 November 1941. Two of 9°*Gruppo's* *Squadriglie* moved immediately to North Africa without desert modification. 73°*Squadriglia*, which stayed in Sicily, pioneered photo-recon use of the Macchi over Malta. In December 1941, both *Gruppi* of 1°*Stormo*, 6° and 17°, now both equipped with tropicalized C.202s, finally deployed to North Africa to support 9°*Gruppo*. That unit's mate, 10°*Gruppo*, moved to Gorizia to convert from C.200s to C.202s late in 1941. Now 1° and 4°*Stormo*, the elite fighter units of the RA, were both flying Macchi's new fighter.



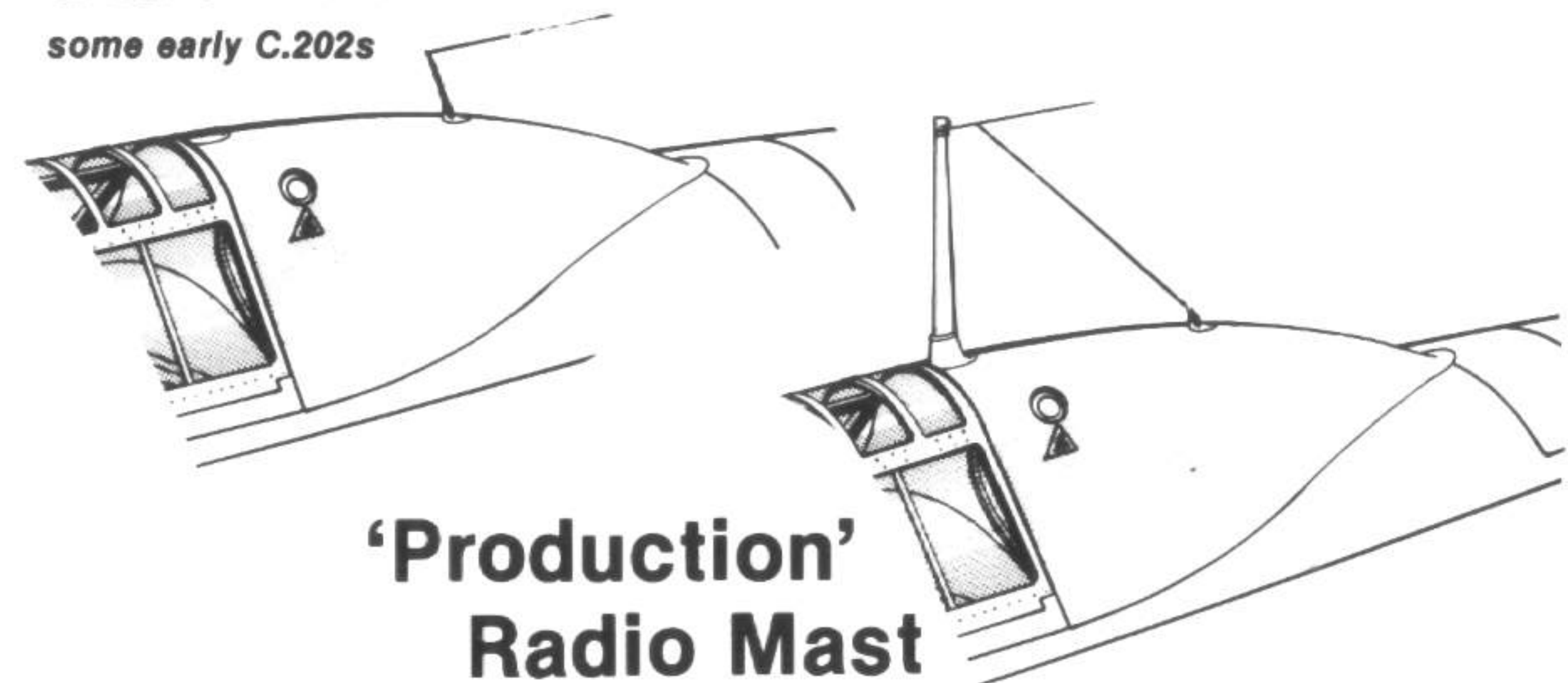


(Above & Left) C.202 96-6, now sporting a white spinner and nose, shows gloss gray paint over repairs at the wingroot and on the fuselage, resulting from damage acquired in the air over Malta. Note the stub radio mast, characteristic of early *Folgore*s.



## Stub Radio Mast

some early C.202s



'Production'  
Radio Mast



# Macchi C.202

## Specifications

**Wingspan:** 34ft 8½in

**Overall length:** 29ft 5/12in

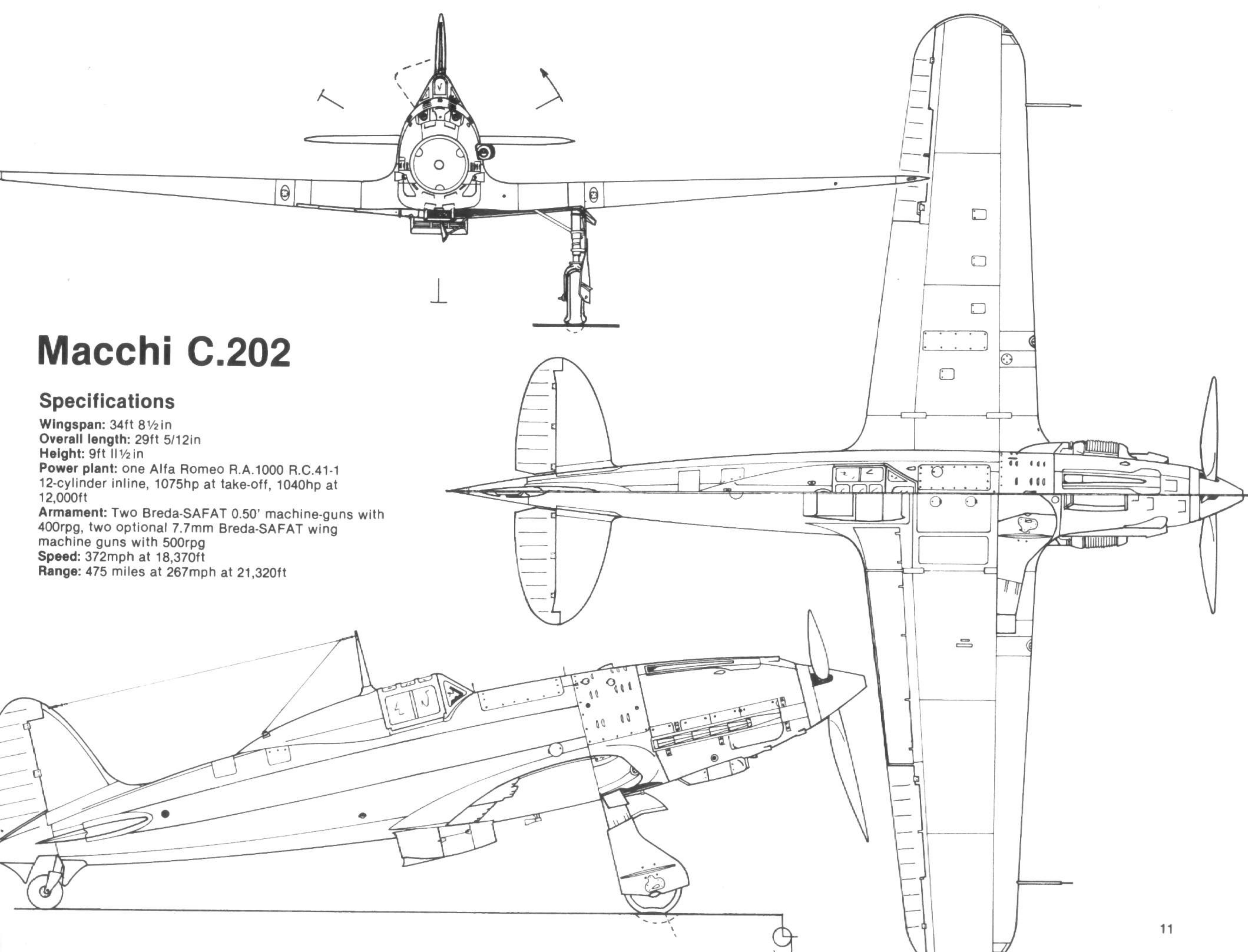
**Height:** 9ft 11½in

**Power plant:** one Alfa Romeo R.A.1000 R.C.41-1  
12-cylinder inline, 1075hp at take-off, 1040hp at  
12,000ft

**Armament:** Two Breda-SAFAT 0.50' machine-guns with  
400rpg, two optional 7.7mm Breda-SAFAT wing  
machine guns with 500rpg

**Speed:** 372mph at 18,370ft

**Range:** 475 miles at 267mph at 21,320ft





# In Africa

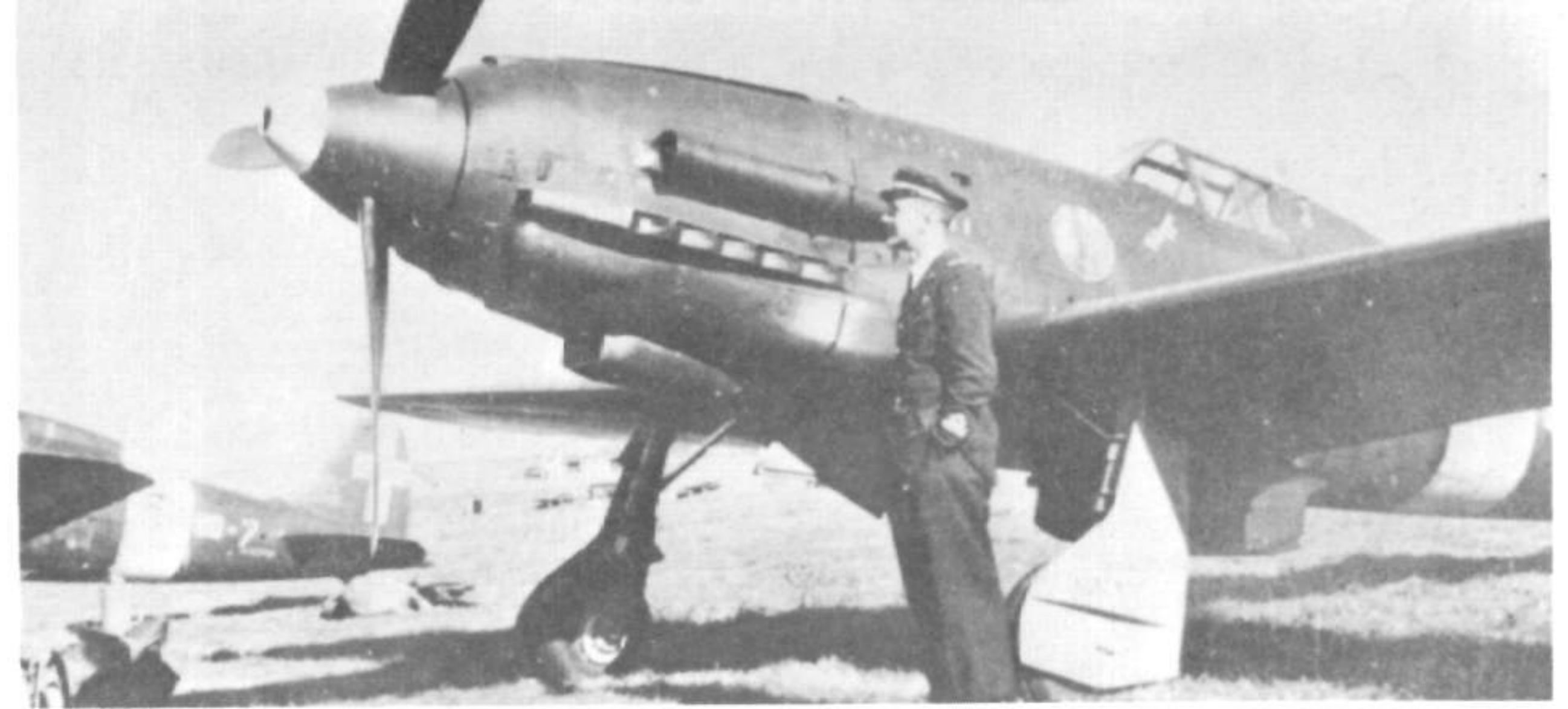
The three C.202-equipped *Gruppi* in North Africa at the end of 1941 found themselves compelled to retreat across Libya in front of the advancing British. 9° *Gruppo* engaged RAF Tomahawks the day after arriving at Martuba, 26 November. There followed a tough month of combat and retreat before it finally turned its surviving C.202s over to 1° *Stormo* and returned to Italy to join its mate at Gorizia. When the front stabilized at El Agheila on 8 January 1942, the two remaining *Gruppi* could only muster a total of 25 C.202s.

In late January 1942, when Rommel took the offensive again, 1° *Stormo* had its 6° *Gruppo* at Ara Phileborum and 17° at Tamet. They started 'freelance' hunting missions in consort with JG27's Bf109s, leaving the remaining Italian aircraft in Africa, CR.42s and C.200s, to ground attack duties. With Rommel's advance 1° *Stormo* moved forward, occupying Benghazi's K3 field. Through the rest of the spring of 1942 the front remained quiet, allowing both sides to rest and build strength.

On 26 May Rommel again struck. 4° *Stormo* had meanwhile returned, now with both *Gruppi* C.202-equipped. The two *Stormi* were joined in a 'Brigade' led by Lt. Col. Alfredo Reglieri, 1° *Stormo* commander. Based at Martuba, they had a strength of over 60 aircraft. Their task was to clear the air of the RAF, allowing Stukas and the older Italian fighters to attack without interference. At dawn on the 26th, 59 C.202s strafed No.250 Squadron's Tomahawks at Gambut, to start the offensive. They were then directed to gain air superiority over Tobruk and Bir Hacheim, which they were able to do. Both fortresses fell before the end of June. Over 1000 sorties were flown by C.202s during this period, only 17 of their number being lost.

During June, 1° *Stormo* returned to Italy, being replaced by 3° *Stormo*, whose 18° *Gruppo* was still in C.200s but whose 23° *Gruppo* had received C.202s in May. The new *Stormo* went to Abu Haggag, 4° moving to Sidi el Barrani and then Fuka. Abu Haggag and Fuka were on the Mediterranean coast between Marsa Matruh and El Alamein, where the British retreat had finally stopped. The total number of C.202s in Africa peaked at 93 on 15 July 1942. In all, the RA had 25 bombers, 90 ground attack aircraft and the 93 C.202s, 46 C.200s and 43 G.50s, a total of 297 aircraft ready for the decisive battle at El Alamein.

By autumn 1942, RAF Liberators and Spitfires had reached the Western Desert, new and formidable opponents for the C.202s. Having held off Rommel's July and August attacks at El Alamein, Montgomery prepared his counterstroke for late October. In preparation for that offensive, the RAF attacked Axis airbases, striking Fuka and Abu Haggag on 20 October. A number of 3° and 4° *Stormo* *Folgore*s were destroyed on the ground. Montgomery finally attacked on 23 October 1942. In the last days of October, between



An 80° *Squadriglia*, 1° *Stormo*, non-tropicalized C.202, painted overall bottle green, with the name 'Filippo' in white under the cockpit. (Ghizzardi)

aerial combat and RAF strafing, the two C.202-equipped *Stormi* lost 15 in the air and four on the ground with a further 46 damaged. They were soon forced to retreat along with the general Axis withdrawal. 4° *Stormo* passed its remaining serviceable *Folgore*s over to 3° *Stormo* which now had both its *Gruppi* in C.202s. 3° *Stormo* then continued the fighting retreat across Libya. Its continual harassment of the British advance was instrumental in allowing the Axis to hold the British advance at Mareth on 16 February 1943. In late November 1942, 4° *Stormo* returned to the fray with new C.202s, supplementing 3° *Stormo* which was gradually being depleted of aircraft. 4° *Stormo* kept on with the fight into the second half of December when its 10° *Gruppo* gave its remaining fighters to 9° *Gruppo* and again returned to Italy. Until New Year's, 9° *Gruppo* flew sorties from Misurata and Castelbenito in the defense of Tripoli but was again forced to retreat in January. At that time 9° *Gruppo* once more turned its remaining *Folgore*s over to 3° *Stormo*, once more leaving that unit as the last C.202 unit in Africa. 3° *Stormo* was at Medenine, Tunisia at the end of January 1943 where it finally was able to hold, and where it encountered USAAF fighters, P-38s, for the first time.

1° *Stormo* was the first unit to take the C.202 to the Western Desert. Here a 1° *Stormo* *Folgore* is seen taking off from a desert airfield with a squadron of JG27 Bf109Fs in the background.





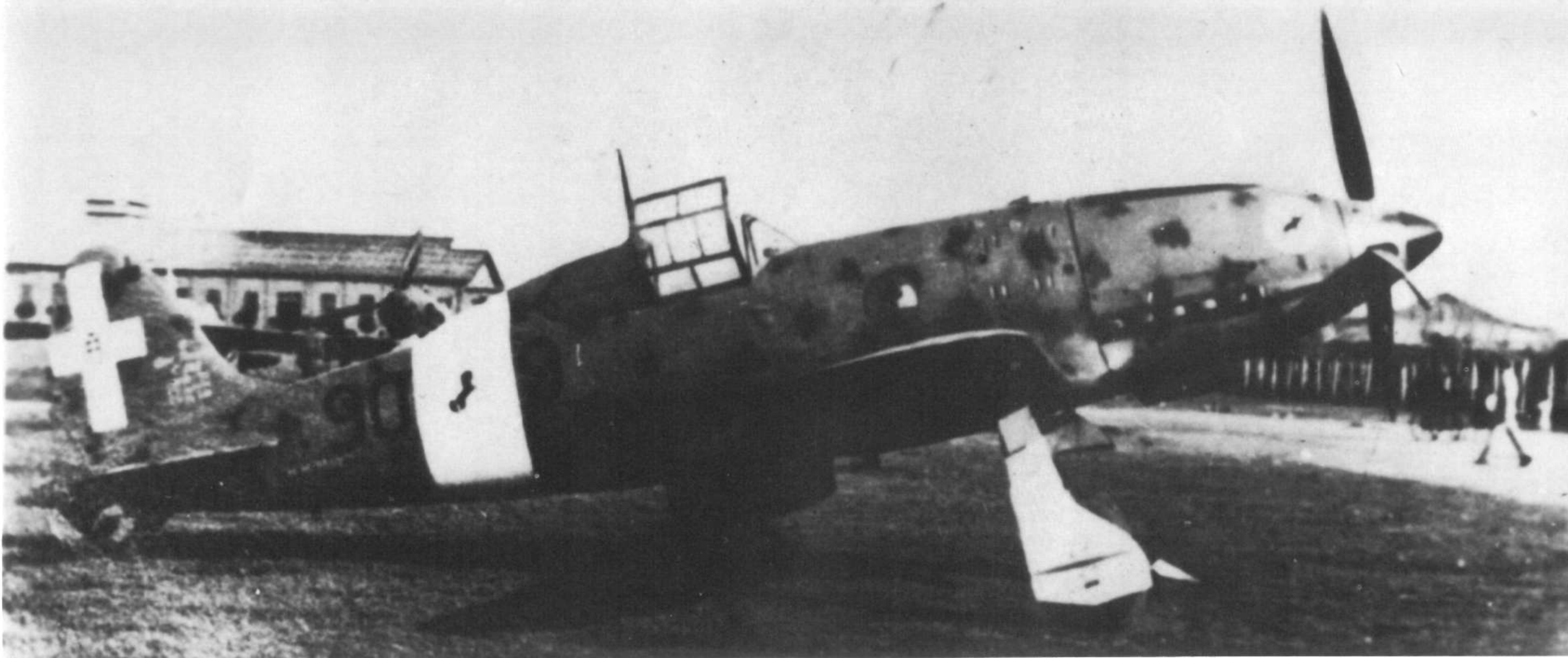


Early in 1942, 4° Stormo united its two *Gruppi* and re-equipped both with C.202s at Campoformido, Northeast Italy. In this line-up, several fighters carry a star on their nose, indicating a flight leader's aircraft. Others in the line display the 90° Squadriglia shield, a red elephant on a white field. The star was soon removed for security reasons.

This 73° Squadriglia Folgore forced down a Hurricane MKIIa HA-D (Z2491) from Malta. 73° was a photo-recon Squadriglia assigned to 4° Stormo. Its *Folgore*s were virtually undistinguishable from fighter variants as they carried the same armament and were as likely to dogfight as any others.





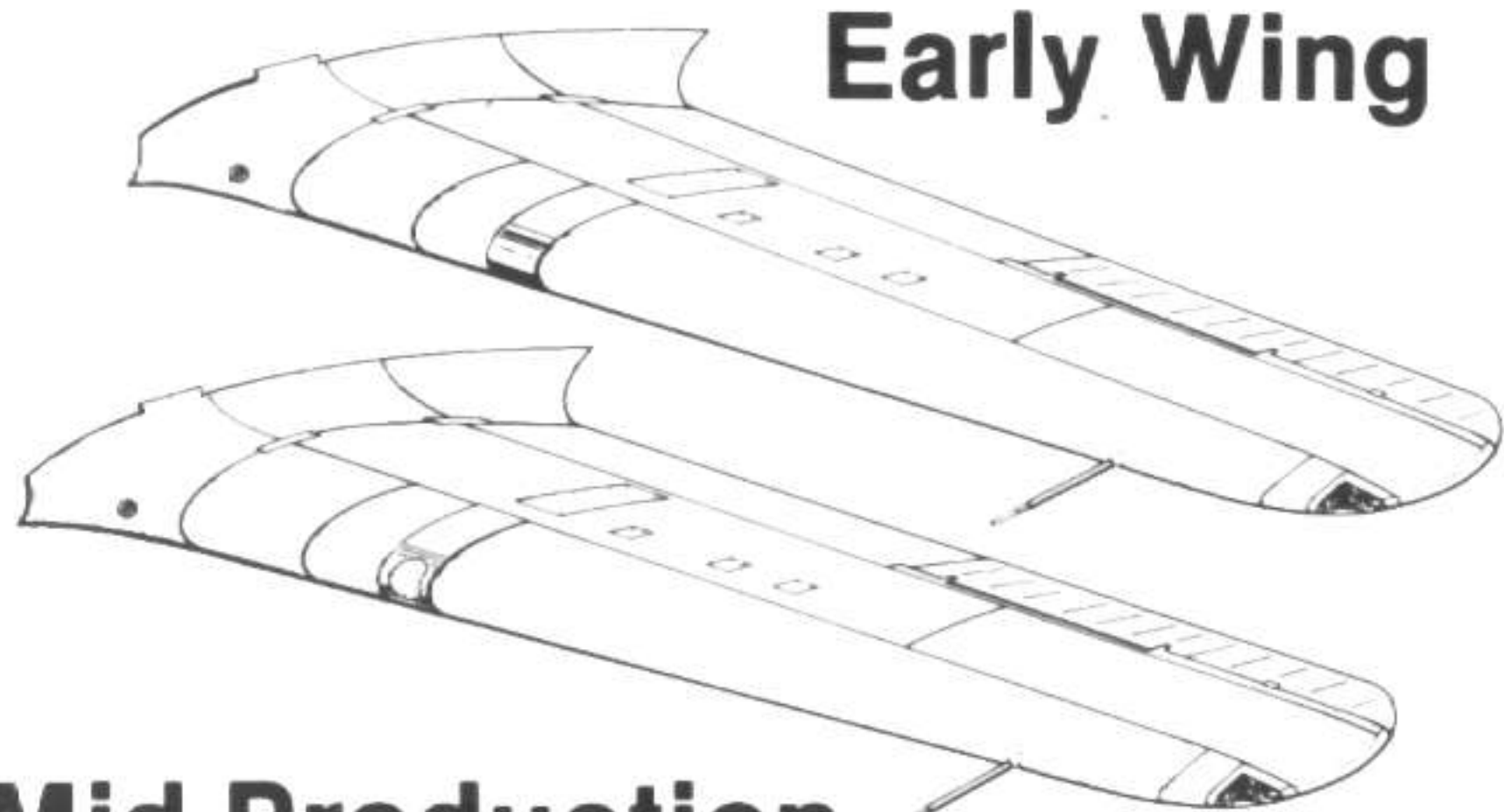


M.M.7457 in the spring of 1942. The red spinner cap and red elephant on white circle indicated 4° Stormo's 90ª Squadriglia. Neither marking lasted long in Africa.

(Right) A C.202 from an unknown unit with a unique personal sign, a cow on a white cloud-shape. This was a mid-production example, one of many equipped to carry, but not mounting the 7.7mm wing guns. The plated-over gunport can be seen beneath the foot of the kneeling groundcrewman.



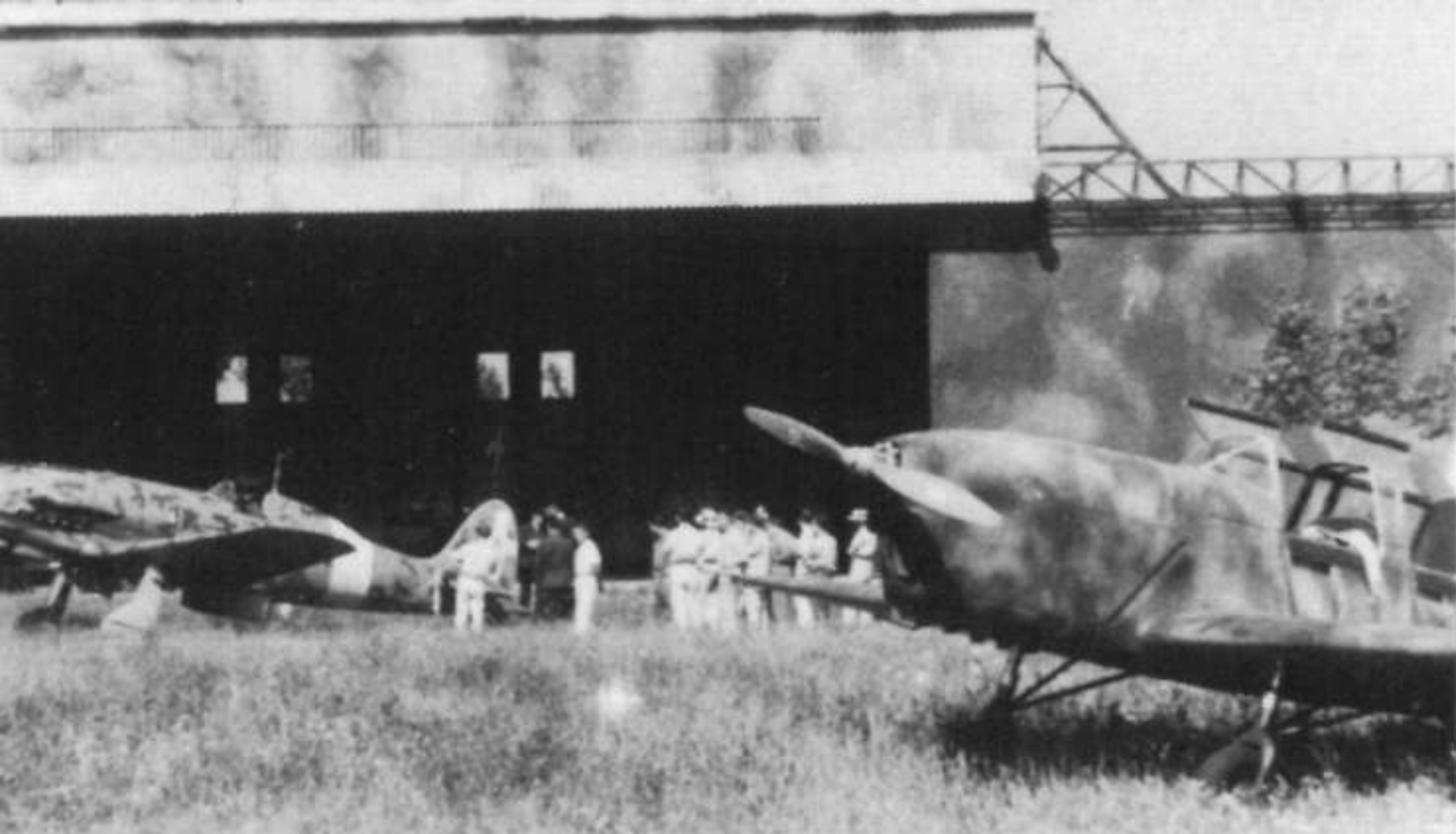
## Early Wing



## Mid-Production Wing

14 with plated-over gun port

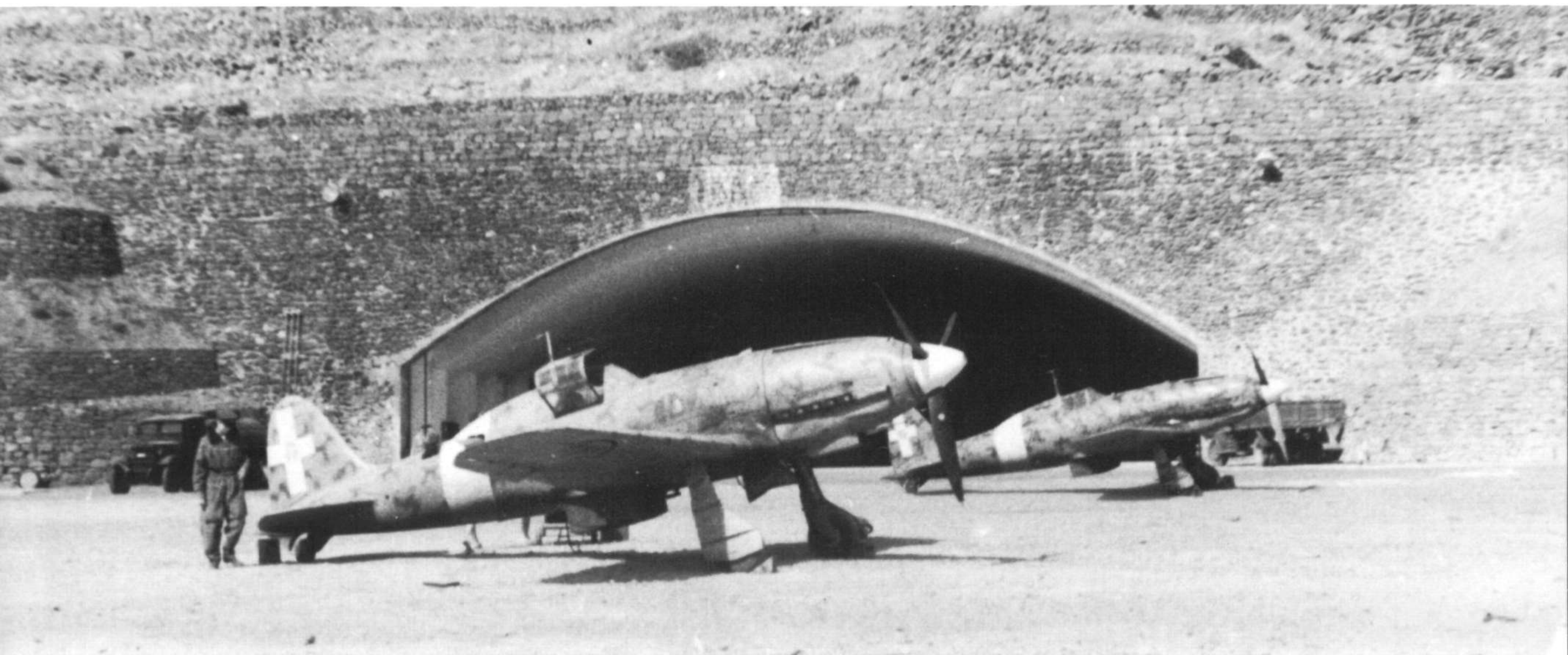




A brand-new Breda-built C.202 of 3°Stormo at Turin. The aircraft in the foreground is a Nardi FN.305 lightplane.

Early Breda-built Macchis of 3°Stormo in transit to Africa. Breda *Folgores* carried the factory-applied camouflage down onto the radiator sides.

C.202s of 74ª Squadriglia, 3°Stormo in front of the underground hangers on Pantelleria while on their way to Africa, July 1942.







The take-off of a 3° *Stormo* C.202. A blue triangle waiting for the *Stormo*'s 'Angry Wasp' insignia is visible on the white fuselage band. This *Stormo* probably had a greater variety of code-styles and markings than any other.

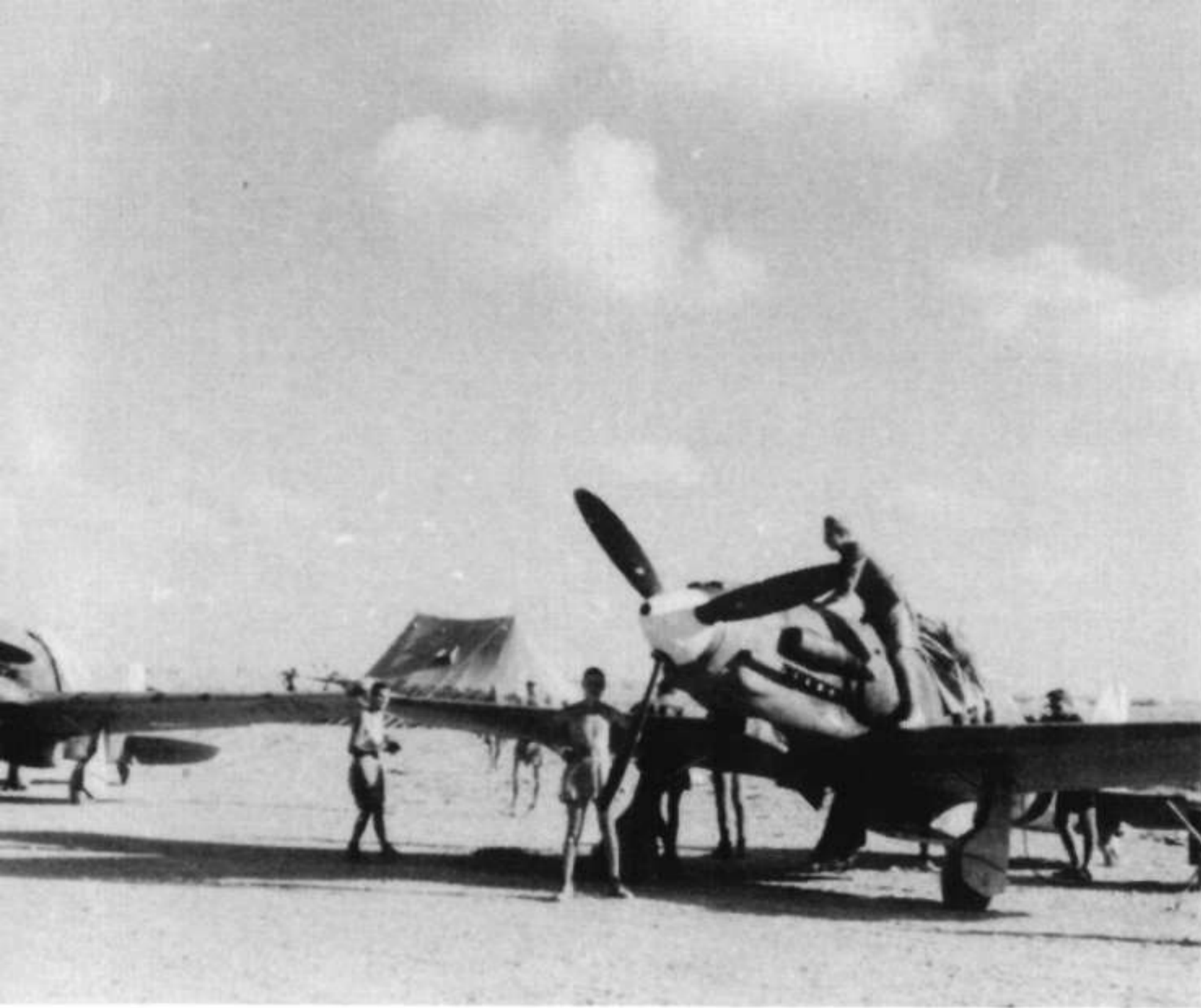
An interesting head-on view of a C.202 running up its engine in the desert, showing clearly all air intakes. The oil cooler is under the engine and the radiator is further back, behind the inner gear doors. This aircraft also has the plated over wing gun ports. White wingtips were carried, in common with Luftwaffe units, in North Africa.

(Below Left) *Folgores* on alert, near the tent where their pilots wait. The truck is a Fiat 1100. The cockpits are covered with canvas to protect them from the sun and sand.

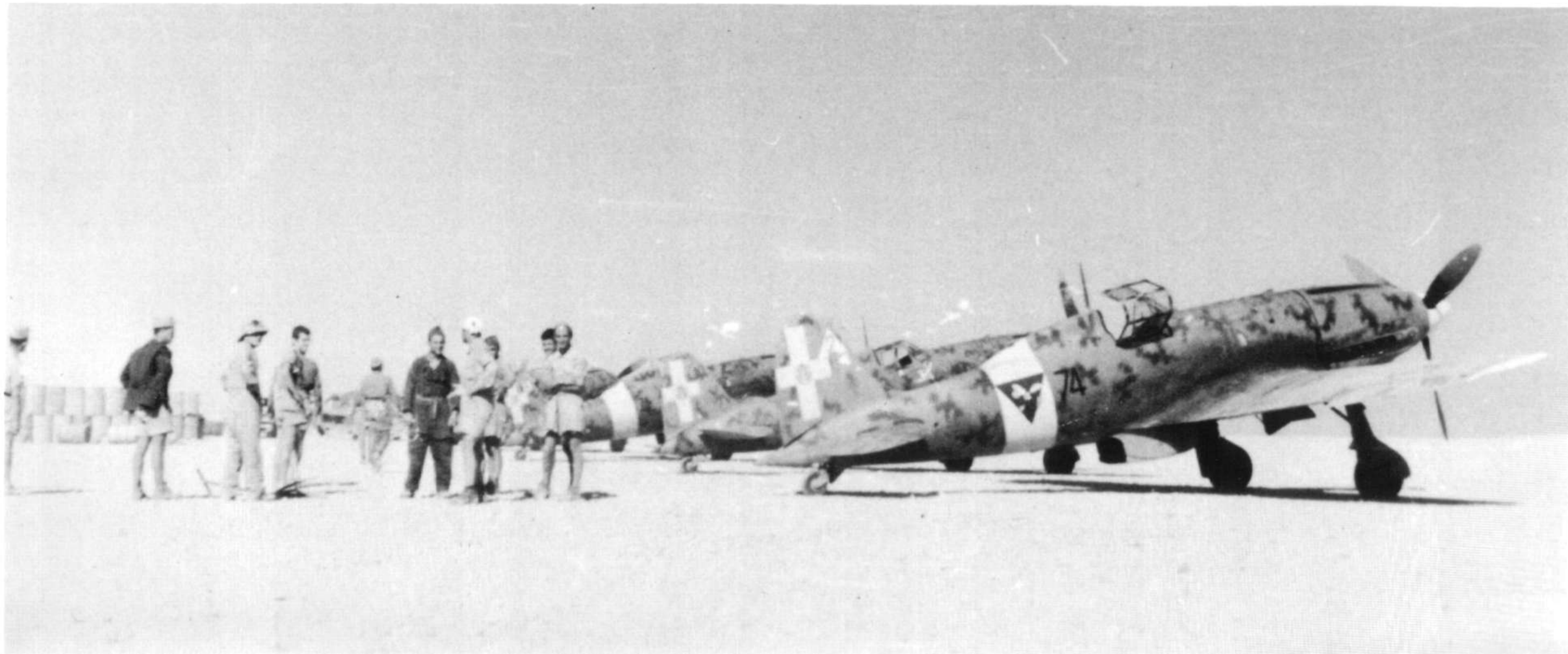
A Fiat 1100 leads a 73° *Squadriglia*, 4° *Stormo* Macchi to the take-off point. The long nose and set-back cockpit made such assistance useful.







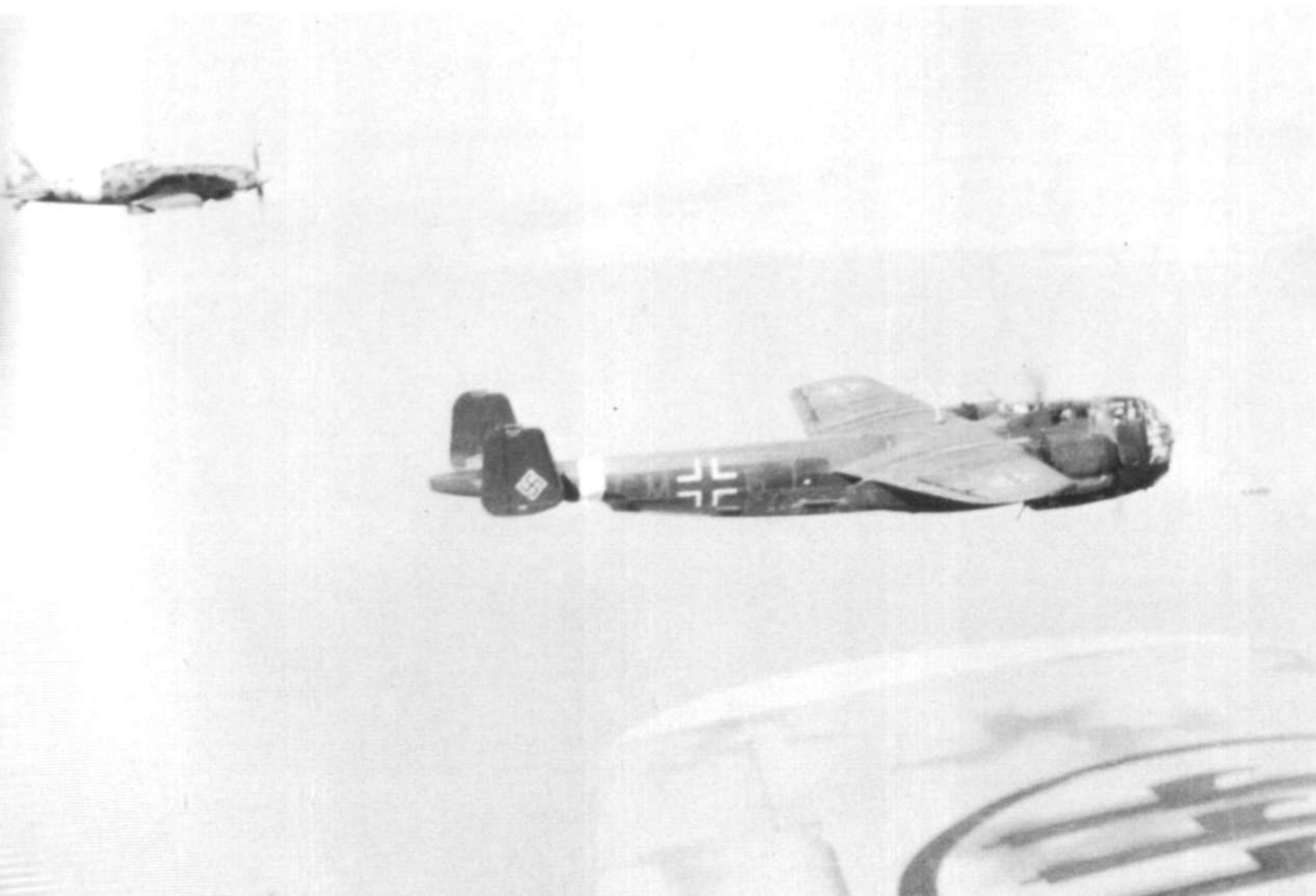
C.202s of 3°Stormo being serviced in North Africa. Individual numbers on some of this Stormo's aircraft were painted in a triangle on the tail. After rearming and refuelling has been completed, the groundcrew stand around and compare notes (a universal characteristic).





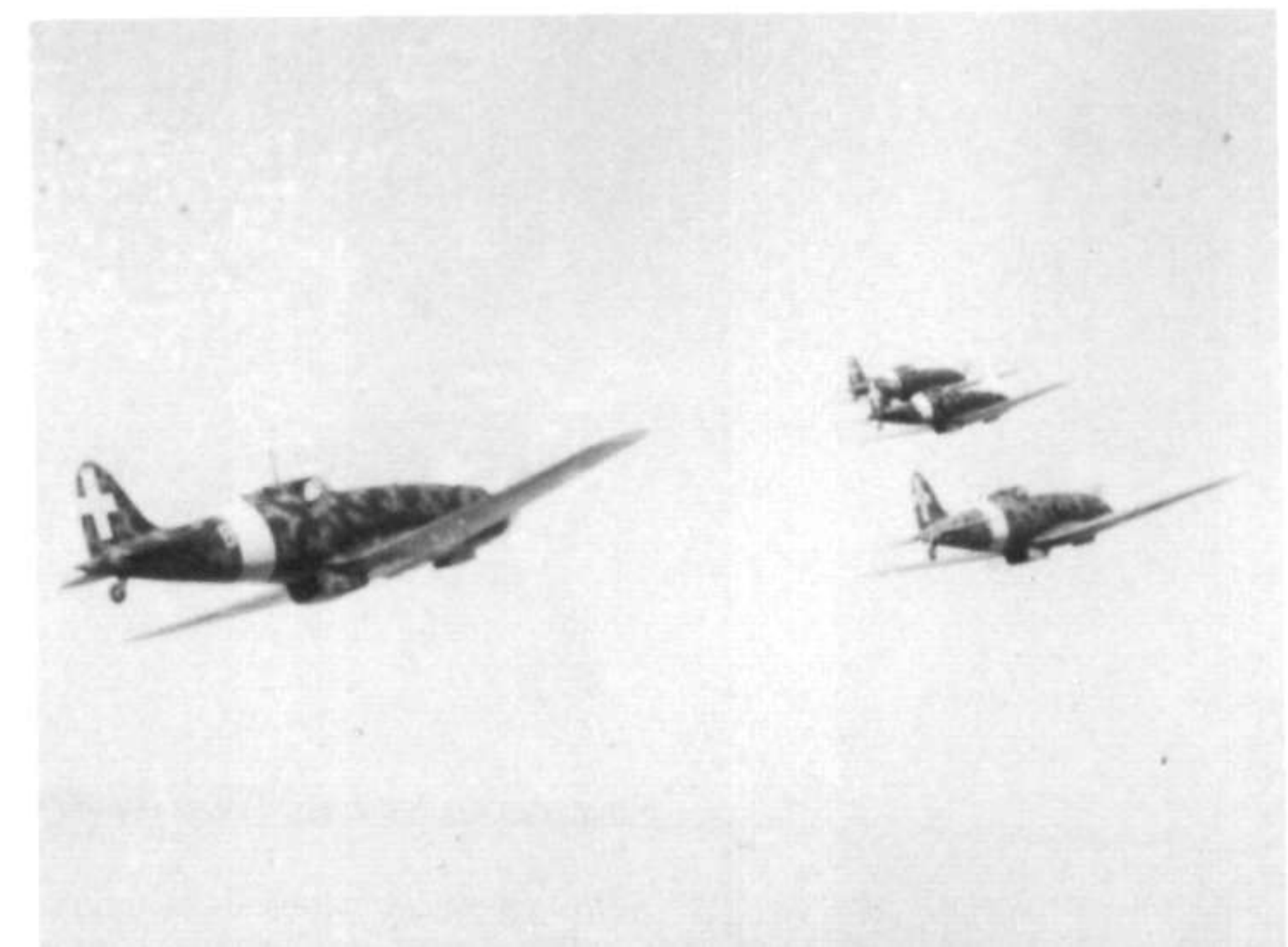


73-4 of 4° Stormo over the Western Desert, 1942. The Axis forces are now in retreat. The terrain over which these missions were flown may have been the most forbidding ever to witness aerial combat.

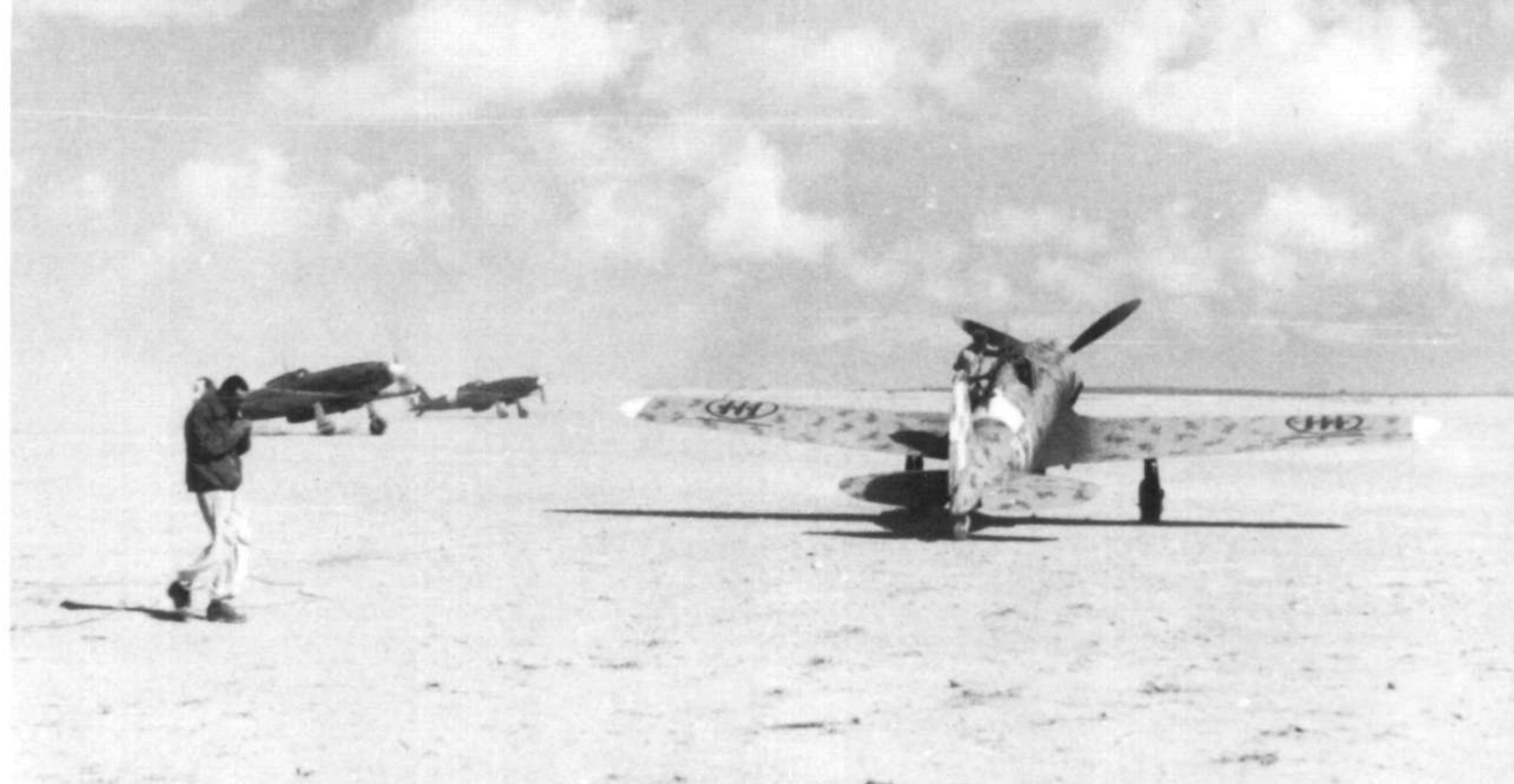


C.202s escort a Do217K bringing Italian Supreme Commander Cavallero to Lybia. The cowling side of the *Folgore* in the background has been streaked by exhaust and oil leakage.

On patrol, these *Folgores* bank over the desert. Note the difference in the percentage of green to sand in the camouflage of the various aircraft.



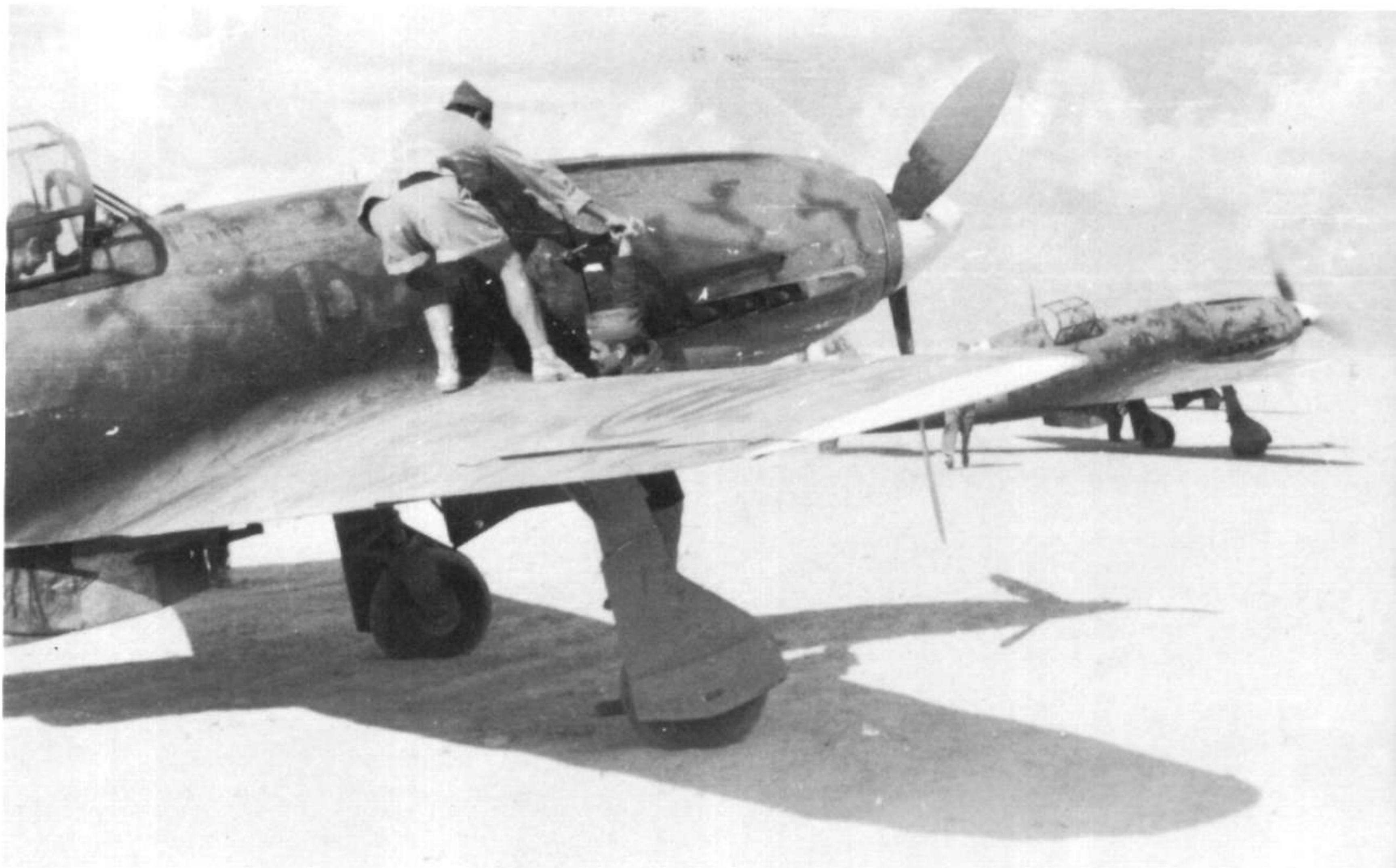




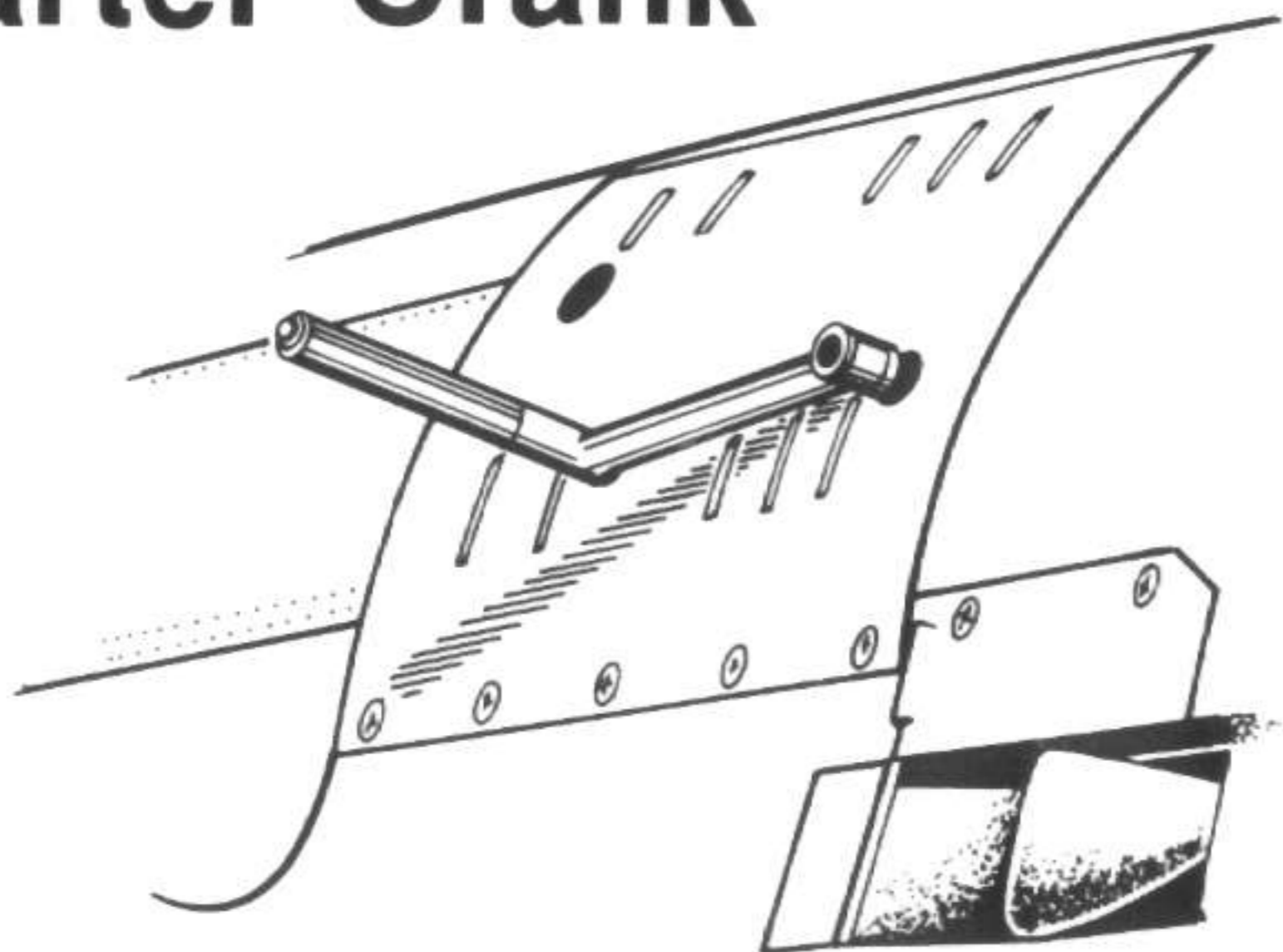
Writing a letter home on the tailplane of his C.202, M.M.8380 of the Breda-built *Serie VI*. The weight stencil on the tail shows 2395kg empty weight and 640kg useful load. The lighter patches of paint show that 75-10 at one point had its individual number on its tail.

(Above Right) Two C.202s of 75<sup>a</sup> Squadriglia, 3<sup>o</sup> Stormo are taking off, while the pilot of a third lights a last cigarette before climbing into his *Folgore*. Note the exhaust stains at the wingroot.

After the crushing boredom of waiting on alert, the alarm brings a burst of activity. As the C.202 in the background begins to taxi, the groundcrew in the foreground grab the starter crank while the pilot finishes strapping himself in.



## Starter Crank







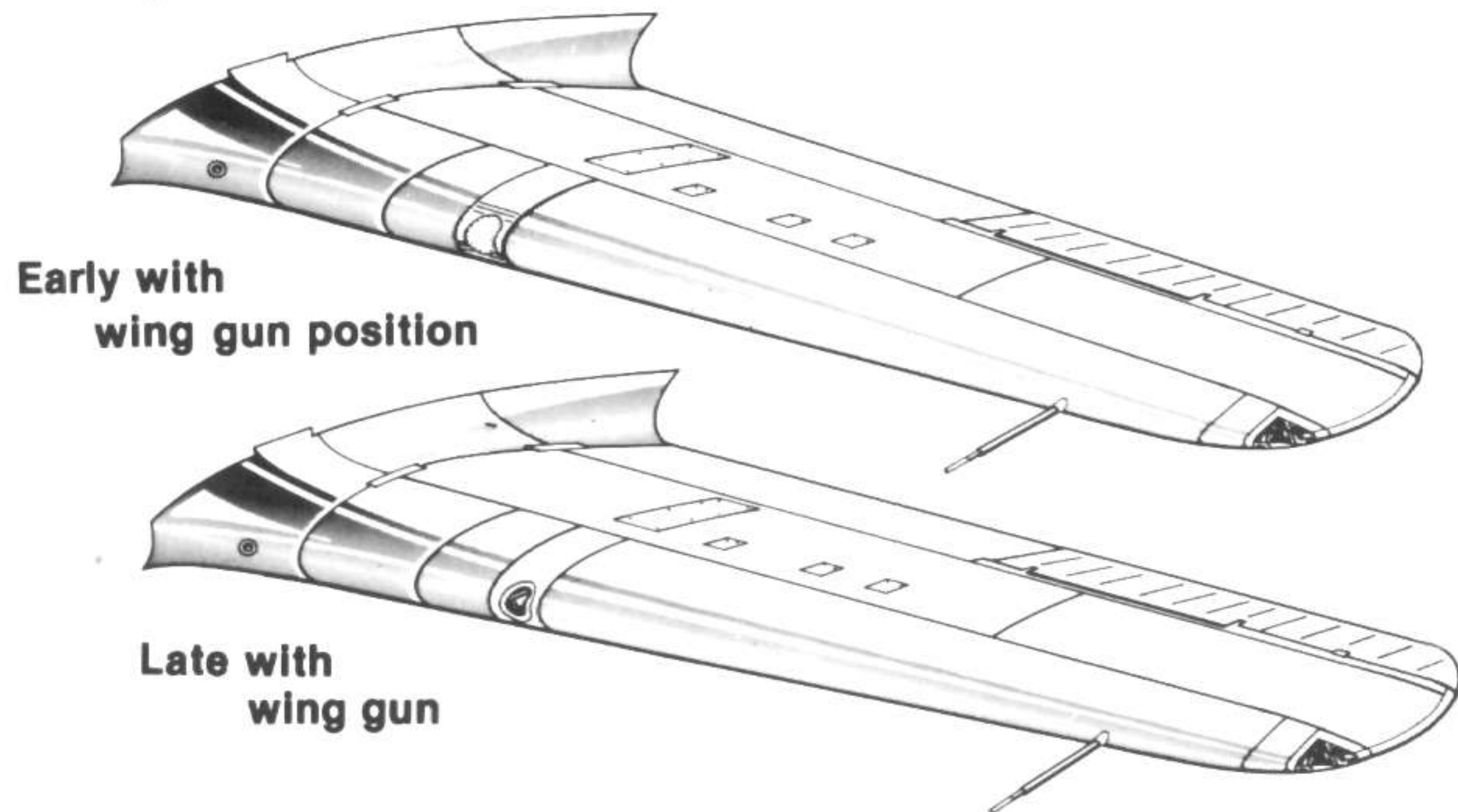
A mixed formation of 3° and 4° Stormo Folgore during the retreat across Lybia.

(Right & Below) In January 1943, 4° Stormo delivered its last surviving Folgore to 3° Stormo at Castelbenito, near Tripoli. Note the great variety of camouflage patterns and unit markings. 3° Stormo has now abandoned the triangle markings and carries only white outline numbers in various locations.





# Wing Development



A relatively rare bird, this early C.202 (note the straight supercharger intake) has wing guns in place, as seen at the fighter school at Rimini. The camouflage is also early style, bottlegreen and grey with yellow nose.

A brand-new *Serie IX* C.202 with the wing guns. The fitting of these guns was common on later *Folgore*s, but their small caliber caused them to be rarely used.





# Over Malta

During the second half of 1941, the only force attacking Malta was the *RA*, all *Luftwaffe* units having been withdrawn for the attack on Russia. At the beginning of 1942, when it became obvious that **Barbarossa** wouldn't be a quick success, the Germans returned to Sicily intent on reducing Malta by air assault. Up against not just Hurricanes but now Spitfires as well, Italian fighters previously committed, such as the C.200, stood no chance. Until C.202s and Re.2001s could be transferred to Sicily, the Italian participation in the new aerial offensive, which began on 20 March 1943, was minor.

During this time period 4°*Stormo* had been at Campofornido re-equipping again with C.202s. On 15 April, the *Stormo* moved to Sicily, 9°*Gruppo* at Castelvetro and 10° at Sciacca. Over Malta it found all the fight it could have wanted. In action over Malta for only a month before being transferred to Africa, 4°*Stormo* still managed to lose three *Squadriglia* leaders. When it was moved to Libya, it was replaced in Sicily by the C.202s of 51°*Stormo*'s 155°*Gruppo*, a young unit that had been formed only in 1939. After fighting in North Africa in G.50s, 51°*Stormo* had been recalled to Italy to re-equip with *Folgores* in

March of 1942. 155°*Gruppo* reached Gela with a full complement of C.202s at the end of May. On 2 June, it claimed its first Spitfire over Malta, beginning a long and arduous tour of duty. At the end of June, 20°*Gruppo*, the other half of 51°*Stormo*, now also flying C.202s, joined its mate at Gela.

Throughout the summer C.202s fought over Malta escorting tiny formations of Cant Z.1007s, SM.84s and Ju88s, which mainly served to lure up the RAF defenders. No effective attack on Malta's strength was possible with the forces available. The fighting subsided in August and September, then flared up again only after 53°*Stormo*'s 153°*Gruppo* ('Ace of Clubs') arrived at San Pietro Caltagirone with a full complement of *Folgores*. The final air assault came in October. The three available *Gruppi* mustering a total of 74 C.202s kept up the pressure for 10 days before attrition brought the action to a halt. During the long summer of 1942, the *RA* flew 10,070 sorties over Malta (as opposed to 18,718 by the *Luftwaffe*). Of these, nearly 4000 were fighter sweeps by C.202s. The brunt of the action was borne by 51°*Stormo* which claimed 100 RAF fighters for the loss of 27 of its own.

**A groundcrewman helps this 51°*Stormo* pilot adjust himself in his seat prior to a mission over Malta, Sicily, June 1942.**

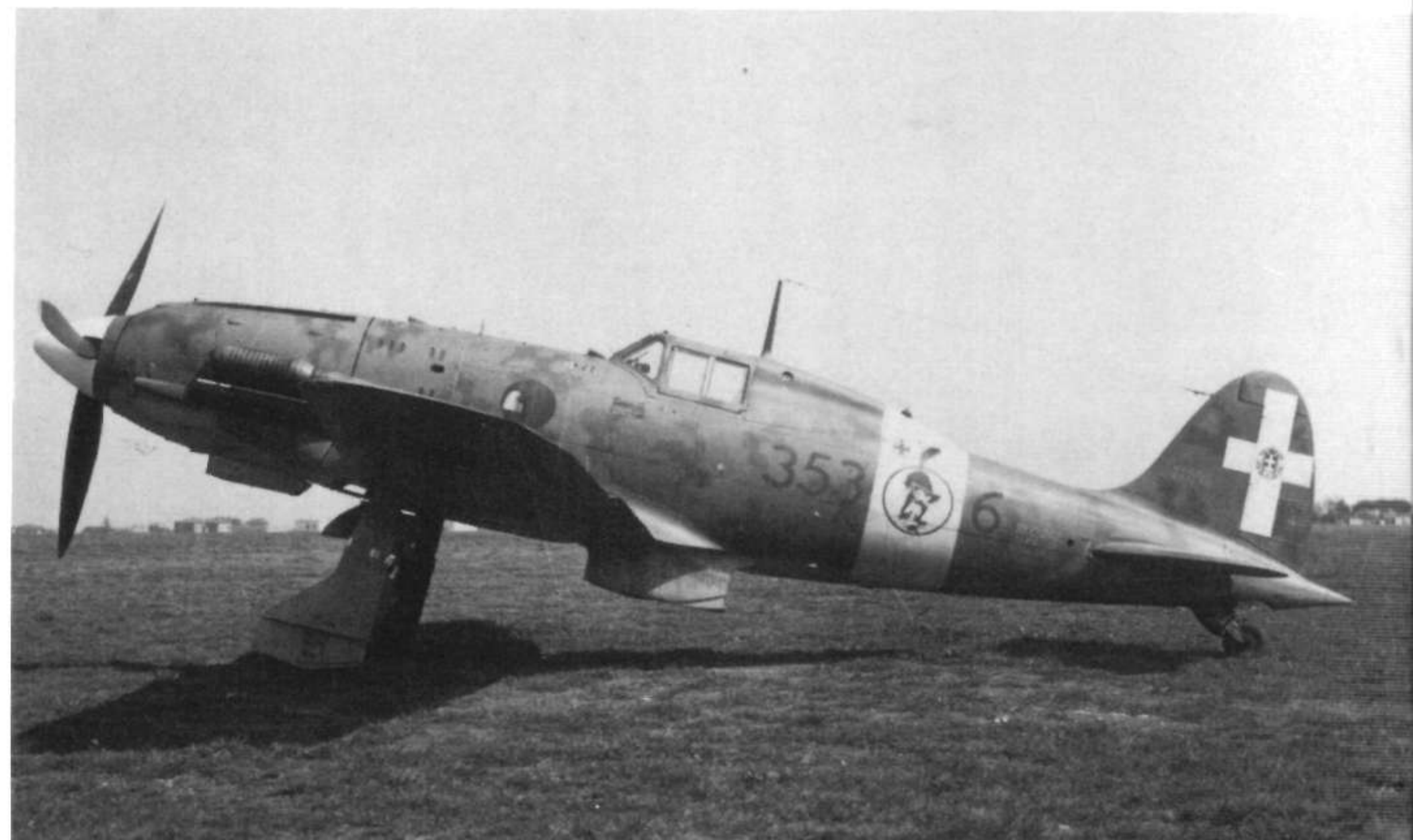
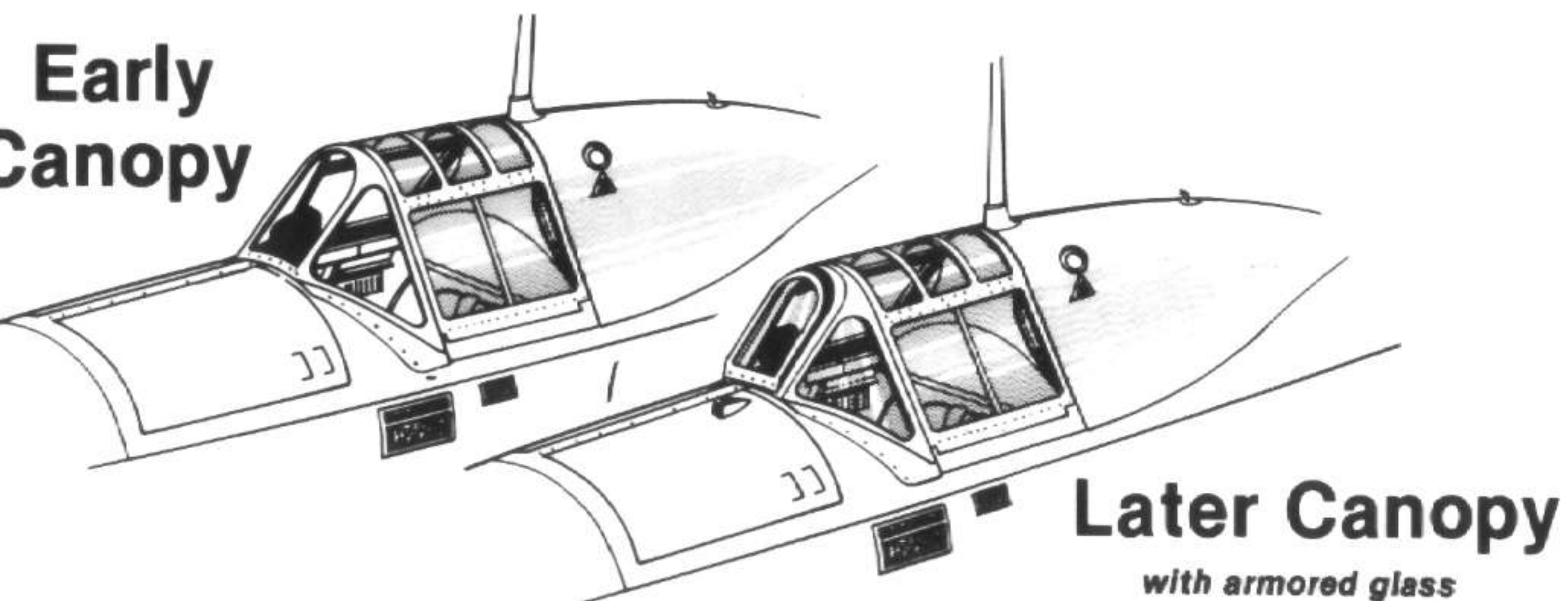




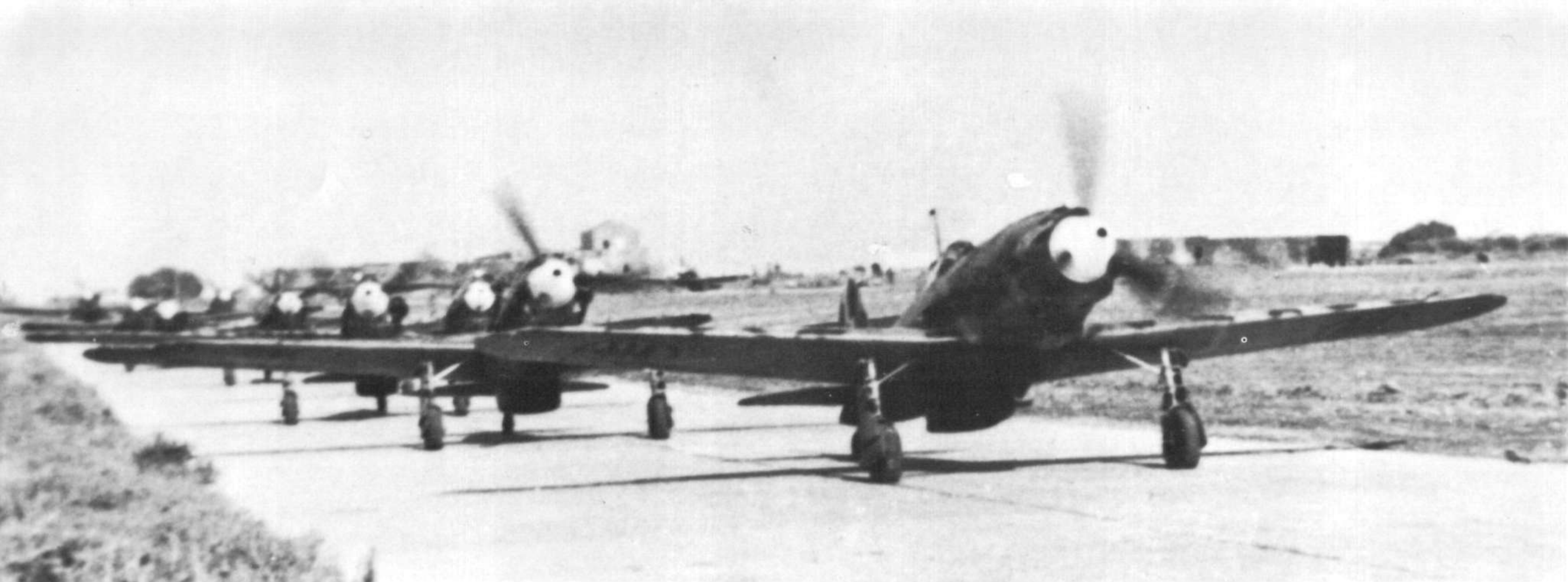


51° Stormo Folgore at Chiniola, 14 June 1942, before the attack on 'Harpoon'. Note the red arrow on the gear door of the nearest aircraft, showing the pilot's rank, sub-lieutenant.

A C.202 of 51° Stormo, M.M.9691 of Breda-built Serie XI, shows well the features of a late-production Folgore: single tailwheel fairing, bulletproof windscreen, second air intake in front of the cockpit and moved venturi tube. The empty weight is now 2415kg, the useful load is still 640kg. As the Serie progressed, the empty weight tended to increase.







C.202s of 153°Gruppo moved from the dispersal area to the main runway at San Pietro Caltagirone, Sicily, October 1942.

Sergeant Ennio Tarantola of 153°Squadriglia, 51°Stormo marked his *Folgore* with the slogan 'Dai Banana!' (Go, Banana). Pre-war he had been a banana importer.

Sgt. Tarantola by the tail of his C.202, M.M.9066, with seven Spitfire silhouettes in yellow on the rudder.

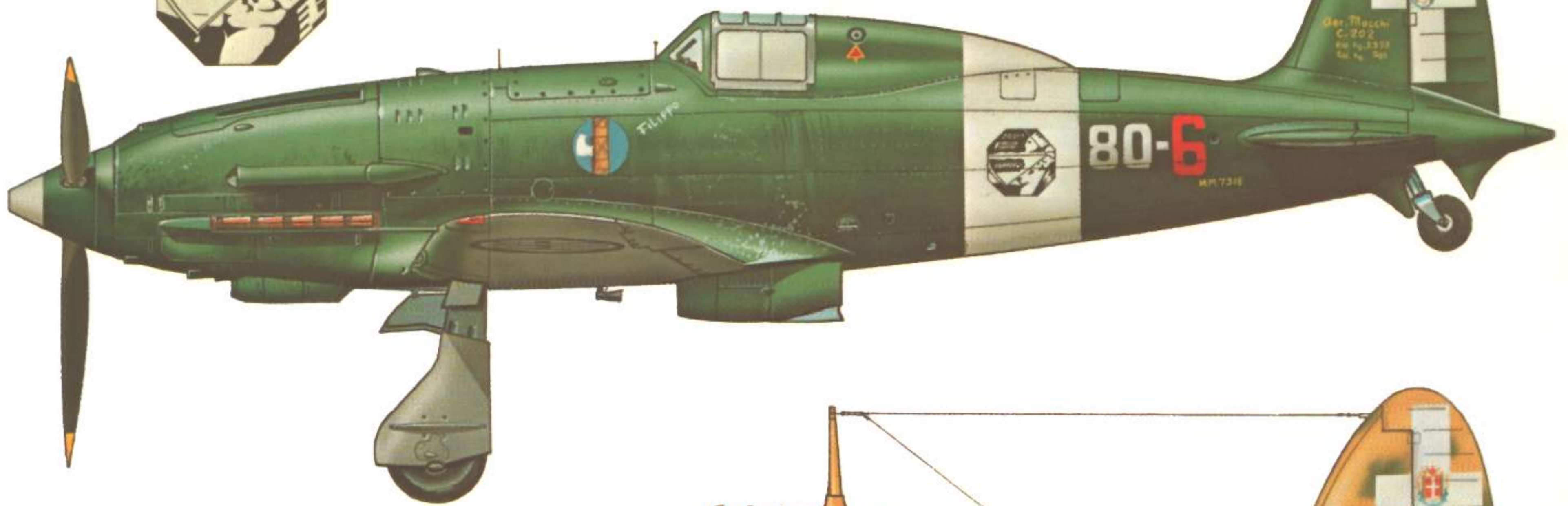




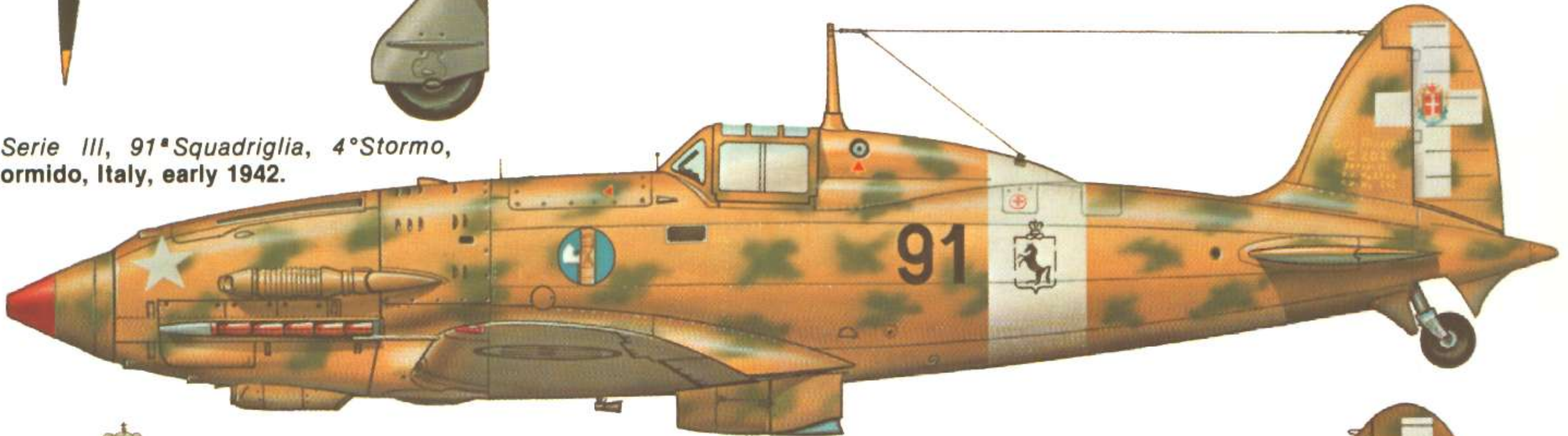
1° Stormo



C.202, 80ª Squadriglia, 1° Stormo, Italy, late 1941.



C.202, Serie III, 91ª Squadriglia, 4° Stormo, Campoformido, Italy, early 1942.



4° Stormo



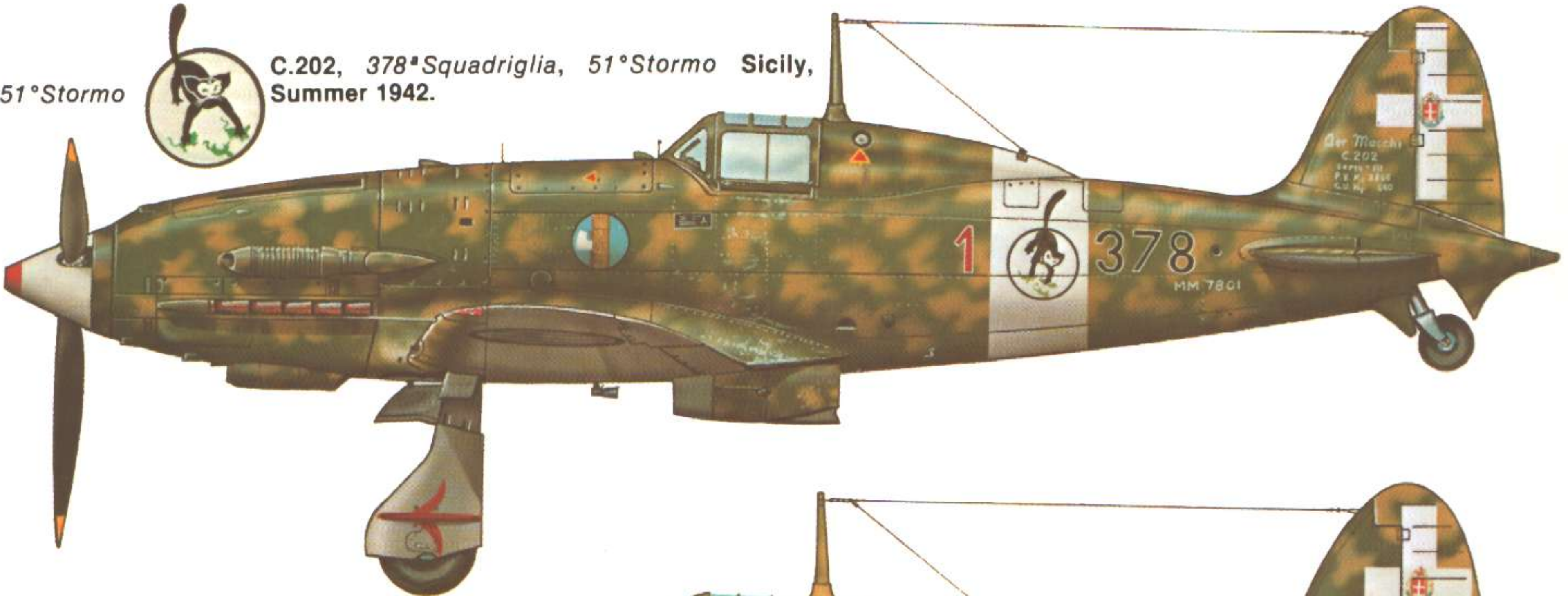
C.202, 84ª Squadriglia, 4° Stormo, Sicily, Spring 1942.



51° Stormo



C.202, 378ª Squadriglia, 51° Stormo Sicily, Summer 1942.



C.202, Serie VIII, 361ª Squadriglia, 21° Gruppo, Russia, Autumn 1942.







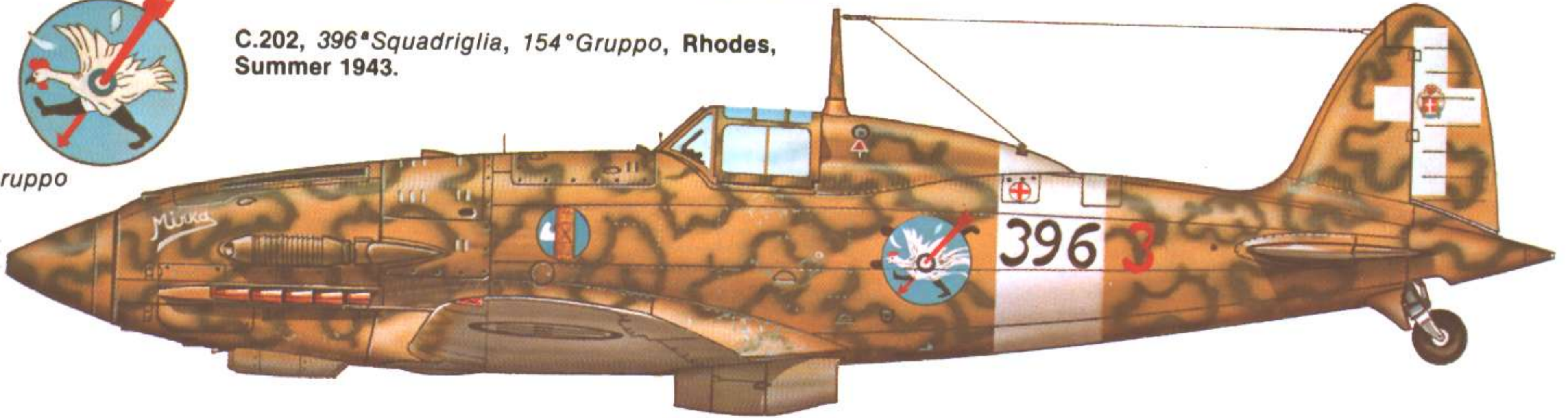
C.202, Serie VII, 369<sup>a</sup> Squadriglia, 53° Stormo, Capodichino, Italy, June 1943.

53° Stormo



C.202, 396<sup>a</sup> Squadriglia, 154° Gruppo, Rhodes, Summer 1943.

154° Gruppo



C.205V, 85<sup>a</sup> Squadriglia, 3° Stormo, Italy, Summer 1943.



The same C.205V as above, now in German hands, probably II./JG77.



C.205V, Co-Belligerent AF, 360<sup>a</sup> Squadriglia, 51° Stormo, Southern Italy, Summer 1944.





# Russian Adventure

After **Barbarossa**, Mussolini sent Italian ground and air units into Russia uninvited because he was afraid that Italy would be left out when Russia was carved up. Tiny by Eastern Front standards, the Italian air effort comprised, from the spring of 1942, *21° Gruppo*. This unit, formerly part of *51° Stormo*, was composed of three, and later four, *Squadriglie* of C.200s. When newer Russian fighters such as the MiG-1 and LaGG-1 were encountered, *21° Gruppo* requested better equipment to meet the threat. All that was available was a few *Folgore*s, 12 of which arrived at Voroshilovgrad, on the River Don, in September 1942. Those 12, and two photo-recon models which arrived later, were distributed among all four *Squadriglie*.

When the Russians attacked along the Don in late Autumn 1942, *21° Gruppo* was forced into action despite terrible weather conditions. By year's end the Italian Armies on the Don had collapsed completely and were in full retreat. Until 17 January 1943, *21° Gruppo* kept up the pressure on the advancing Russians as best it could but, with its bases and supply lines threatened, it was pulled back to Stalino, behind the Donets. Later it fell back again to Odessa and finally, in May, was recalled to Italy. The 202s hadn't been particularly active, only 17 sorties being flown with no claimed victories and no losses. Nine of the *Folgore*s returned to Italy, the other five being abandoned as unserviceable.



The shield of *21° Gruppo*, as painted on the tail of a *Folgore* at Voroshilovgrad.

The pilot and groundcrew of this *Folgore* of *382ª Squadriglia*, *21° Gruppo* in Russia, showing the yellow nose and fuselage band that marked Axis aircraft on the Eastern Front. Behind are two SM.81 transports.





Two C.200s and a C.202 in the snow during the Italian retreat. The white triangle on the wing leading edge was another recognition mark.



A rather cold-looking pilot stands beside his *Folgore*, probably the same one seen above, 356-1. In spite of snow, they retained their desert sand and green camouflage. Note the *Squadriglia* number on the canvas draped over the engine, perhaps to prevent unauthorized 'borrowing.'



C.202s of 151° Gruppo 'Ace of Spades', the Italian version of Spades. The closer aircraft is M.M.91956 of Macchi's Serie XIII. The empty weight has risen now to 2437kg., reflecting the added armor and the wing guns.



## In Tunisia

When the Allies landed in Morocco and Algeria in November 1942, the RA was forced to react. 153° Gruppo with 24 C.202s was transferred immediately from Sicily to Decimomannu, Sardinia, while 151° Gruppo ('Ace of Spades') its mate, moved to Pantelleria. 17° Gruppo of 1° Stormo, which had been refitting at Campofornido, also came down to Pantelleria. Attacks were launched from those bases against the Allied fleets, particularly at Bone, but without much success. Losses among Italian bombers and ground attack aircraft were so great that soon only C.202s or Re.2001s were allowed to continue the offensive with relatively ineffective strafing missions. On 11 November, 3 days after 'Torch', 155° Gruppo moved to El Alouina near Tunis, offending the prideful Vichy French and accelerating the end of French resistance to the Allied landings.

In December, 6° Gruppo of 1° Stormo, joined its mate on Pantelleria. Two of 6° Gruppo's Squadriglie moved on to Sfax, Tunisia. On 31 December, 3° Stormo received a few remaining C.202s of 2° Stormo's 13° Gruppo and continued the fight against the 8th Army at the Mareth line from bases near El Hamma. 16° Gruppo moved from Crotona, at Italy's toe, to Tunisia at this time, bringing the total RA commitment in Tunisia to 54 C.202s in 12 Squadriglie along with 25 C.200s and 12 G.50s.

Axis airfields in Tunisia were subjected to continuous aerial attack by the Allies, wearing down aircraft and personnel strength and making it increasingly difficult for the RA to carry out its main function of protecting air and sea traffic from Italy. All available Italian aircraft moved East to Gabes to support a DAK attack on the 8th Army on 6 March, but all that could be mustered at that time was 39 C.202s. In the aerial battles that followed, the *Folgore*s claimed nine Spitfires and a P-38 for the loss of two of their own. In late March

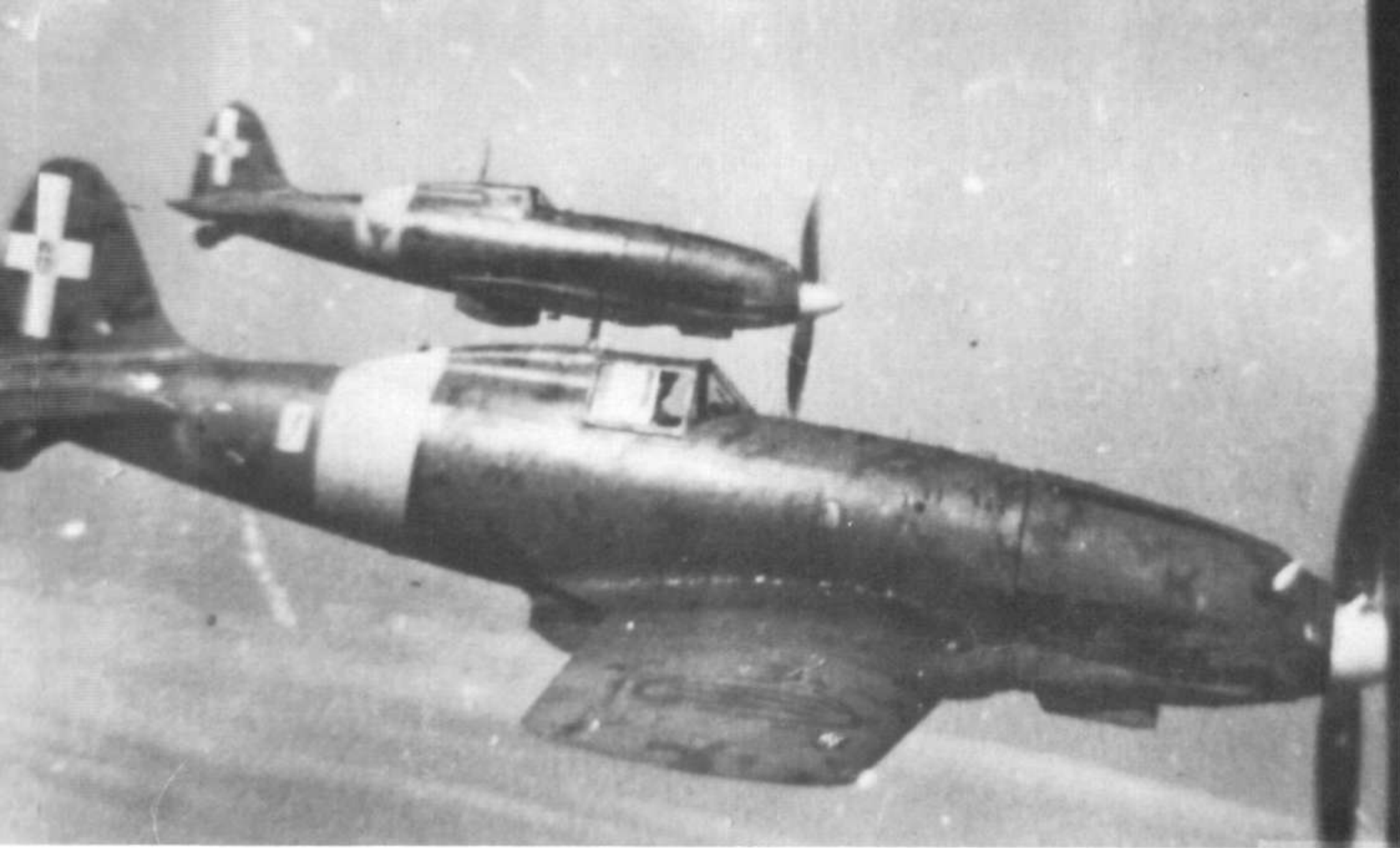
the expected British counterattack broke through at Mareth, resisted mainly by sorties from the available *Folgore*s. Both sides took losses in aerial combat, but it was raids by USAAF B-25s that eventually broke the strength of the RA in Tunisia. One particularly damaging raid on Sfax on 31 March destroyed 15 C.202s lined up for take off. In all 22 *Folgore*s were destroyed and 47 damaged on the ground during the two-month-long campaign.

At the end of March 7° Gruppo from Italy moved to Tunisia, the last major reinforcement of the doomed Axis foothold in Africa. 6° Gruppo and 3° Stormo, virtually shorn of aircraft, were withdrawn to Italy. Resistance went on for another month after the final Allied assault. The Germans surrendered on 10 May, the Italians on the 13th. 54° Stormo was the last Axis air unit in Tunisia, leaving for Sicily with its few remaining C.202s on the 10th.

The *Folgore* of 153° Gruppo's CO, in flight. On the fuselage side, the Gruppo number has been painted in roman numerals, in red with white outline, and a red band bisects the fuselage stripe.

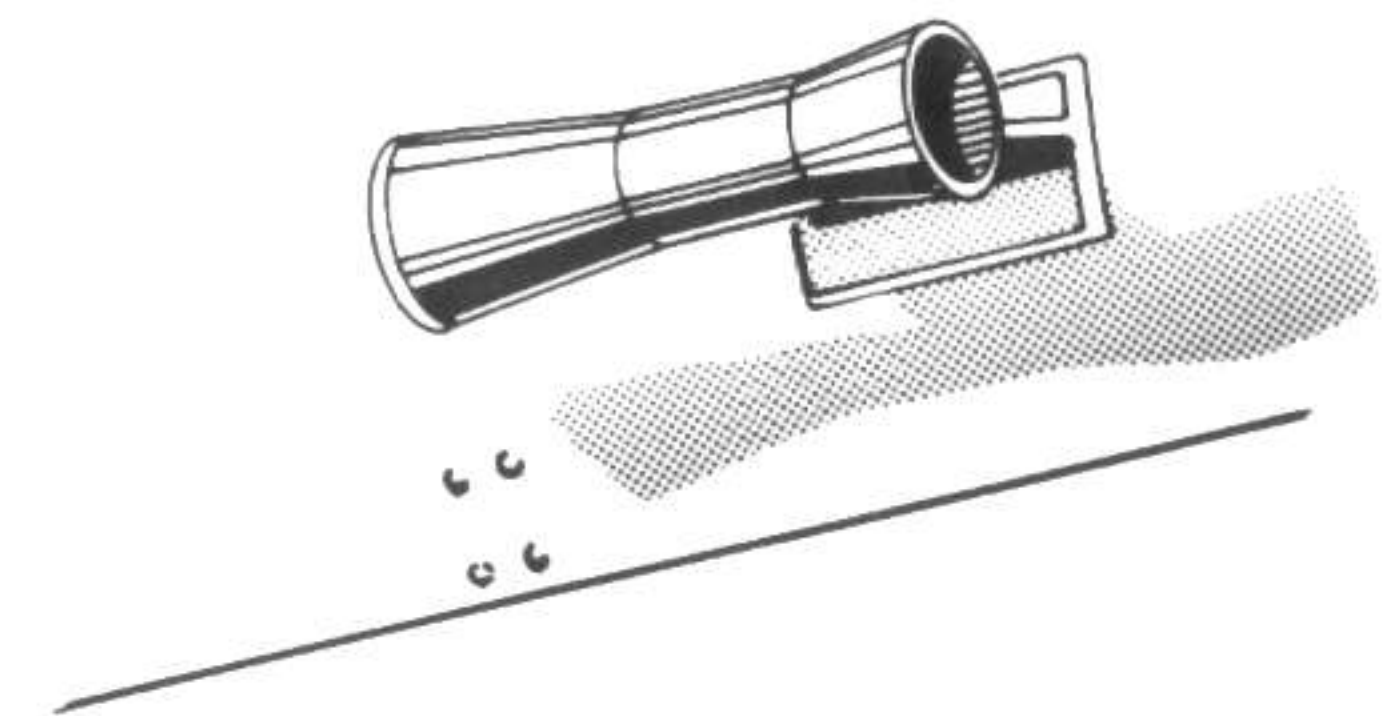






This *Folgore* of 151° Gruppo in Tunisia retains its desert marking of white nose and spinner. It has the later style windscreen with armor glass and supplementary cockpit air scoop but has the venturi tube beneath the fuselage.

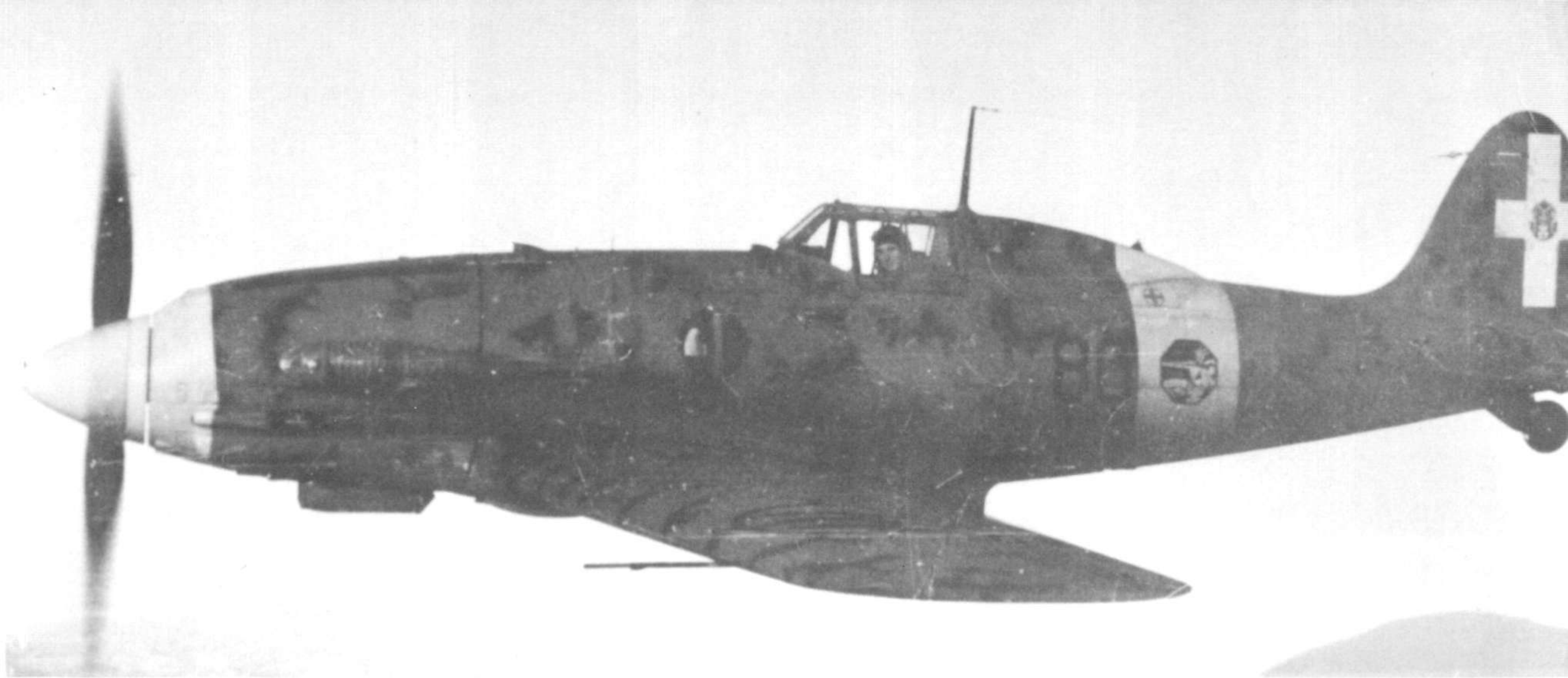
## Venturi Tube



(Above Left) Macchis from 153° Gruppo and 3° Stormo in formation over Tunisia. Note the generally darker appearance of the aircraft as desert sand gave way to the darker 'continental' shade.

A C.202 of 74° Squadriglia, 3° Stormo at Castelvetrano for the purpose of escorting Italian transports to Tunisia. This aircraft is unusual in that it retains the 4° Stormo 'signature' on its nose, indicating that this is one of the aircraft that transferred from that unit.

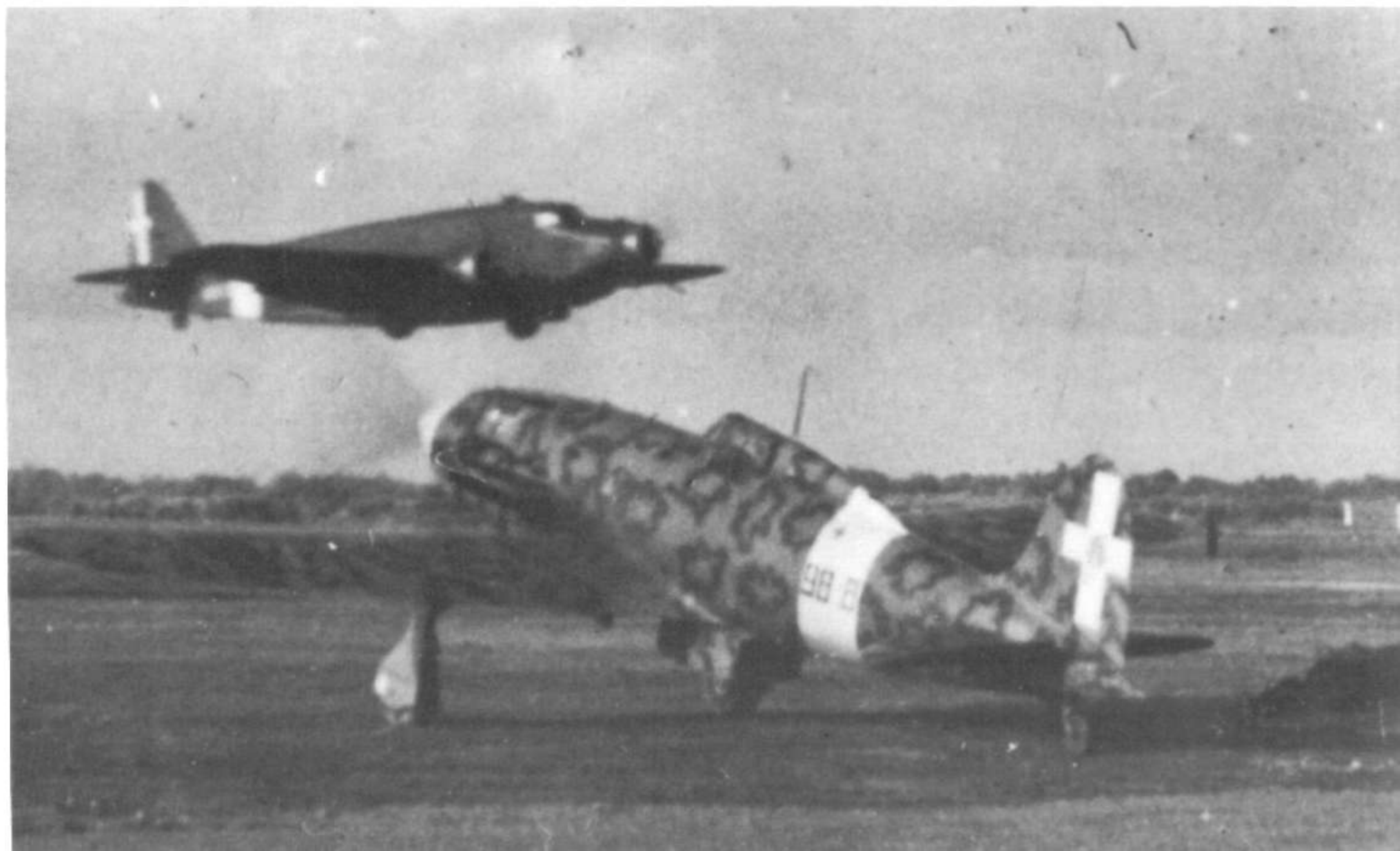




In-flight view of an 80<sup>a</sup> Squadriglia, 1<sup>o</sup> Stormo C.202 over the Mediterranean. The white cowl band has been rather ineptly masked. (Ghizzardi)

A C.202 of 98<sup>a</sup> Squadriglia's, 54<sup>o</sup> Stormo in Tunisia. An SM.82 takes off in the background.

One of 75<sup>a</sup> Squadriglia's Folgores bellied in at Castelvetrano after an escort sortie. There were never enough C.202s to allow for this kind of attrition.







(Above and Left) The sole Macchi C.202D, M.M.7768, as fitted with a chin radiator. The improvement in performance was marginal, not justifying an interruption of the assembly lines.

M.M.91974 was experimentally fitted with 20mm cannon pods under the wings. This did increase the firepower but substantially degraded performance.





# From C.202 to C.205

Through the first two years of its operational life, the C.202 had gone through virtually no modification. From *Serie VII* on a bullet proof windscreen was fitted, an auxiliary plate of armored glass that could stop a .50 cal round. Later *Folgore*s also had armor plate for the pilot's head and back. The last few *Serie* had a small supplementary air intake immediately in front of the cockpit and had the venturi tube moved from the aircraft's belly in front of the radiator to position on the aircraft's starboard side. The last group had wing racks for fuel tanks or bombs but these were rarely carried. All but the first several *Serie* had space in each wing for the mounting of a 7.7mm machine gun, but these were not often actually fitted until late in the production run. Even after *Folgore*s were delivered with the 7.7mm guns in place, they were rarely, if ever, armed because they were utterly ineffective against the large American bombers or well-protected fighters that were being encountered in 1943. One C.202, M.M.7768, was tested with chin radiators, and named C.202D, but wasn't particularly successful. Another, M.M.91974, was tested with 20mm Mauser gun pods, similar to those used on Luftwaffe Bf109s. The Italians, however, weren't willing to accept the degradation of performance as the Germans were, and the gun pods never were used operationally.

By late 1942, the C.202 was facing far superior opposition and the search for improved performance became critical. The DB601, from which its engine was derived, was already out of production in Germany. Plans for the Germans to overhaul worn Italian engines fell through. Production of the RA 1000 by Alfa-Romeo never exceeded 50 units per month, which had to be shared with Reggiane. This meant that airframes often had to wait for engines, forcing Macchi to keep the C.200 in production well into 1943.

Logically, a more powerful engine which could be supplied in relatively large numbers had to be found. Equally logically, the DB605, the 1475hp uprated 601, was chosen. A prototype mating the 605 to the C.202 airframe first flew on 19 April 1942, called the C.202bis. The only visible differences from a standard *Folgore* were a retractable tailwheel, twin cylindrical oil coolers replacing the single, chin mounted cooler on the *Folgore* and a blunter spinner for the Piaggio 2001 propeller. It retained its C.202 serial, M.M.9487, incorrectly painted as 9287. The second prototype was M.M.9488. The new fighter was ordered into production well before that first flight because of the obvious ease of transition on C.202 production lines and the justified confidence in its performance and handling. It was eventually dubbed the C.205V, for *Veltro* (Greyhound). Production was authorized in the following batches:

	Builder	Quantity	Serials
<i>Serie I</i>	Macchi	100	9287-9386
<i>Serie II</i>	Fiat	150	90050-90149
<i>Serie III</i>	Macchi	150	92153-92302
	Macchi	300	98218-98517

Fiat started producing the DB605 as the RA 1050 R.C.58 *Tifone* (Typhoon), tooling up to full production rapidly. Nevertheless, *Veltros* only appeared in small numbers, *Serie I Veltros* had the late C.202 armament of two cowl-mounted 12.7mm machine guns and two 7.7mms in the wings. The first of those were delivered in early 1943 to 1° *Stormo*. These were followed on Macchi's lines by *Serie III* which mounted two 20mm cannons in the wings in the place of the rifle-calibre machine guns. Before the Armistice, 77 *Serie III Veltros* were completed. No *Serie II Veltros* were ever finished because Fiat's Turin works were largely demolished by Allied bombing in December 1942. The C.205V was judged an excellent fighter, fast and only slightly less maneuverable than the *Folgore*. Its main drawback was high altitude performance, which suffered because it retained the relatively small C.202 wing.

The C.205V was always considered by the RA as an interim fighter. At the same time that the *Veltro* was ordered into production, specifications were issued for the so-called *Serie 5* fighters (after the last digit of the 605), which resulted in the Fiat G.55, Reggiane Re.2005 and Macchi C.205N *Orione*. The prototype *Orione* (Orion) first flew on 1 November 1942, serialled M.M.499. It was an entirely new airframe, with a powerful armament of one



Mario Castoldi (for whom the C. in C.202 stood) stands in front of his last production design, the C.205V.

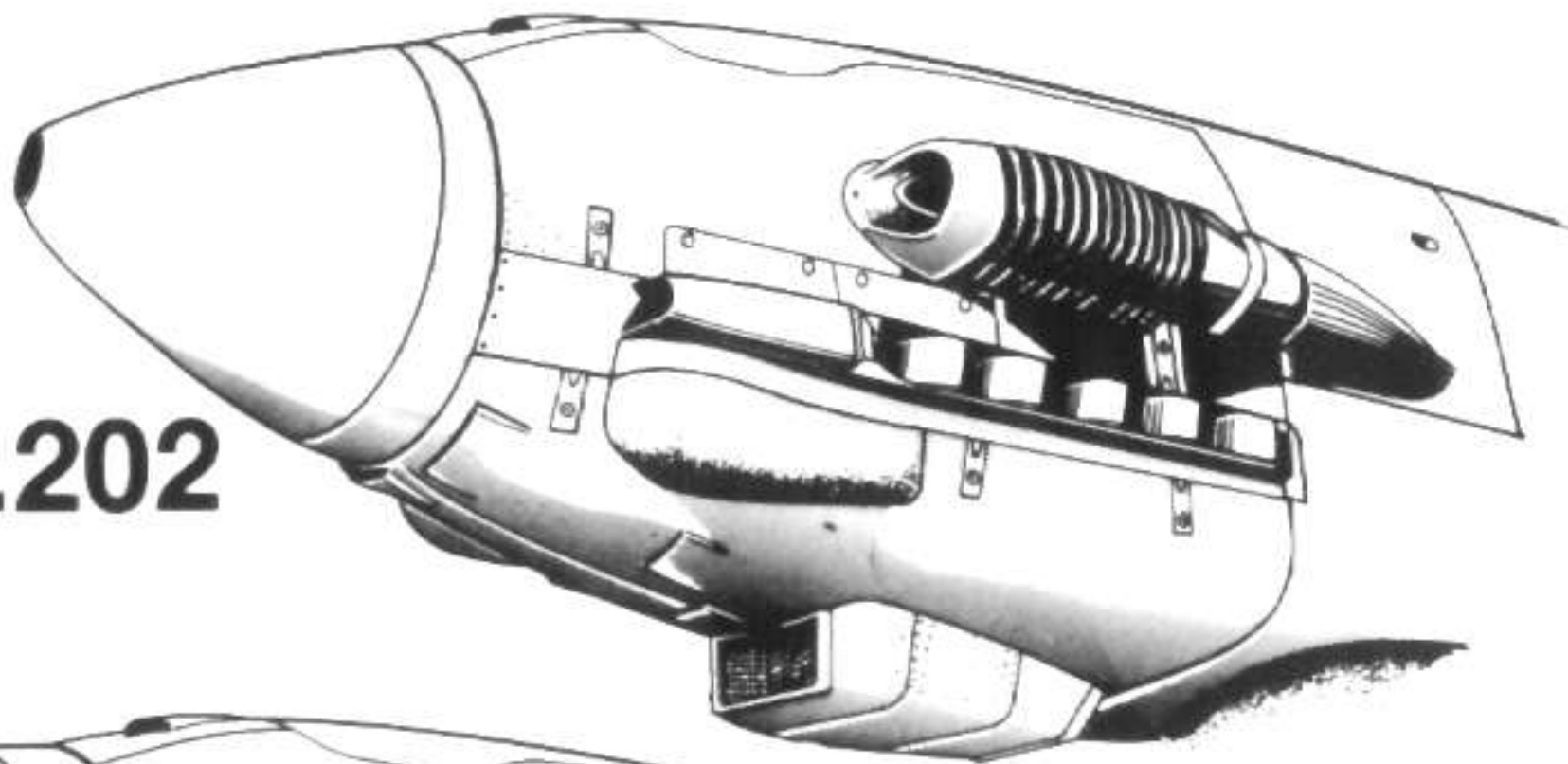
20mm cannon firing through the propeller hub and four 12.7mm guns, two in the wings and two above the wing roots. A second *Orione* prototype, M.M.500, eliminated all four machine guns, replacing them with two more 20mm cannons in the wings. The *Orione* flew well and was ordered into production but the contract was cancelled in the spring of 1943 when the RA changed its mind and opted for the Fiat G.55.



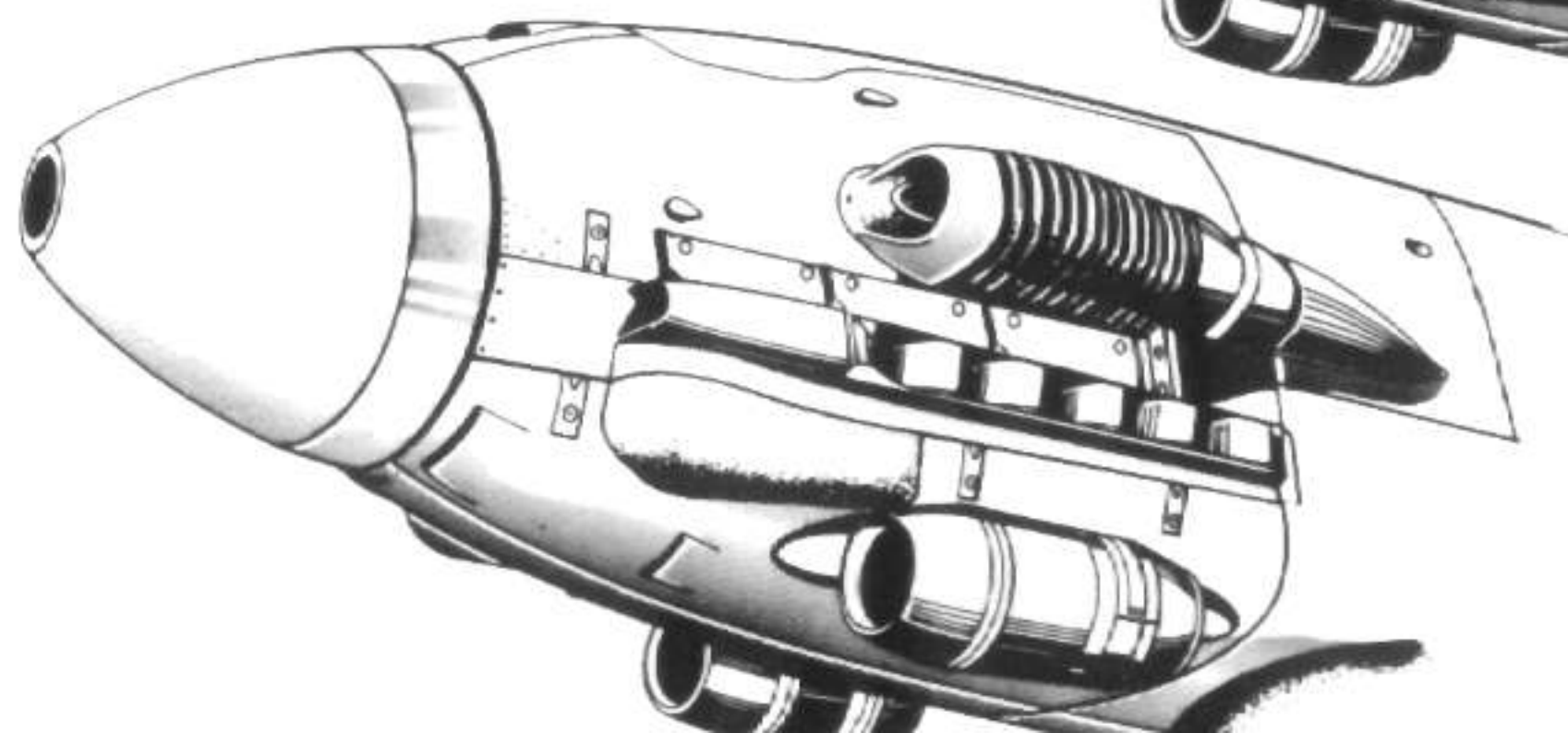
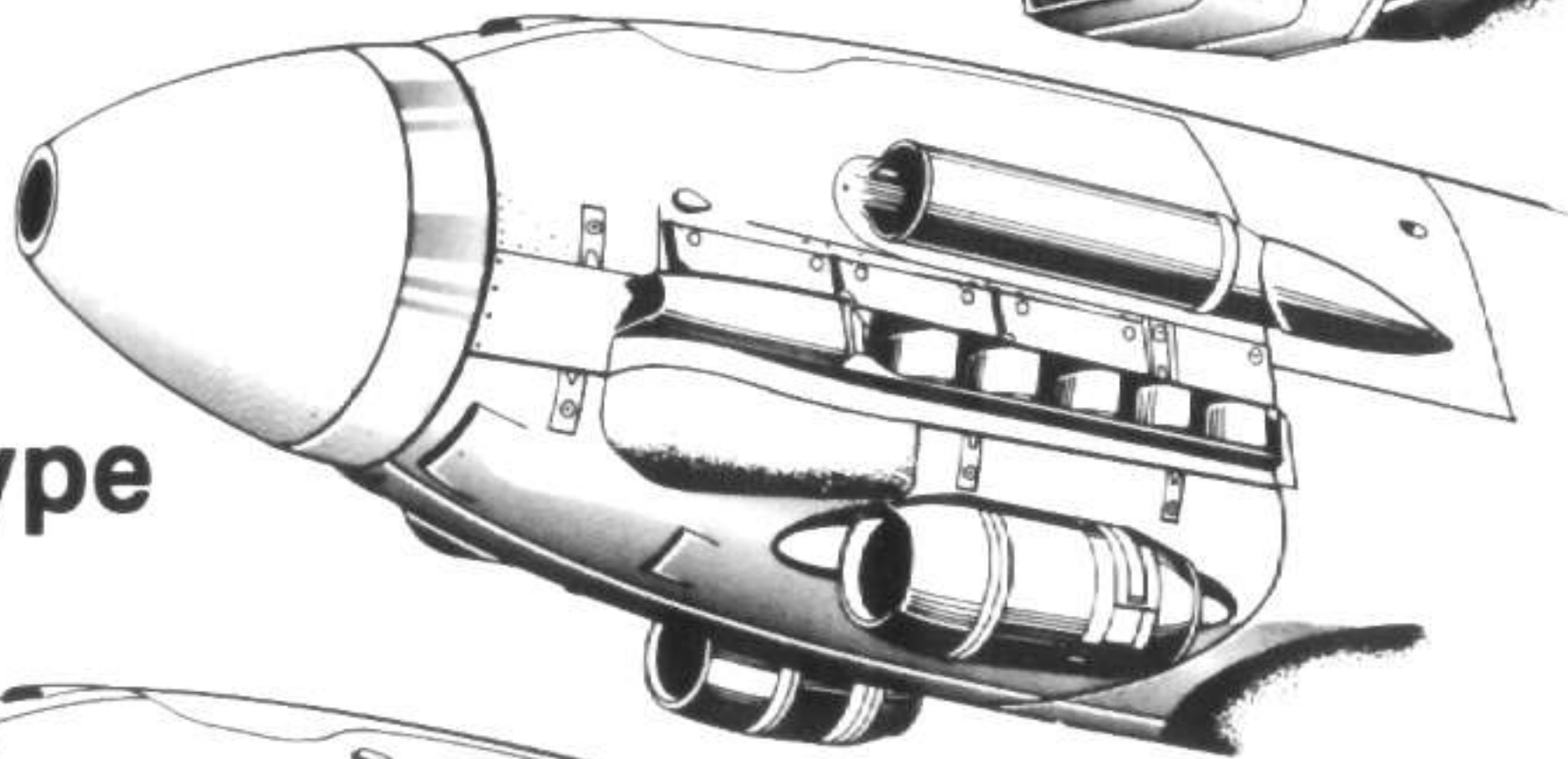


The C.205V (*Veltro*-Greyhound) prototype, showing the twin cylindrical oil coolers, blunter spinner and retracting tailwheel, at the Guidonia Test Center.

**Main  
Production C.202**



**C.205  
Prototype**

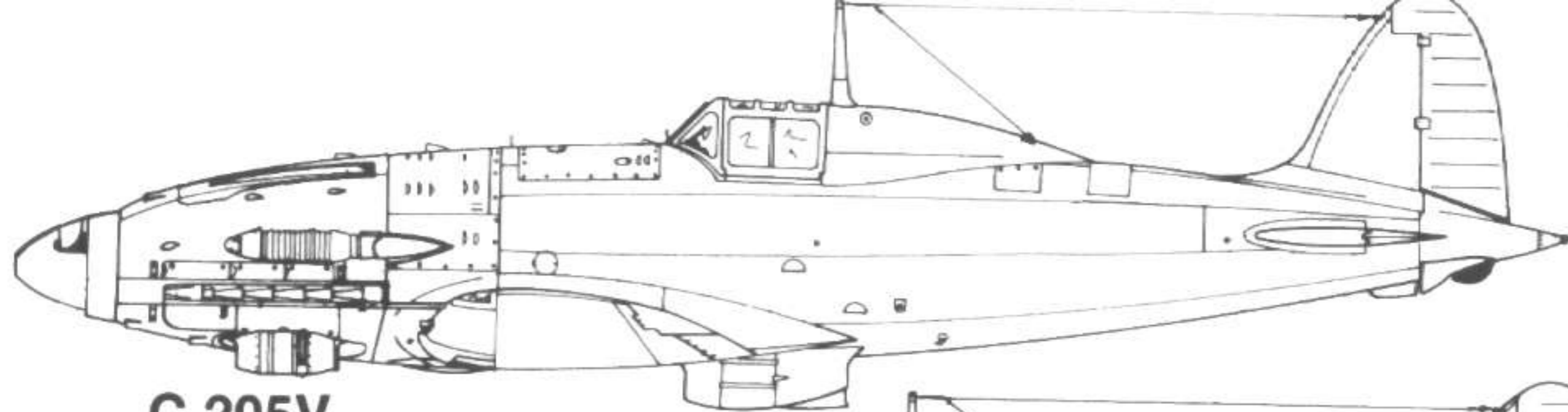


**Production  
C.205**

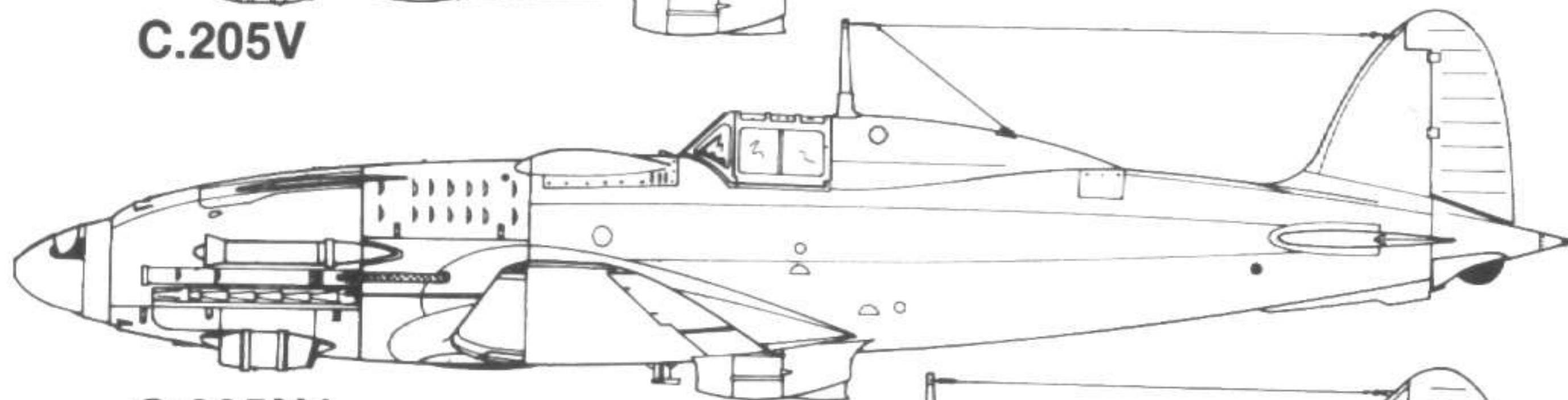
A *Serie I Veltro*, M.M.9338, with late-style C.202 armament, two cowl-mounted 12.7mms and two wing 7.7s. The name on the tail was to remind the reluctant pilots of the 'official' nickname.



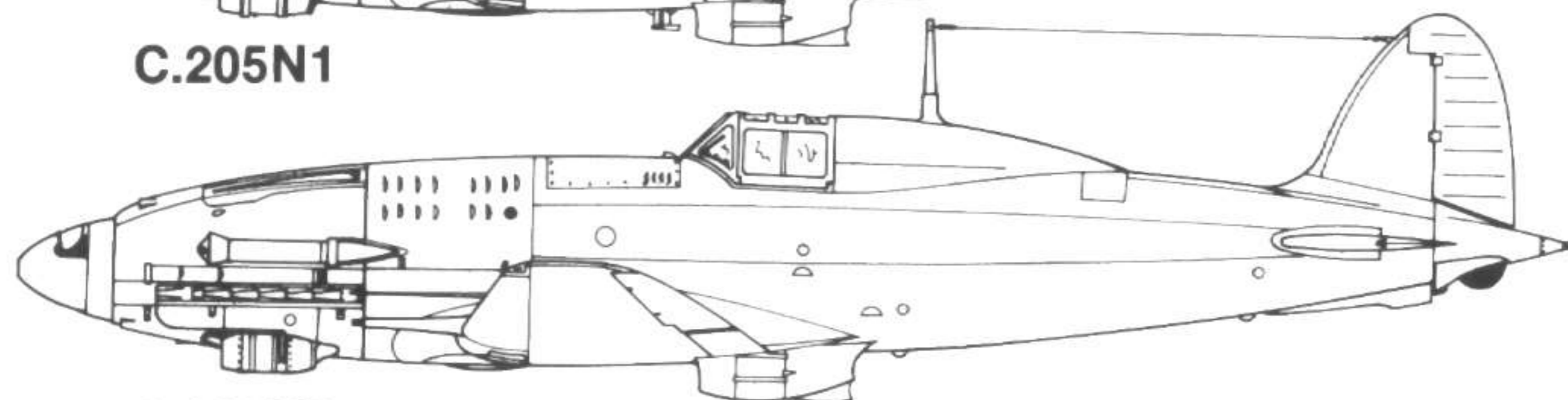




C.205V



C.205N1



C.205N2



The first C.205N *Orione* (Orion) prototype, M.M.499. The armament was a single 20mm cannon firing through the propeller hub and four 12.7mm MGs, two in the cowl and two above the wing roots.

The second *Orione* prototype replaced the MGs with a pair of wing-mounted cannon





Macchis from 151° Gruppo in front of the cave-hangers on Pantelleria, just before the aerial assault that overwhelmed that island.



## The Defense of Italy

The slow production of C.202s barely allowed existing units to maintain strength. Nevertheless, several new units re-equipped with the now no longer new fighter in preparation for the defense of the homeland. 16° Gruppo in Southern Italy, 154° Gruppo in Rhodes, 22° Gruppo ('Scarecrow') at Naples, 24° Gruppo in Northern Sardinia, 21° Gruppo back from Russia and now at Florence and, finally, 3° Gruppo and 150° Gruppo which briefly acquired *Folgore*s before switching to the Bf109G, all flew the C.202 for the first time.

During the spring of 1943, the Allies began the air activity that would lead to the invasion of Italy. 1° Stormo, based at Pantelleria, now with *Veltros*, opened the action on 20 April 1943 when 32 C.205Vs jumped a force of nearly 80 Spitfires and P-38s, claiming 18 for the loss of one. Flying the best fighter in the area, 1° Stormo controlled the local airspace until the Allies launched an all-out aerial assault on the island at the end of May, totally overwhelming the defenders. For probably the only time in history, an island was bombed into surrender. 1° Stormo retreated to Sicily, 151° Gruppo was wiped out and on 11 June, Pantelleria surrendered without being invaded.

The Allied bomber offensive against strategic targets in Italy and Southern Germany continued unabated throughout this period. *Folgore*s with their relatively light armament had little effect on the American bomber streams. Italian pilots found that the only way they could survive the defensive fire of the bomber 'boxes' was by head-on attacks, but the *Folgore*s twin .50s could do little damage in the brief firing time allowed by that form of attack. The only successes that the RA could claim against USAAF heavy bombers

were against solitary stragglers. Such was the desperation of the RA that it tried C.200s dropping altitude-fuzed bombs, without any success. The new cannon-armed Re.2005s and C.205s proved much more effective, but they were never available in numbers large enough to make a difference.

In preparation for the invasion of Sicily in July, massive Allied flights struck at all Italian airfields, demolishing over 1000 RA aircraft on the ground during the months before Operation Husky. When the Allies landed on 10 July 1943, the RA threw in all the forces it had. The attrition of Stuka, G.50 and Re.2002 attack aircraft was terrific. Within days there were virtually none left to continue the suicidal attacks on the invasion fleet. 4° Stormo at Catania, 21° Gruppo at Chinisia and 161° and 153° Gruppi at Palermo represented the only C.202 units on the island. They were joined over the island by 3° Stormo from Cerveteri and a dozen 51° Stormo *Veltros* from Sardinia, but were never able to do more than make nuisance raids on the landings. On 12 July, an unidentified *Folgore* strafed the launch bringing General George Patton ashore, but was brought down by flak when it turned for a second pass.

Within 10 days, all fighter units had been forced to withdraw from Sicily, unable to protect even their own bases. The island fell in mid-August without much further RA support. Through the rest of the summer, the RA kept putting *Folgore*s and *Veltros* into the air over Southern Italy with generally poor results. Only 51° Stormo, which had some luck against USAAF P-40s, and 3° Stormo's C.205Vs, which maintained a good record of B-17 kills, could claim any significant success. On 8 September 1943, five days after the British crossed over to the mainland at Messina and the day before the Salerno landings, the Royal government of Badoglio surrendered. That evening, the RA lost the last casualties of its long fight against the Allies, two 51° Stormo *Veltros* falling in combat.





A C.202 of 3° *Stormo* at Venaria Reale, near Turin, during the winter of 1943. The camouflage has been oversprayed onto the aircraft numerals and fuselage band. The semi-circular structure on the wing is the one-piece engine access panel removed by the mechanics.

In warmer weather, the CO of 151° *Gruppo* also had his unit's number inscribed in roman numerals.



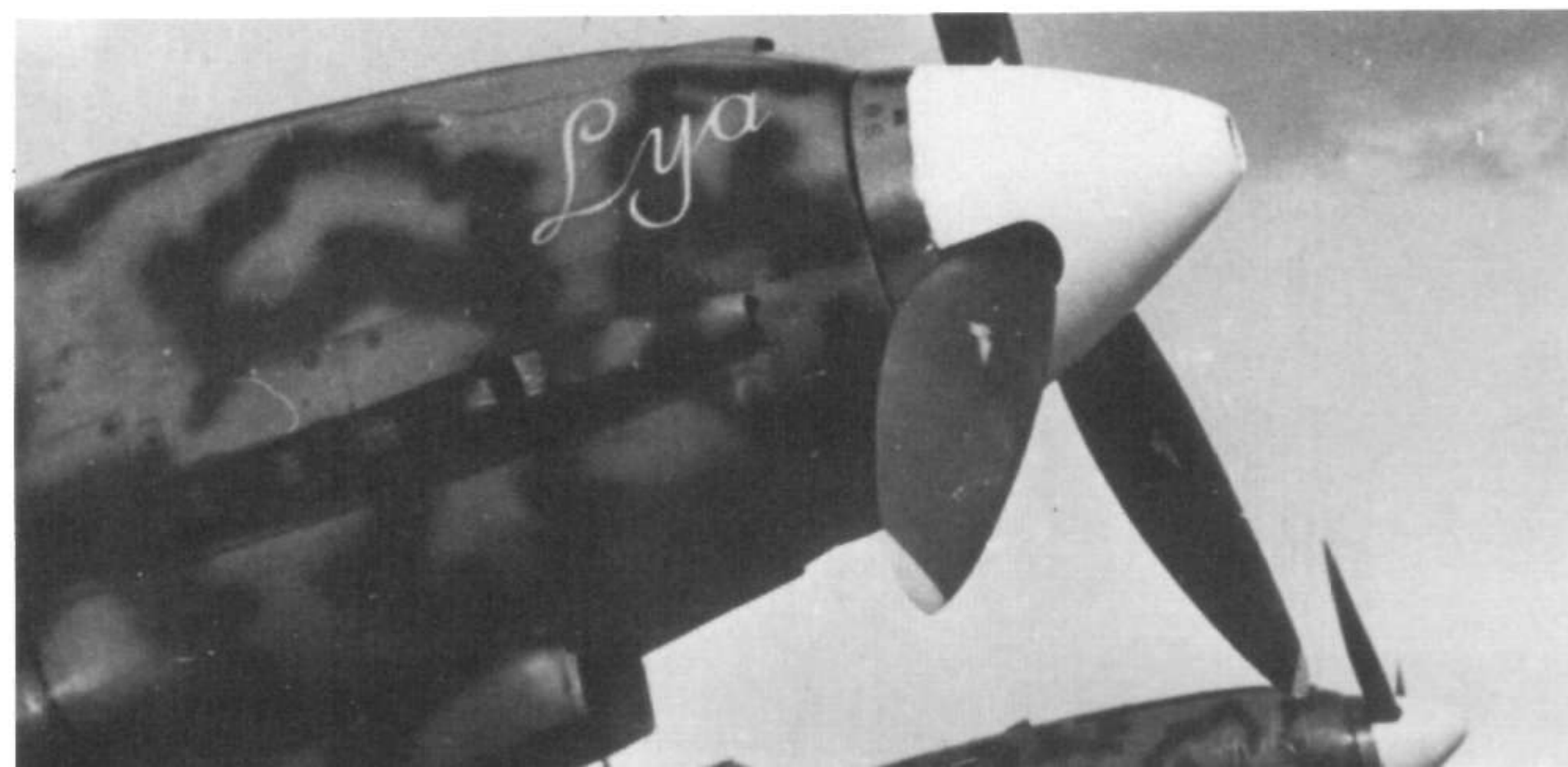
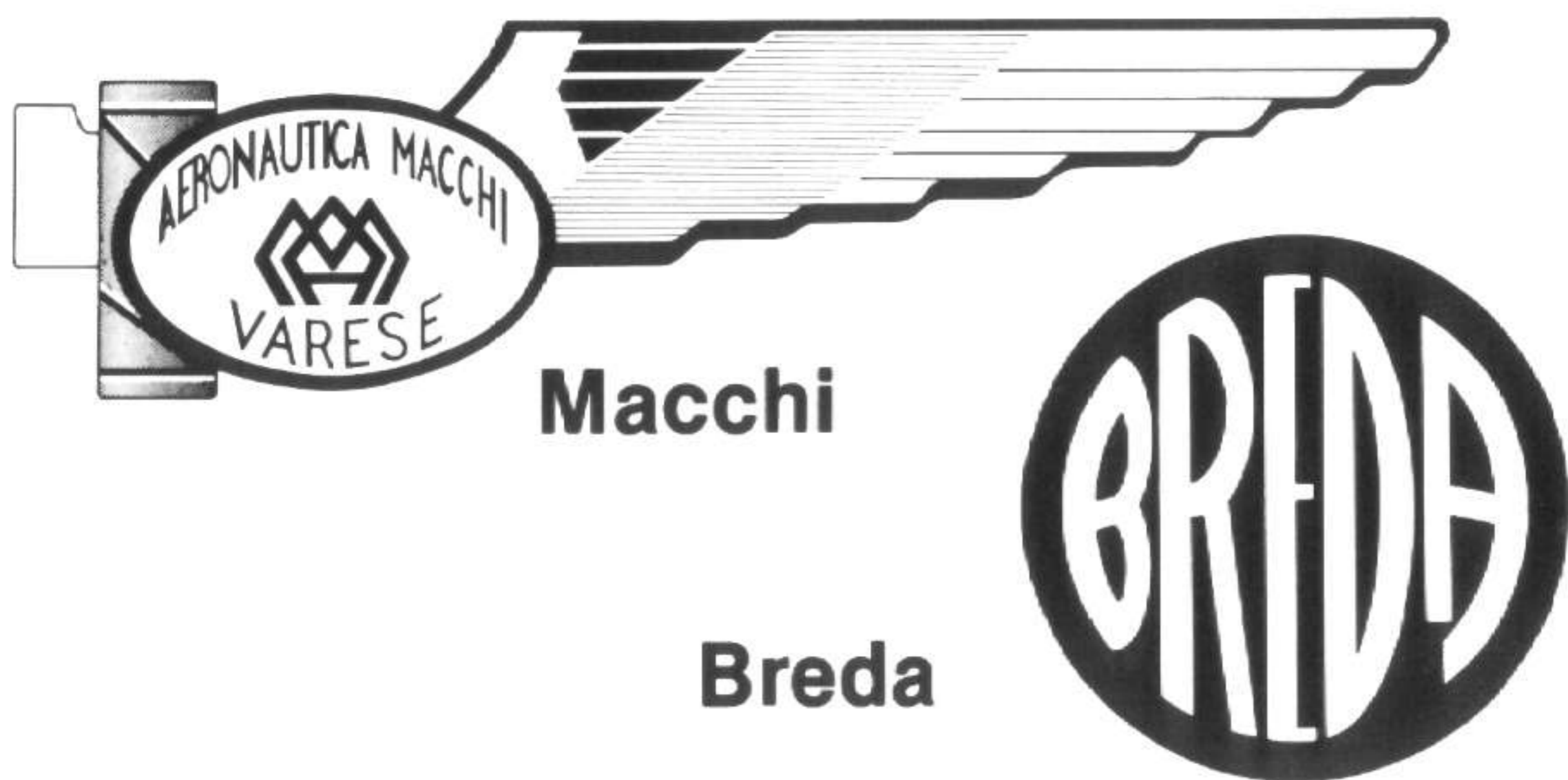




C.202 of 4° Stormo, Naples, Spring 1943.

*Folgore*s from 153° Gruppo had individual names painted on their noses. The closest is 'Lya', then 'Puky'.

## Propeller Insignia







150°Gruppo flew the *Folgore* briefly before switching to Bf109s. The insignia is a blue circle with a palm tree, three birds and the motto: *Gigi Tre Osei*.

(Below Left) A C.202 of 396°Squadriglia, 154°Gruppo at Rhodes. The Gruppo insignia, deriving from earlier action over Greece, shows a white hen with black boots and a Union Jack hat. An RAF roundel, serving as a bullseye, is hit by a red arrow standing for the Fiat G.50 *Freccia* (Arrow) which the Gruppo flew in 1941. The insignia has been painted over the Squadriglia number which was then repainted on the white band.

A rare photo of a 3°Gruppo *Folgore*. As with 150°Gruppo, 3° flew the C.202 only briefly before re-equipping with Bf109s. The high individual aircraft number, 18, is rare at a time when most RA Squadriglie had a difficult time keeping one-third of their allotted 12 aircraft in flying condition.



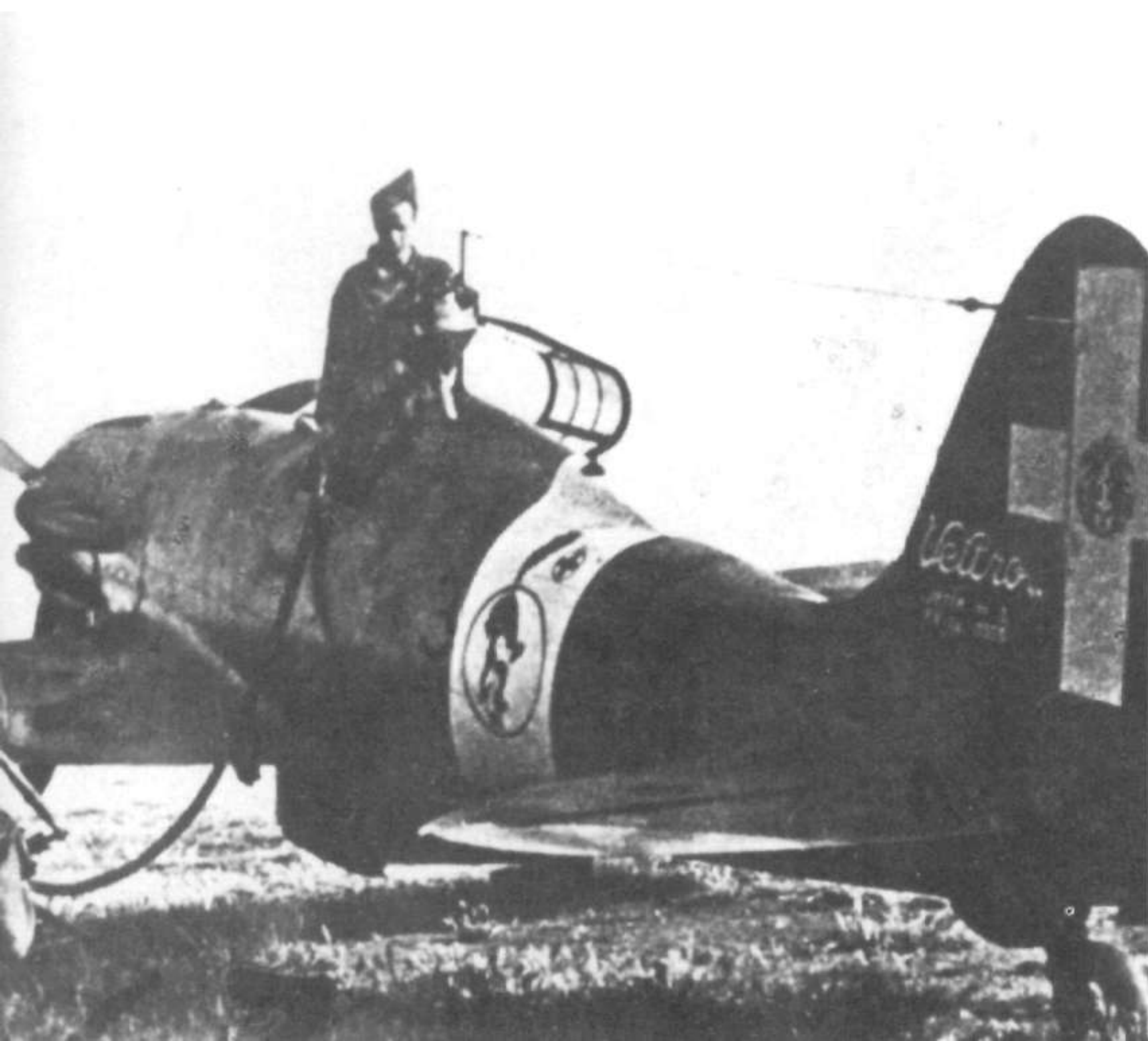




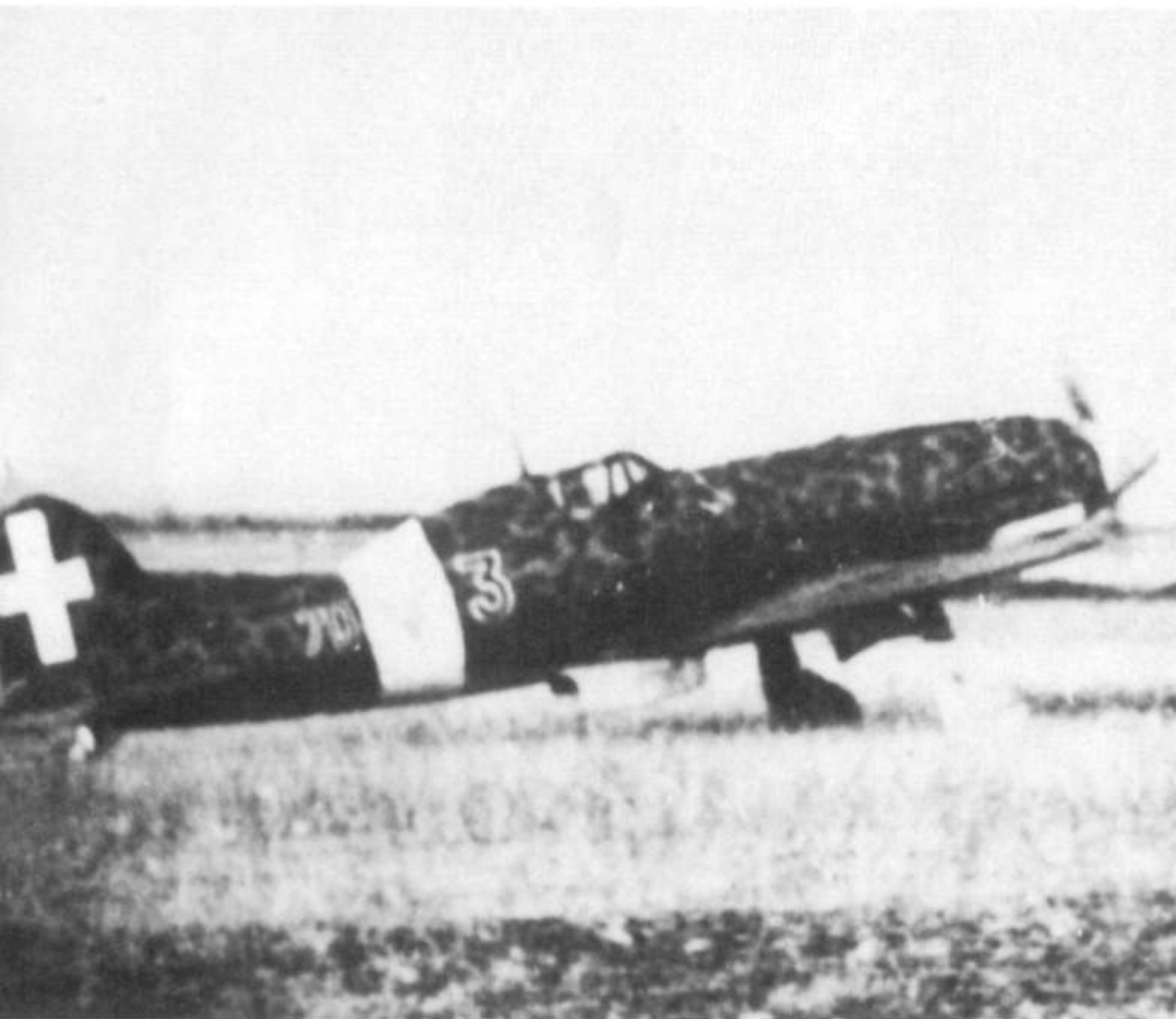
C.202 of 22°Gruppo at Naples in the spring of 1943. Note that the near aircraft has a camouflaged spinner.

A 22°Gruppo Folgore over Mt. Vesuvius near Naples on its way to intercepting USAAF B-17s.

(Below & Right) Among the first units to receive the new *Veltro*, 51°Stormo flew out of Sardinia during the summer of 1943.







A C.202 of 70<sup>a</sup> Squadriglia, 3<sup>o</sup> Stormo in the defense of Rome. The camouflage has a high percentage of green, giving a very dark appearance. The Stormo's triangular insignia is barely visible.

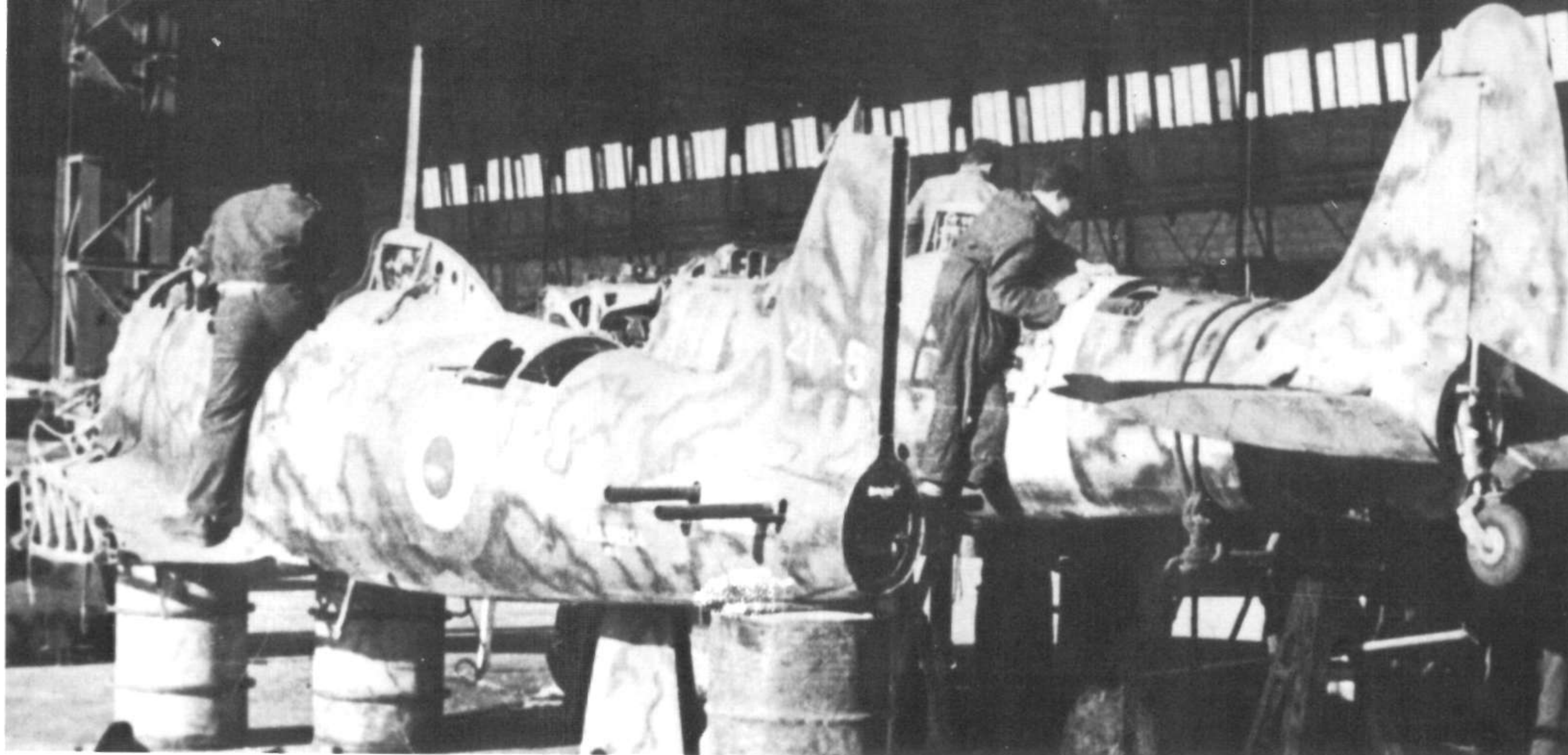
Servicing a 3<sup>o</sup> Stormo Folgore at Cerveteri in the summer of 1943. Again the camouflage is very dark.

A pair of Veltros of 85<sup>a</sup> Squadriglia, 3<sup>o</sup> Stormo at Cerveteri, summer 1943.





Two C.205Vs being rebuilt from wrecks and spares. The nearer one, M.M.92214, already has the red-white-green roundels of the Co-Belligerent Air Force. Its tail codes identify it as belonging to 21° Gruppo. The farther one still has its old markings, the white fuselage band and the 'Indian Archer' insignia of 1° Stormo.



## With the Allies

After the Armistice, the King and his government fled to the Allied-held South, ordering all military units to follow suit. But for many pilots, raised with Fascism, the choice wasn't simple and many units split, part going South and part joining the Germans. 4° and 51° Stormi and 21° and 8° Gruppi went South along with some individuals from other units, bringing with them 43 Veltros, 23 Folgores and a number of C.200s. They were united into a single 'Fighter Command' and went into action immediately without formal Allied authorization, strafing German columns retreating to Cassino and dropping propaganda leaflets on German-held towns.

The leaders of the King's government contacted the Allies and, after some rather delicate negotiations, the RA units fighting on the Allied side gained official status as the Italian Co-Belligerent Air Force. The fighters were organized into a 'Raggruppamento Caccia' composed of the Macchi-equipped 4° and 51° Stormi and the Re.2002-equipped 5° Stormo, based at Brindisi, Lecce and Manduria. Often ignored in Allied planning, flying aircraft for which there were no spares (as the entire Italian aviation industry was in the German-held North), volunteering to fight on when most other Italian soldiers had simply gone home, facing execution by the Germans if captured, the pilots of the Raggruppamento had the thankless task of proving to the Allies that they were a serious force for liberation.

Soon after its formation, Allied High Command decided to restrict the use of the Co-Belligerent units to the Balkans, to avoid the unhappy prospect of Italian fighting Italian. In November 1943, the Raggruppamento assembled at Lecce, facing Albania across the Adriatic. Throughout 1944 the Macchis fought in the air over the Balkans, kept flying by spares scrounged from the wrecks that littered Southern Italy, battling their former allies of JG 27. For these relatively long-range operations, some C.205Vs were modified with fuel tanks replacing the cowl guns and were renamed C.205S (for Scorta-Escort). Other

'new' C.205s came into existence when intact DB605 engines from downed Bf109Gs or ANR Veltros were grafted to existing C.202 airframes. This explains the appearance of some C.205s without the characteristic retracting tailwheel.

In April 1944, 4° Stormo moved North into liberated Central Italy, where it exchanged its war-weary Macchis for not-much-less weary Bell P-39s. 51° Stormo also moved North, all its C.205s were assembled in 20° and 155° Gruppi. Its 21° Gruppo continued with Folgores until it received 20° Gruppo's Veltros in November when that unit re-equipped with Spitfires. 155° Gruppo flew the Veltro until war's end, the only unit to do so. 21° Gruppo was deactivated when there were no longer enough Veltros to keep two such units flying, its aircraft making up 155°'s losses. The C.202s which it gave up in November were passed on to 5° Stormo whose Re.2002s were inadequate. That unit flew the Folgore until January 1945 when the German retreat put them beyond the Macchi's limited range.

In over one and a half years, the Raggruppamento managed 6546 sorties of all types. It shot down six German aircraft, lost 39 of its own, and did substantial damage to Axis ground forces in the Balkans.

A C.205V captured by No. 3 Sqdn, RAAF. Squadron codes and RAF roundel have been painted over the Italian markings.





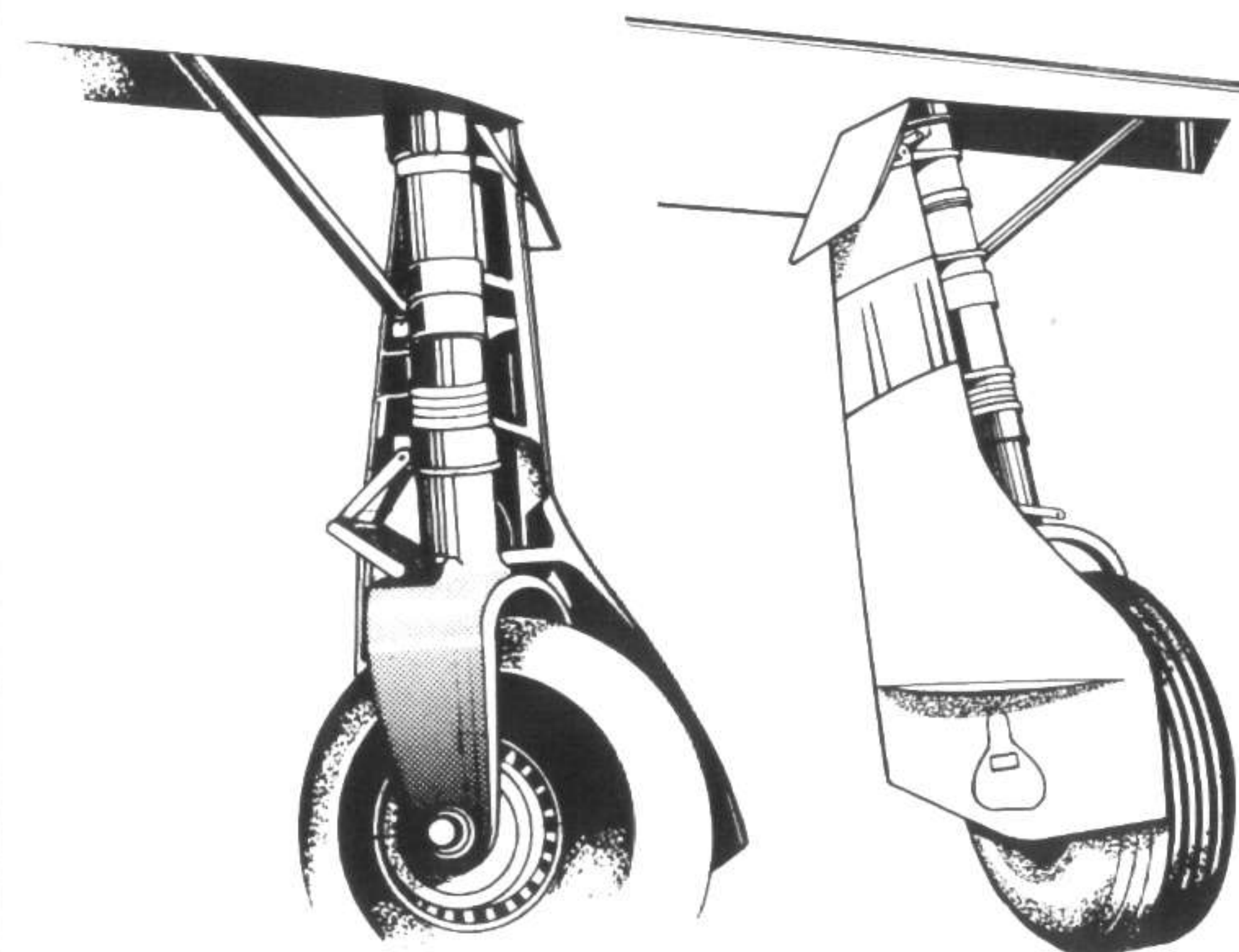


Victor Emmanuel III, in the black armband, reviewing a formation of Co - Belligerent Folgores.



A line-up of Co-Belligerent aircraft: (from the foreground) C.202, C.205V, Spitfire, P-39 and Martin Baltimore. The *Folgore* is rare in carrying wing tanks.

## Main Landing Gear





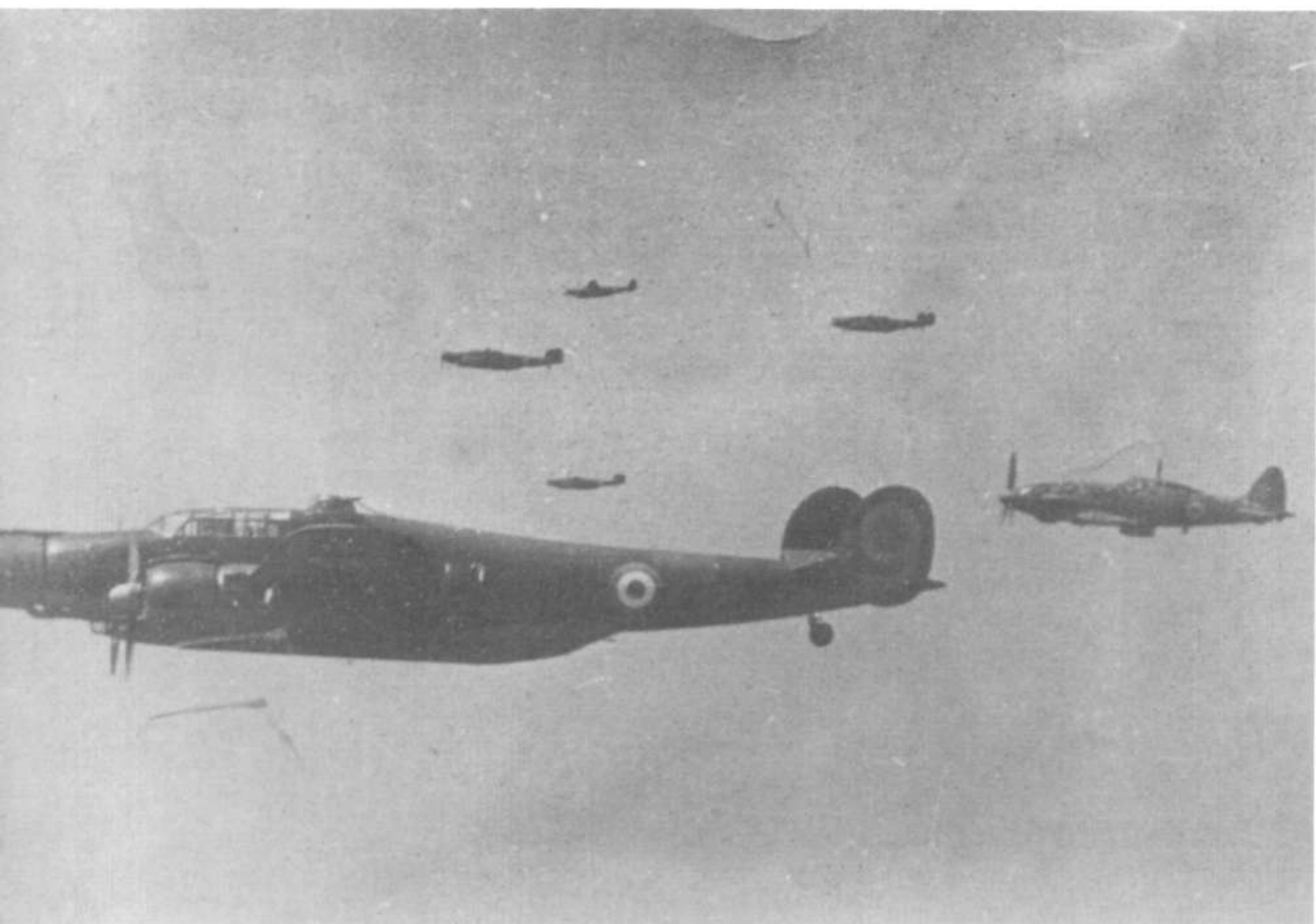


A C.205V of 155° Gruppo, carrying the 51° Stormo insignia on its tail. Co-Belligerent aircraft carried the Gruppo, rather than Squadriglia, number.

An 8° Gruppo Folgore taxis with a groundcrewman on the wing. The green 'smoke-rings' were much glossier than the sand undercoat.

A C.202 of 208° Squadriglia, 101° Gruppo lands at Lecca. To every rule there is an exception - here the Squadriglia rather than Gruppo number is used.

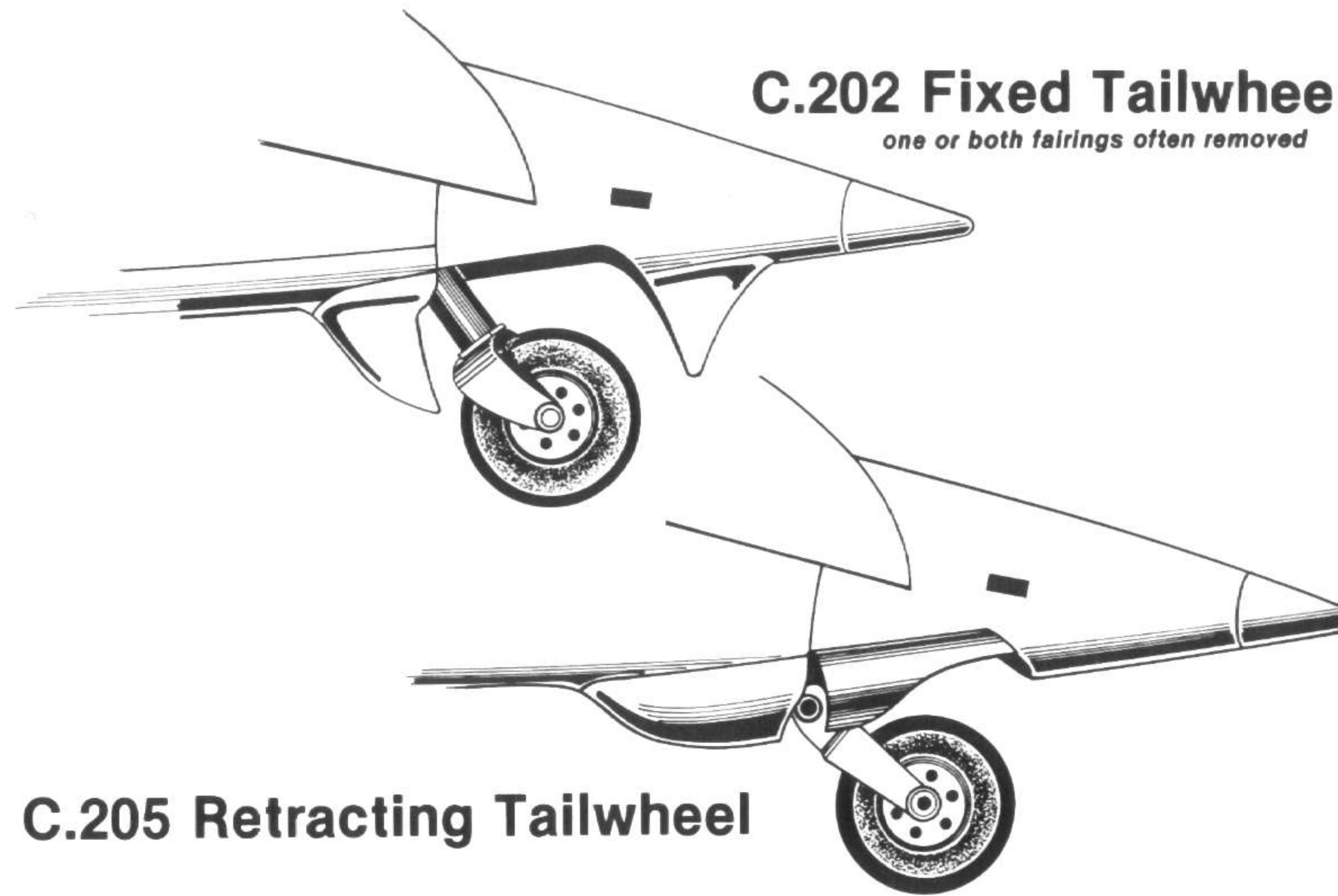
Veltros escort Co-Belligerent Cant Z.1007s on a supply dropping mission to the Yugoslav partisans.







The tail of a Macchi of *8° Gruppo* shows the new emblem of that unit, the 'Charging Knight'.

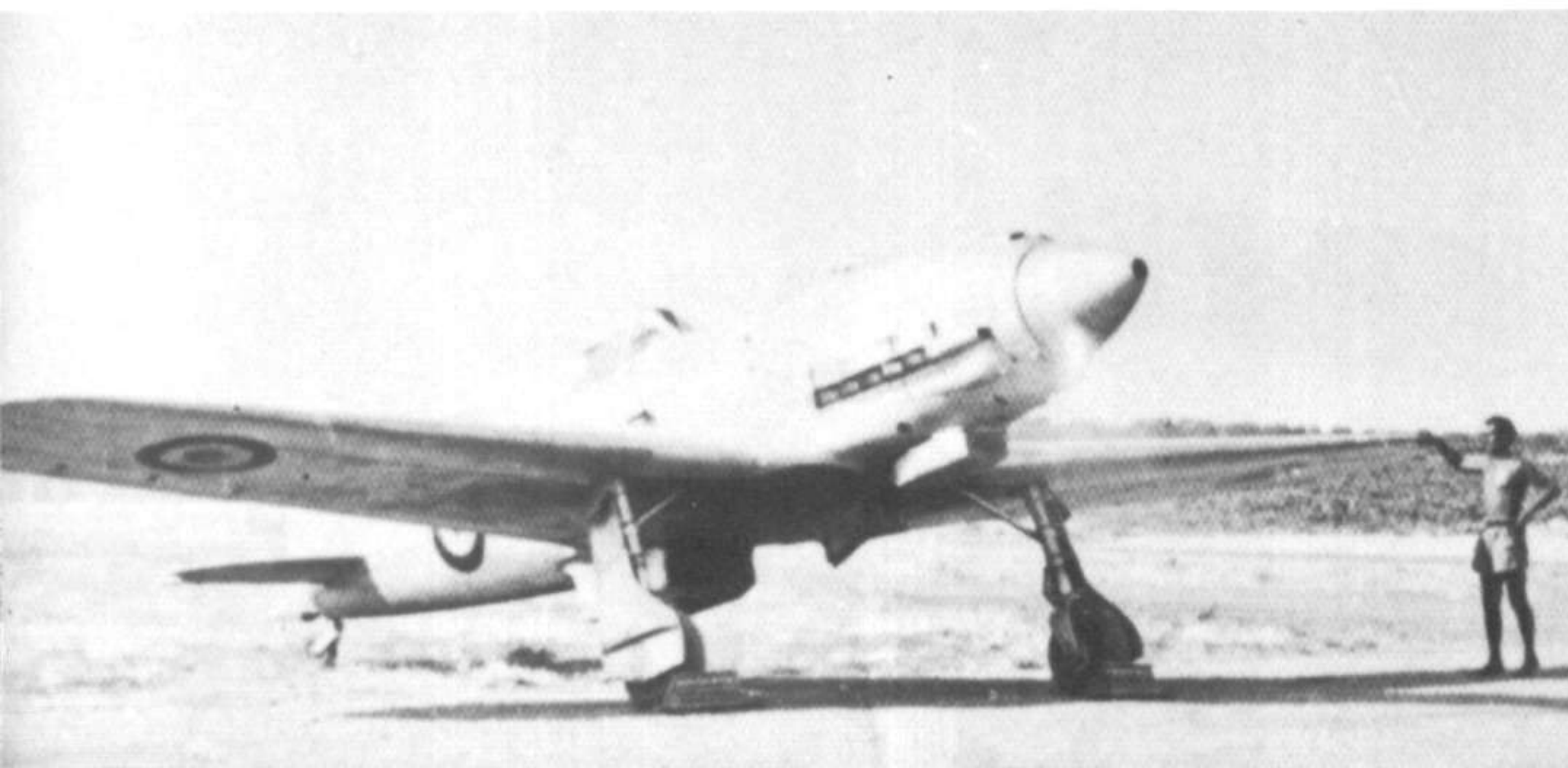


### C.202 Fixed Tailwheel

*one or both fairings often removed*

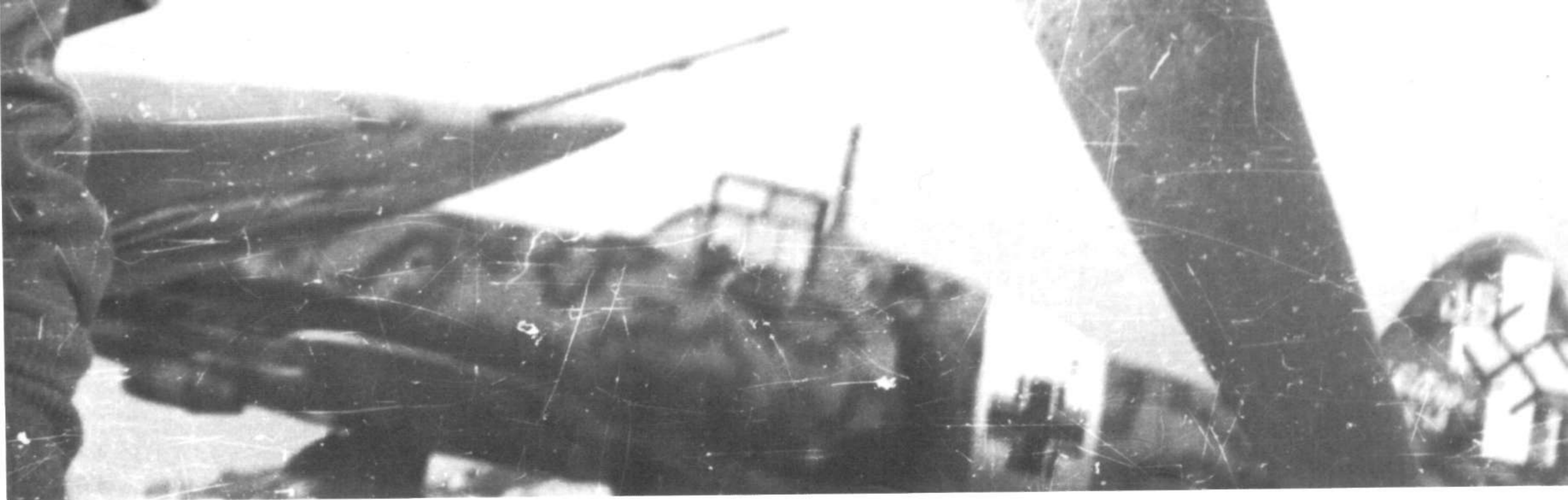
### C.205 Retracting Tailwheel

(Below & Below Left) Rebuilt from parts by *8° Gruppo* mechanics, with a DB605 engine, but retaining the *Folgore* oil cooler, this C.205 was left unpainted and was called 'Biancone' (Whitey). It came to its unhappy end when a novice pilot spun it into the ground. That this *Veltro* is a rebuild can also be ascertained from the non-retracting tailwheel.





A C.205V, formerly of 85<sup>a</sup> Squadriglia, 3<sup>o</sup> Stormo, with German markings. JG77 briefly flew captured *Veltros* before returning them to the ANR.



## In the North

While the official RA went South to the Allies, many Italian pilots gave their allegiance to the new *Aeronautica Nazionale Repubblicana (ANR)*, formed in the Fascist state created by Mussolini in the North. In particular, 3<sup>o</sup> Stormo chose to move North in a group. For many, it was as much a matter of where one's home was located as it was a matter of politics.

Initially there were only some 40 operational C.205Vs in the North, but AerMacchi built approximately another 100, all cannon-equipped, before it was switched to the manufacture of Bf109 components in September 1944. Breda finished the last 30 of its pre-Armistice *Serie XII Folgore*s.

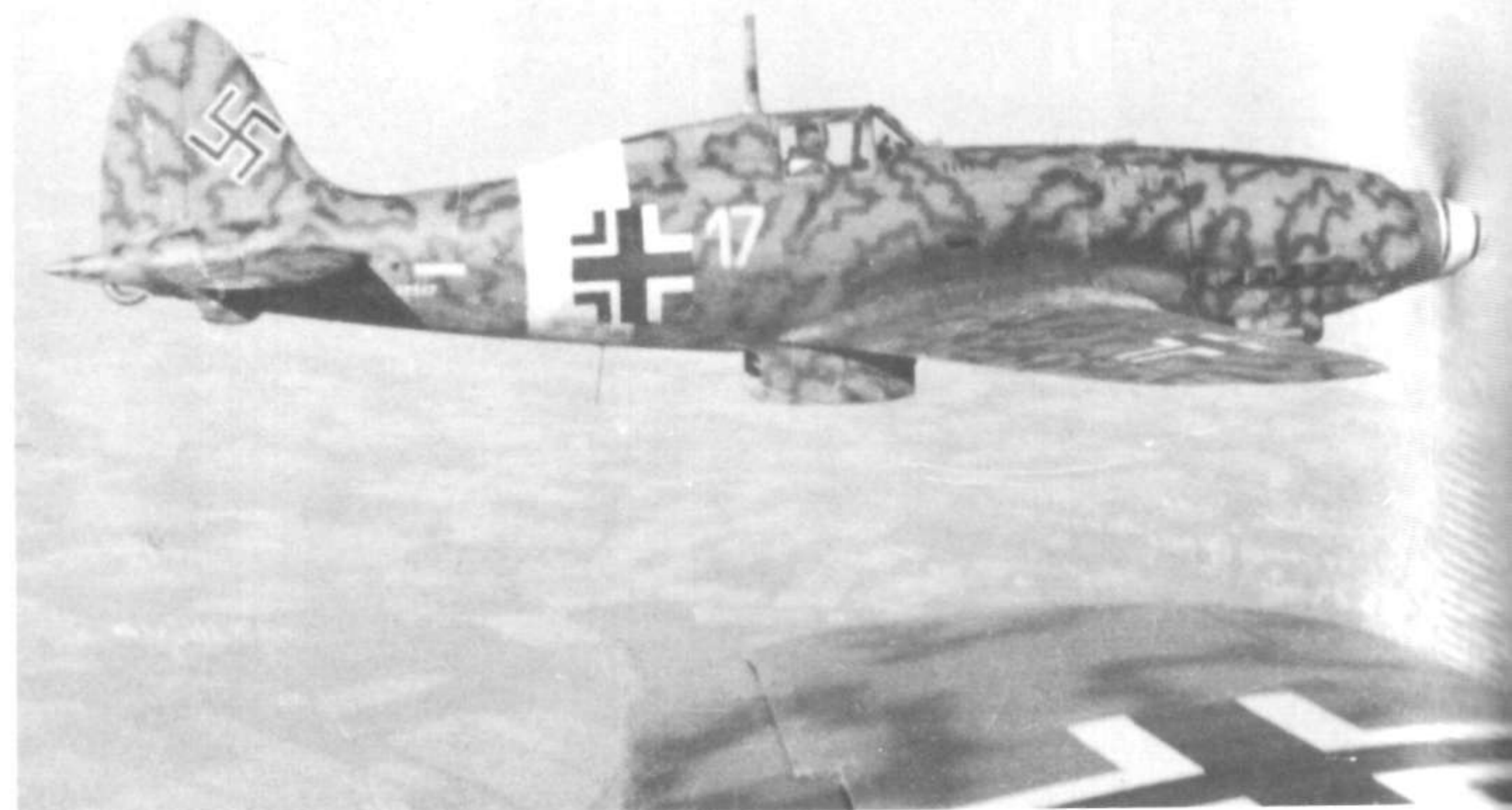
All aircraft in the ANR re-organized into new units. 1<sup>o</sup> Gruppo ANR was composed of 1<sup>a</sup> Squadriglia ('Ace of Clubs'-formerly the insignia of 153<sup>o</sup> Gruppo), 2<sup>a</sup> Squadriglia ('Angry Wasp'-formerly 3<sup>o</sup> Stormo) and 3<sup>a</sup> Squadriglia ('Indian Archer'-formerly 1<sup>o</sup> Stormo). 1<sup>o</sup> Gruppo first saw action on 3 January 1944 against B-17s bombing the Villar Perosa ball-bearing works, claiming three victories. Thereafter the Gruppo occupied a number of bases, attempting to attack 15th AF formations on their way to industrial targets in Southern Germany. They claimed a few victories, but suffered heavy losses, particularly from the P-47s that regularly escorted the American bombers.

At the end of April, the Gruppo moved to Reggio Emilia to be closer to the front line, a move that proved disastrous. On 12 May the airfield was hit by strafing P-38s and 11 *Veltros* were destroyed. Other attacks followed, forcing the Gruppo to disperse to semi-prepared fields. In six months of fighting, 1<sup>o</sup> Gruppo ANR had lost over 100 *Veltros* forcing it to re-equip 1<sup>a</sup> and 3<sup>a</sup> Squadriglie with G.55s.

In August 1944, the Germans tried to disband the ANR, impressing its pilots into the Luftwaffe. To a man the pilots refused and, while their airbases were surrounded by SS units, they burned their aircraft. The crisis was eventually resolved and the ANR continued a separate existence, supplying the only Axis aircraft over Italy in the last year of the war. For the remainder of the war, 1<sup>o</sup> Gruppo flew Bf109s. During the time that it had flown Macchis, it claimed over 100 Allied aircraft and lost about the same number. It lost more pilots, but downed more enemy, than any other Italian unit of its size.

The ANR had two other Gruppi. 2<sup>o</sup> Gruppo flew G.55s and later Bf109s. 3<sup>o</sup> Gruppo was created in the summer of 1944 with those C.202s and C.205Vs that could be scraped together, but it never reached combat status.

A captured *Veltro* of JG77 in flight. It carries the II Gruppe horizontal bar on the fuselage side. The *Balkenkreuz* has been curiously tailored to stand out over the white fuselage band.







This 1<sup>a</sup> Squadriglia, 1<sup>o</sup> Gruppo Veltro carries that unit's 'Ace of Clubs' insignia. (Arena)

A Veltro of 1<sup>o</sup> Gruppo ANR, with the new air force's markings, red-white-green flags with yellow fringe and two fasces inside a square on the wings.

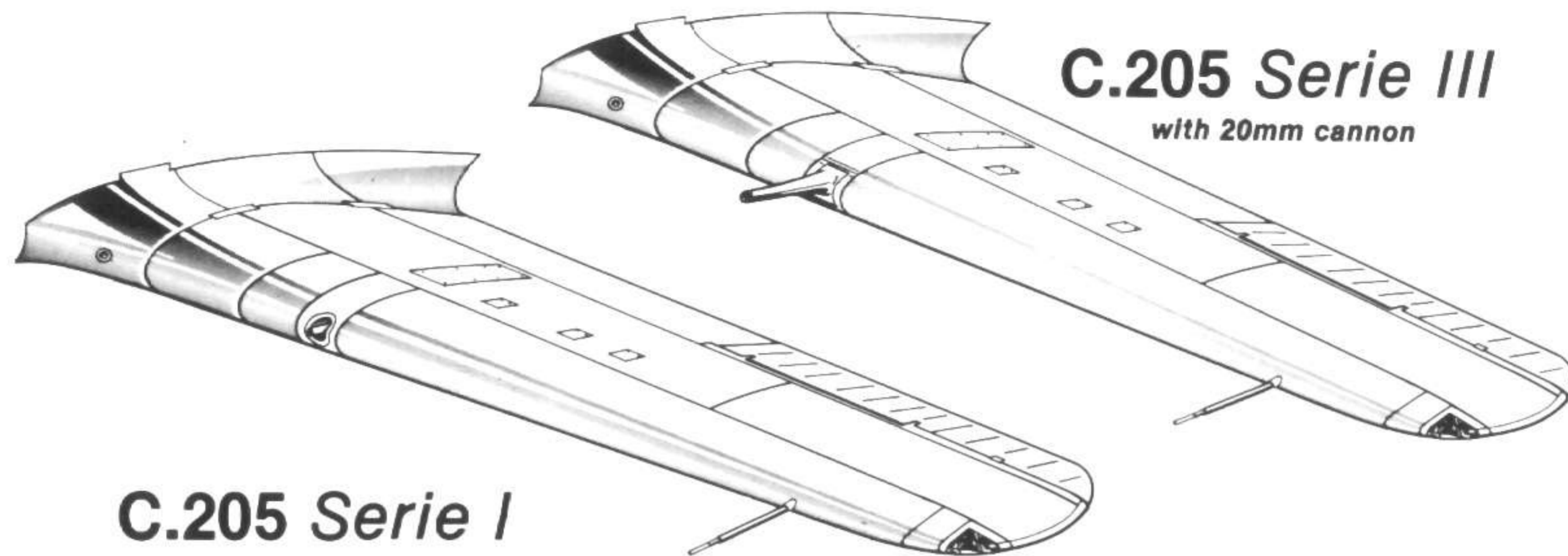
Three Veltros of 1<sup>o</sup> Stormo ANR. The two to the left are in normal Italian camouflage of green over continental sand. The markings are standard ANR. The aircraft to the right is in German camouflage paint, light green over grey. The large white individual aircraft number and lack of fuselage band give the aircraft a very German appearance.







A *Veltro* of 2<sup>a</sup> Squadriglia ANR. The cowling carries a light-blue cloud-shape where that unit's 'Angry Wasp' insignia is to be painted.



C.205 Serie I



2<sup>a</sup> Squadriglia pilots, fooling around with Very pistols, are seen on a *Veltro* of that unit, now with the insignia in place. This is a Serie III C.205V with the 20mm wing cannon.



C.202 Folgore of 74<sup>a</sup> Squadriglia, 3<sup>o</sup> Stormo, green over light sand, Tunisia, 1943.

Fuselage  
Fasces



Shield of  
House of  
Savoy

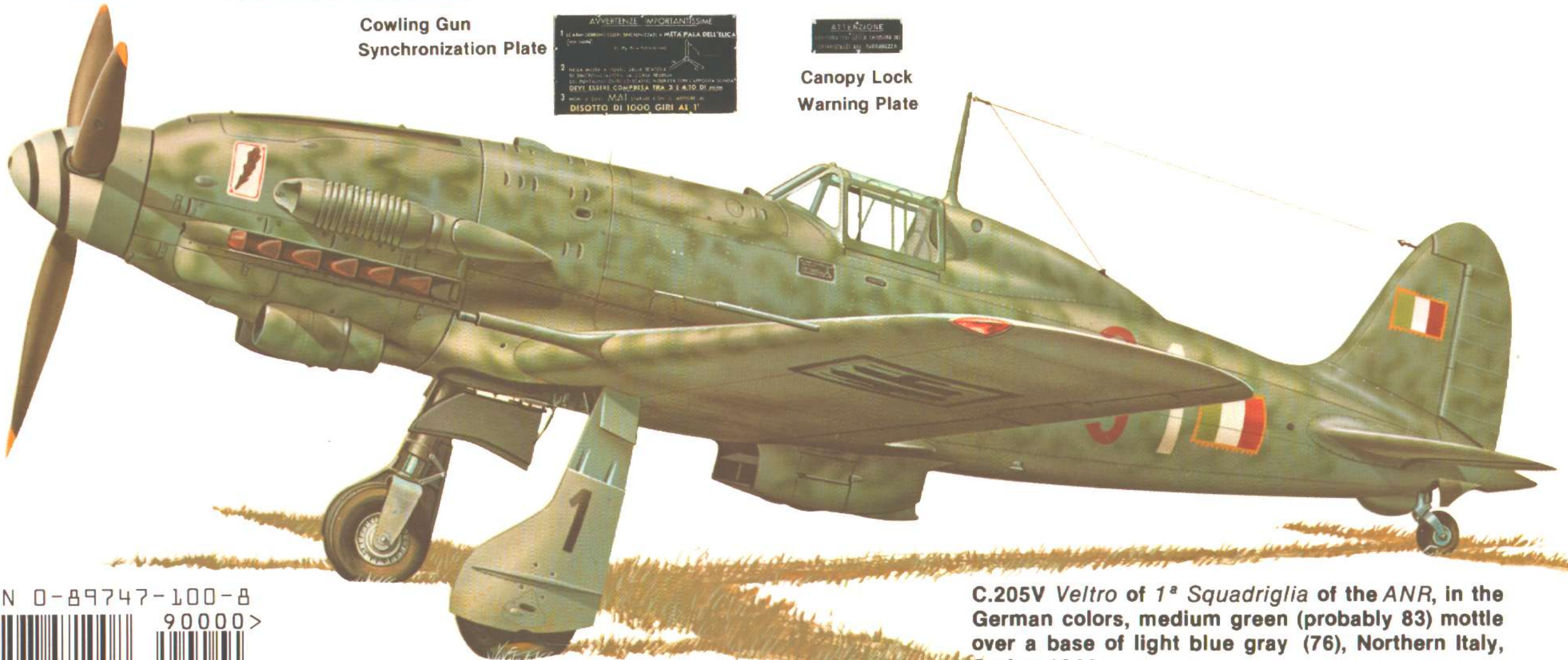


DAK GREEN '80

Cowling Gun  
Synchronization Plate



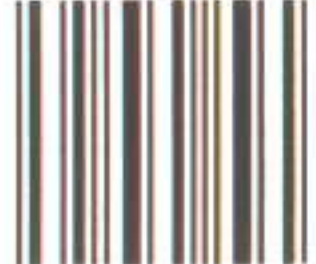
ATTENZIONE  
Canopy Lock  
Warning Plate



C.205V Veltro of 1<sup>a</sup> Squadriglia of the ANR, in the German colors, medium green (probably 83) mottle over a base of light blue gray (76), Northern Italy, Spring 1944.

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