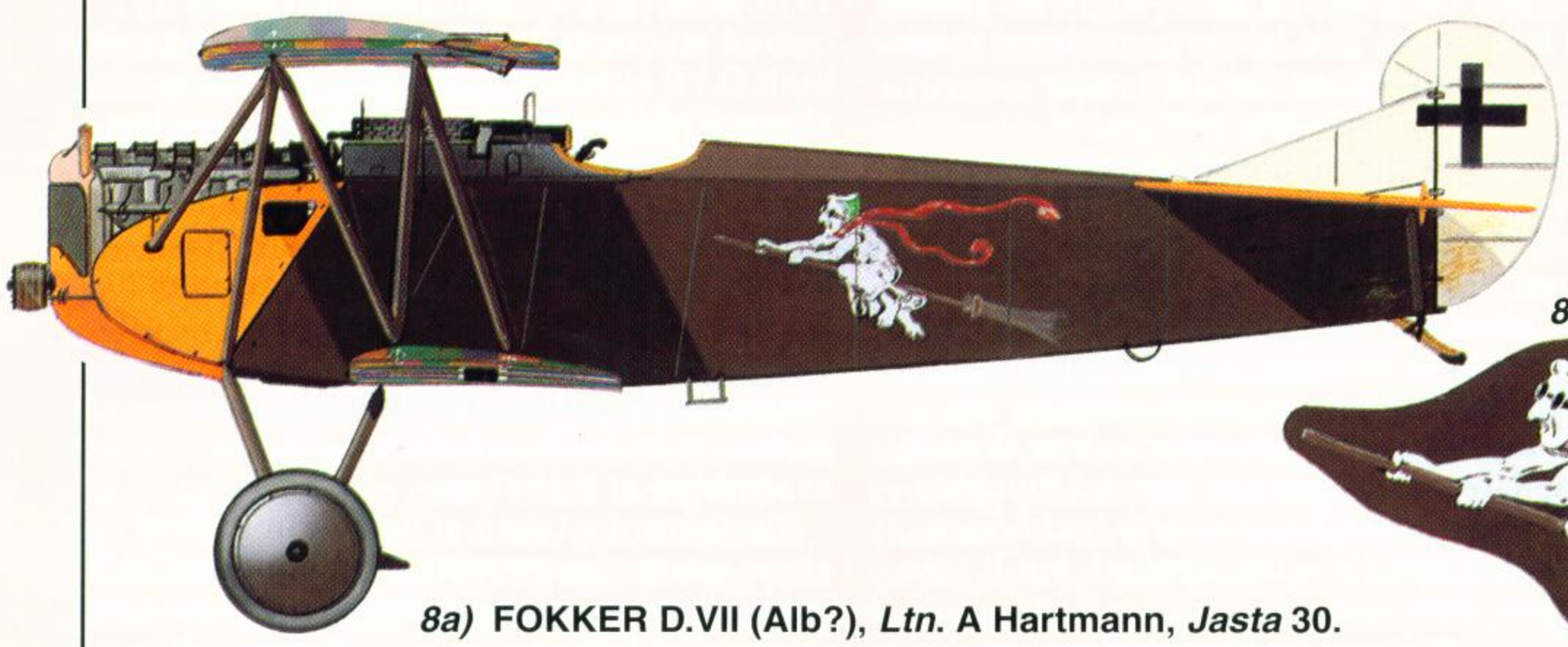
FOKKER D.VII

ANTHOLOGY 2

BRIAN KNIGHT

7) **FOKKER D.VII 387/18, *Oblt.* H Auffarht, *Jasta* 29.**

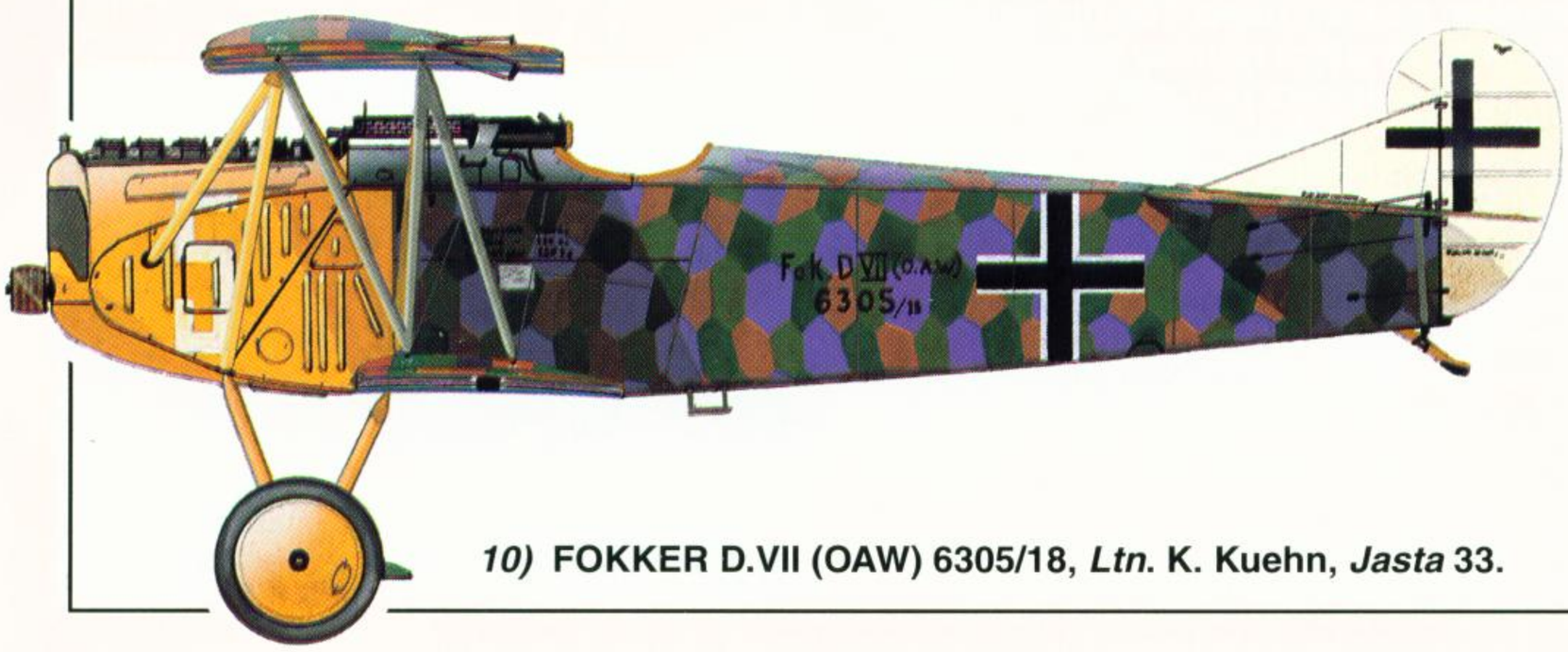


8a) **FOKKER D.VII (Alb?), *Ltn.* A Hartmann, *Jasta* 30.**

8a) **Fuselage detail.**

9) **FOKKER D.VII (OAW), *Hptm.* E von Schleich, *Jasta* 32b.**

9a) **Fuselage detail.**



10) **FOKKER D.VII (OAW) 6305/18, *Ltn.* K. Kuehn, *Jasta* 33.**

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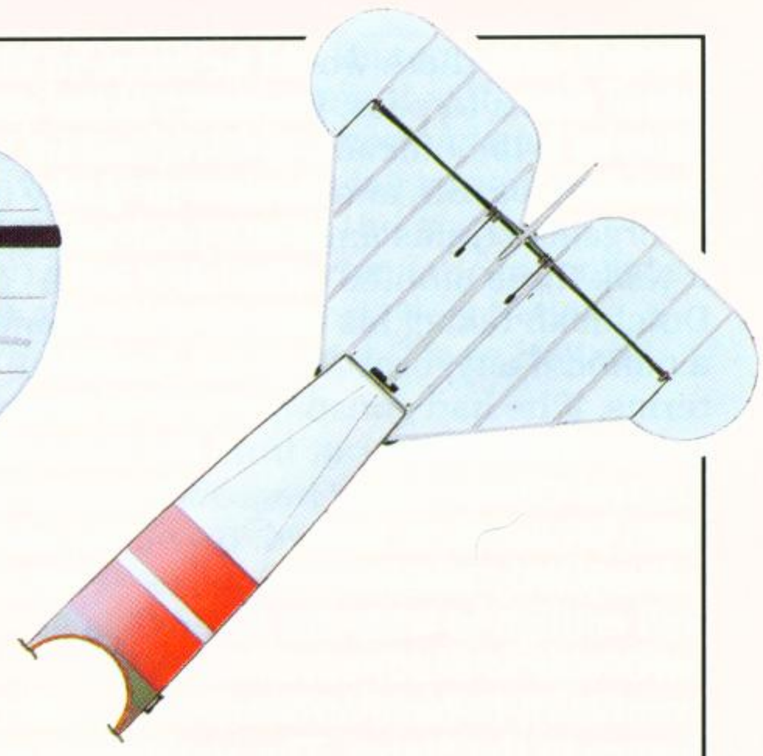
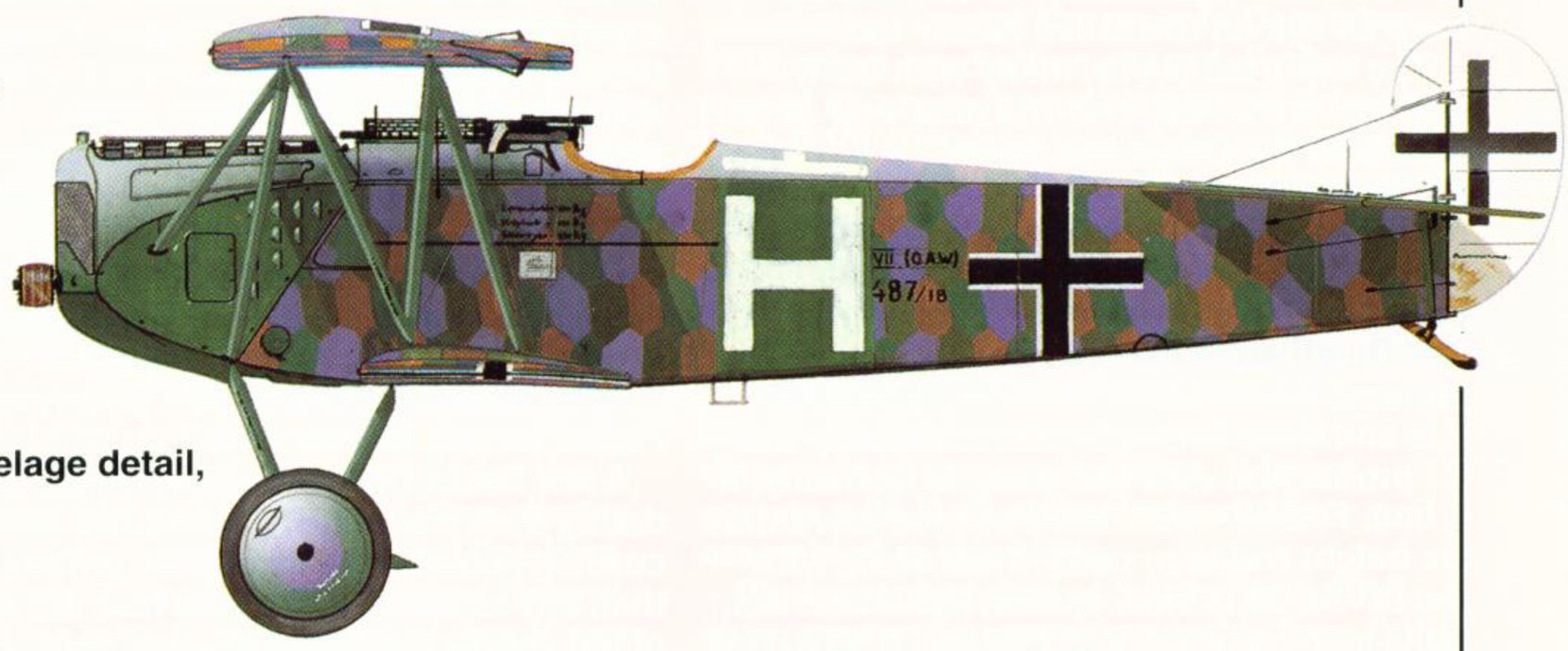
11) FOKKER D.VII (Alb), *Oblt.*. R von Greim, *Jasta* 34b.



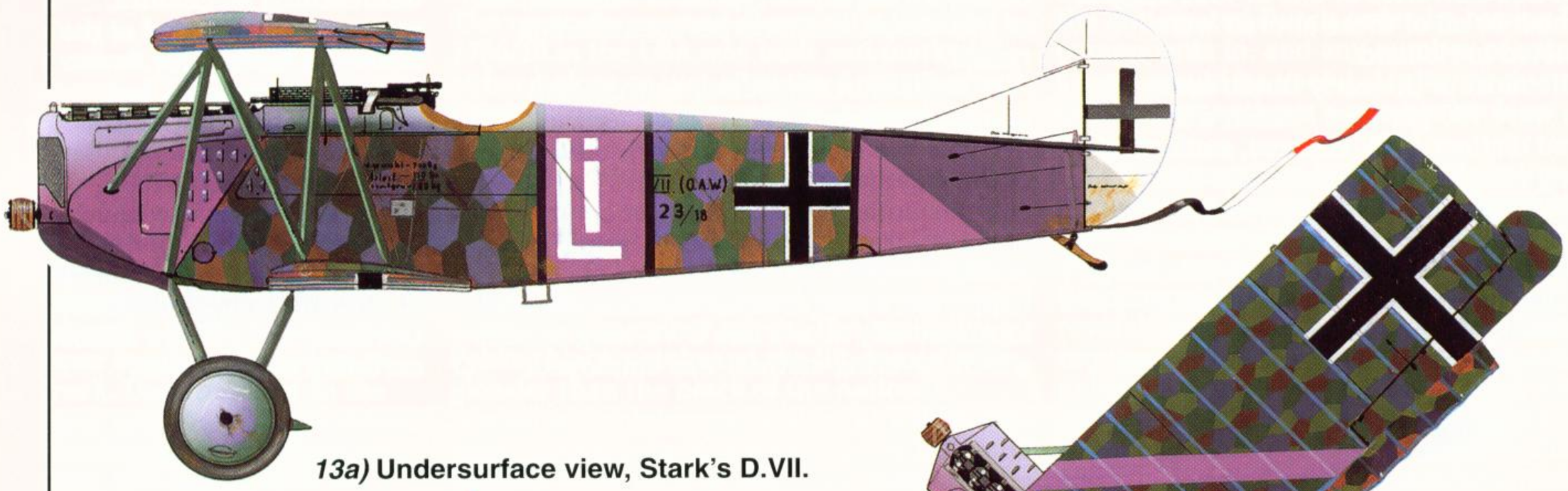
11a) Upper fuselage detail, Greim's D.VII.

12a) Upper fuselage detail, Stoer's D.VII

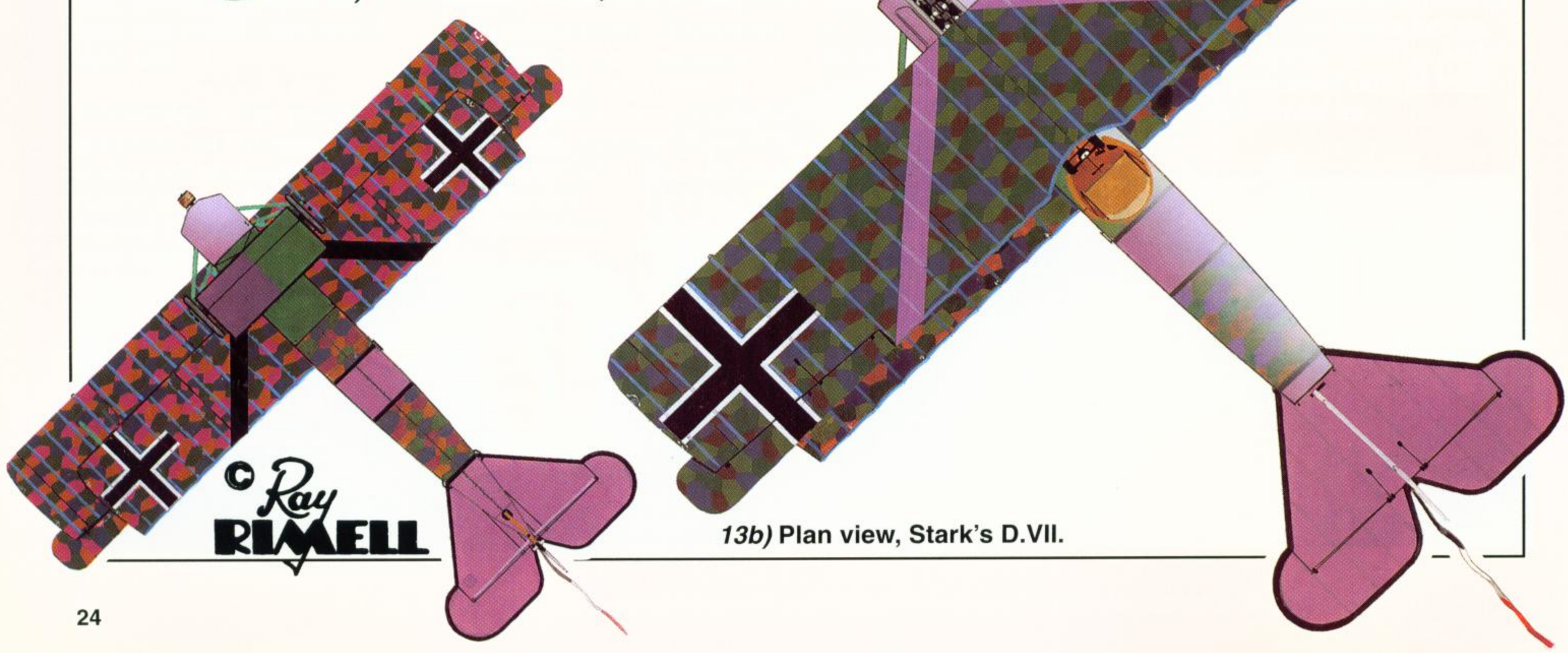


12) FOKKER D.VII (OAW) 4487/18, *Ltn.d.R.* F Stoer, *Jasta* 35b.

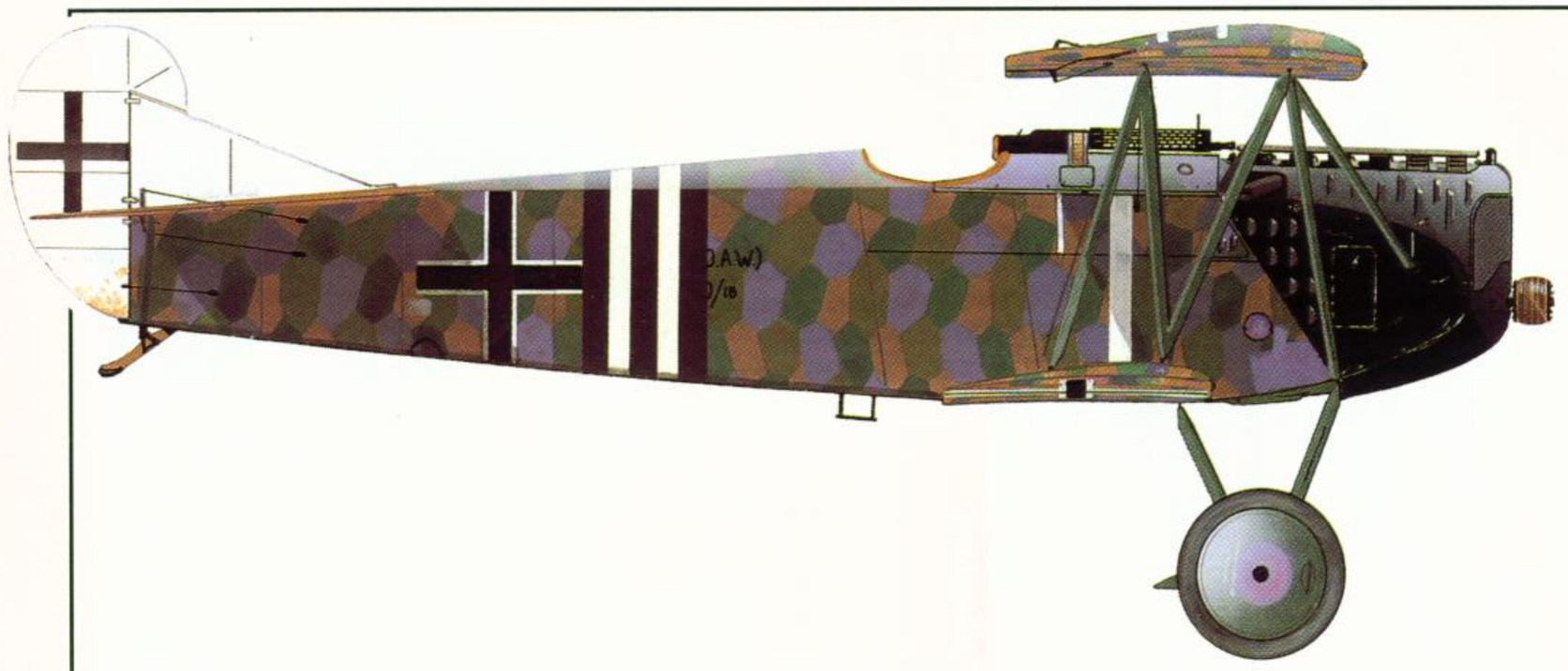
13) FOKKER D.VII (OAW) 4523/18, *Ltn.* R Stark, *Jasta* 35b.



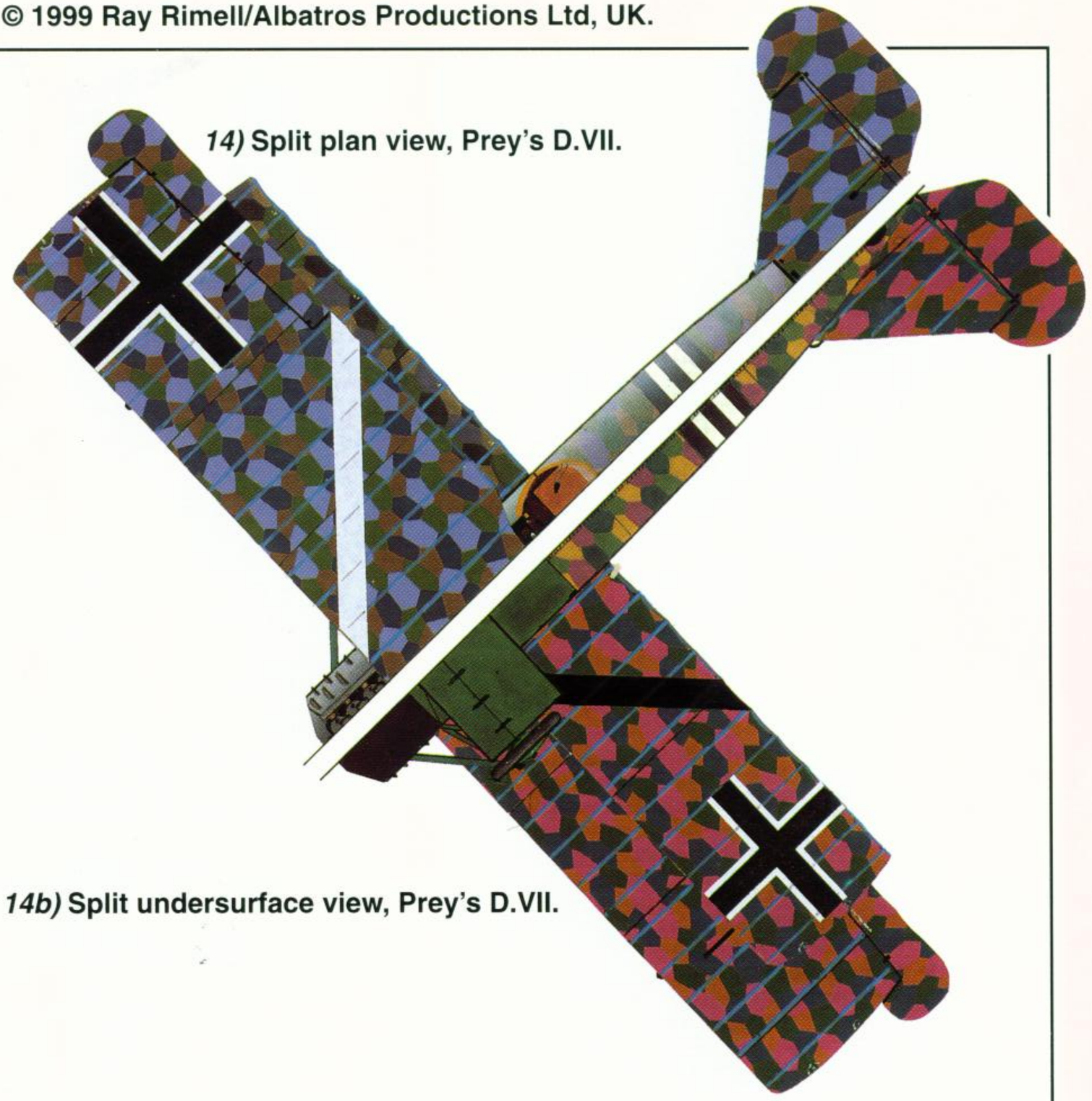
13a) Undersurface view, Stark's D.VII.



13b) Plan view, Stark's D.VII.

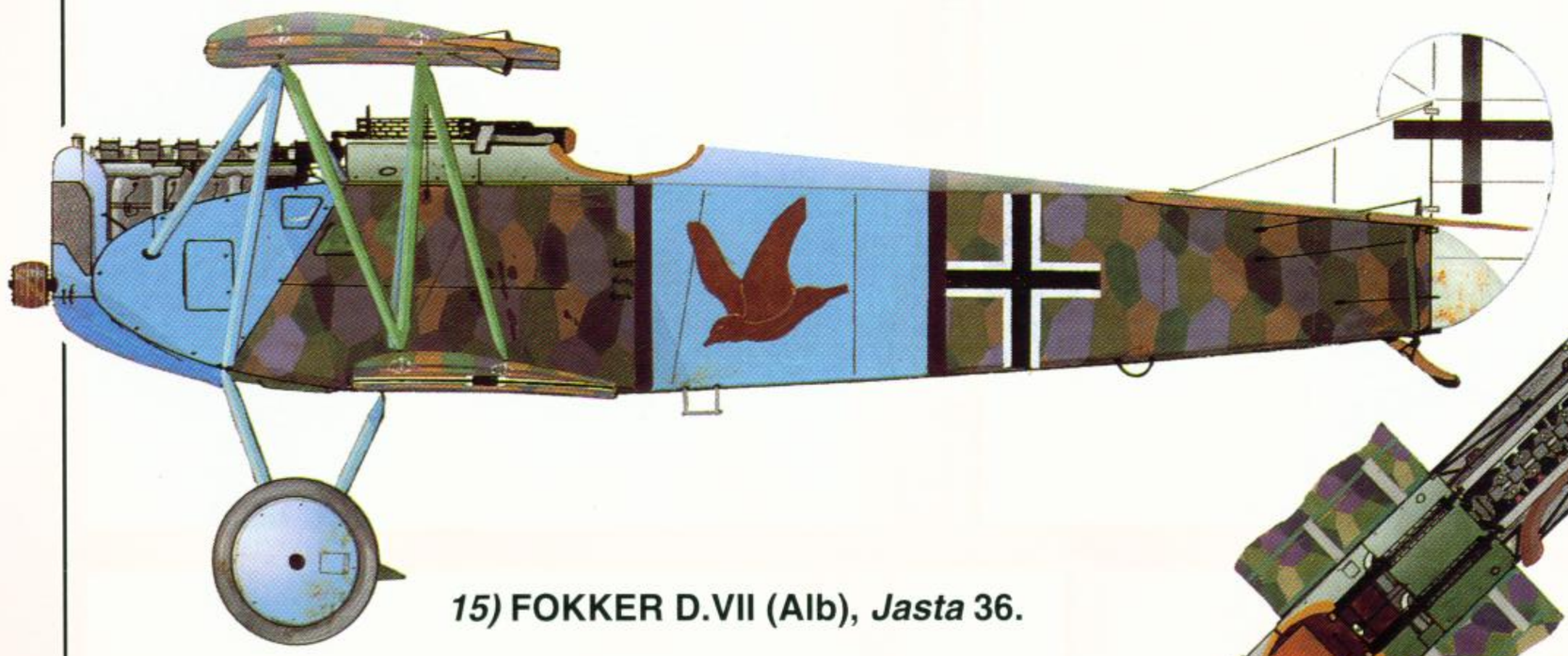


14) **FOKKER D.VII (OAW), *Gefr.* X Prey, *Jasta* 35b.**

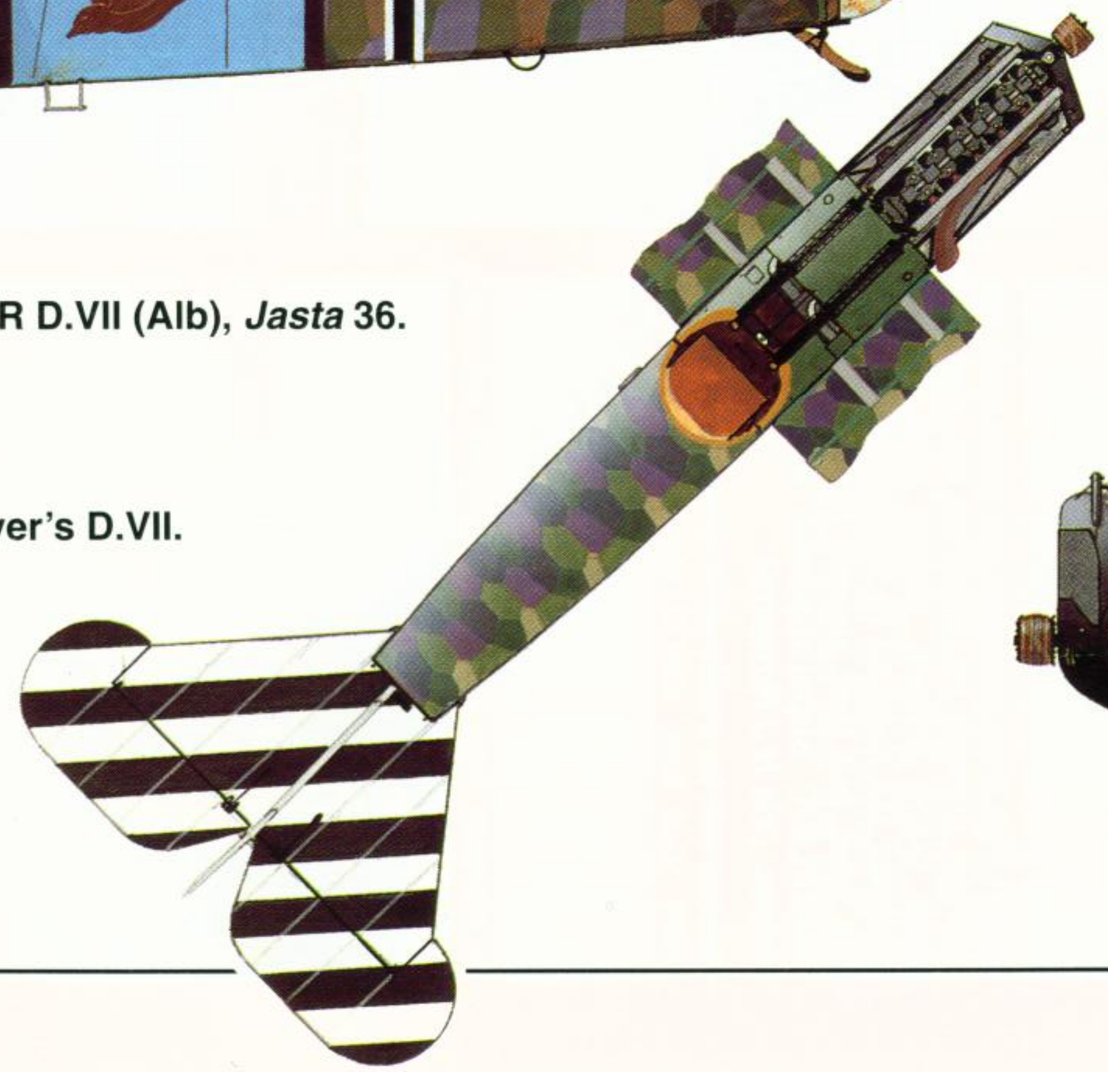


14) **Split plan view, Prey's D.VII.**

14b) **Split undersurface view, Prey's D.VII.**

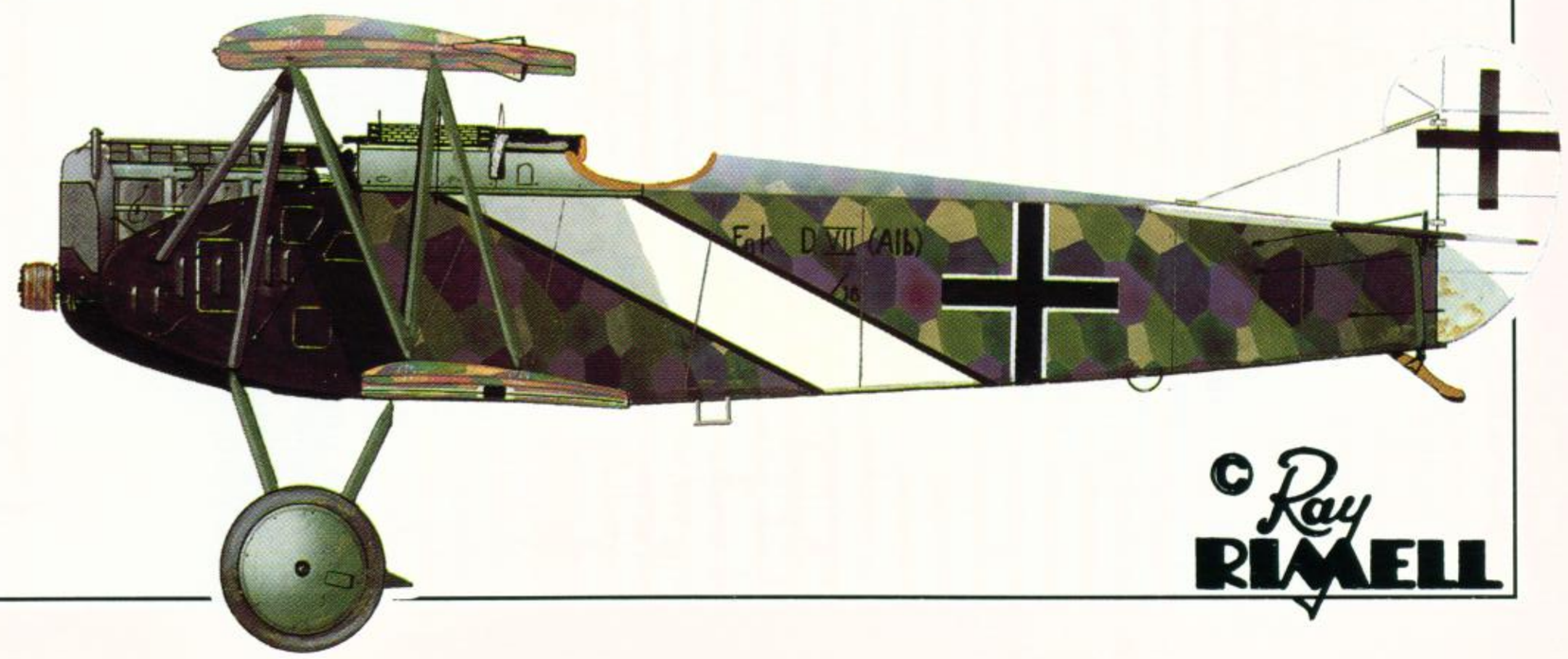


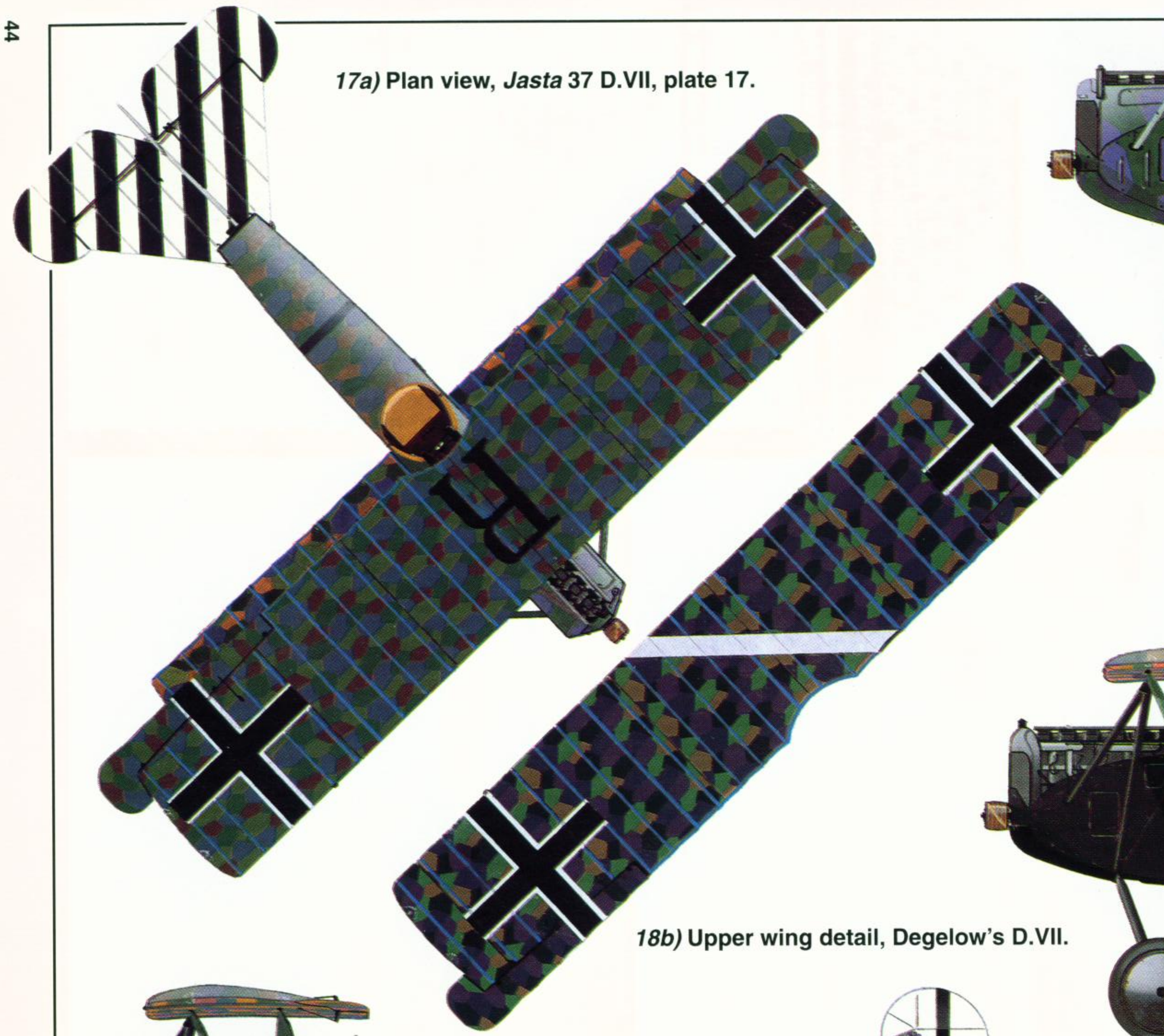
15) **FOKKER D.VII (Alb), *Jasta* 36.**



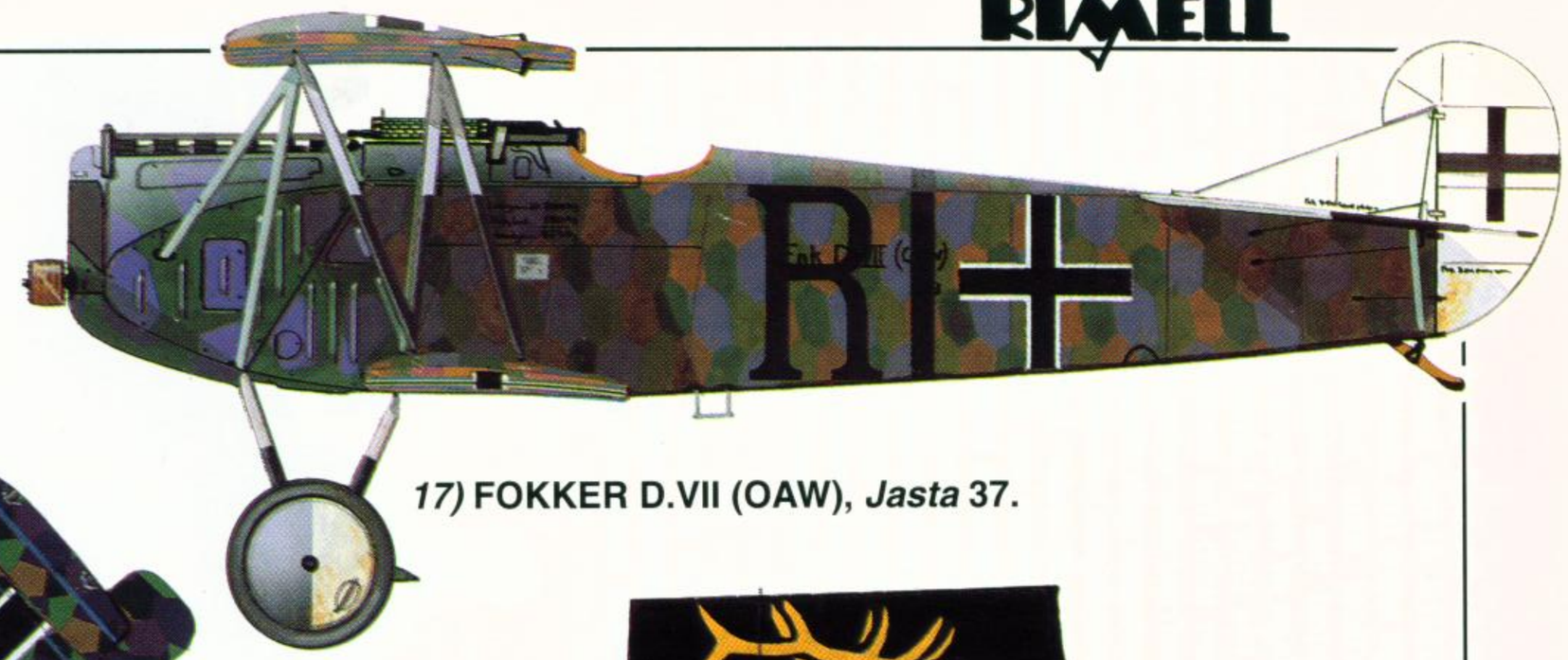
16a) **Upper fuselage detail, Meyer's D.VII.**

16) **FOKKER D.VII (Alb), *Ltn. d. R.* G Meyer, *Jasta* 37.**





17a) **Plan view, *Jasta* 37 D.VII, plate 17.**



17) **FOKKER D.VII (OAW), *Jasta* 37.**

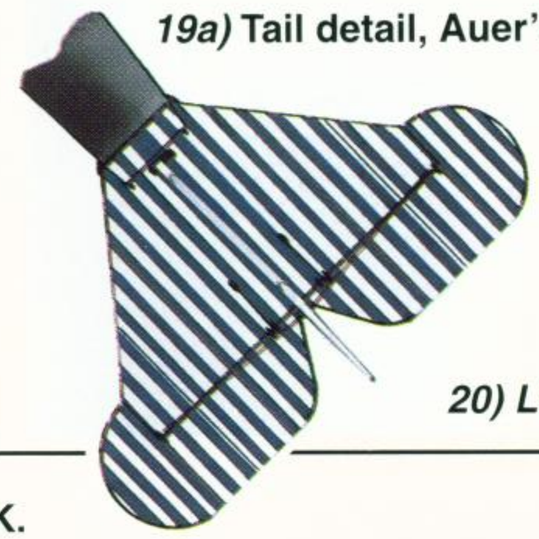
18a) **Fuselage detail starboard.**

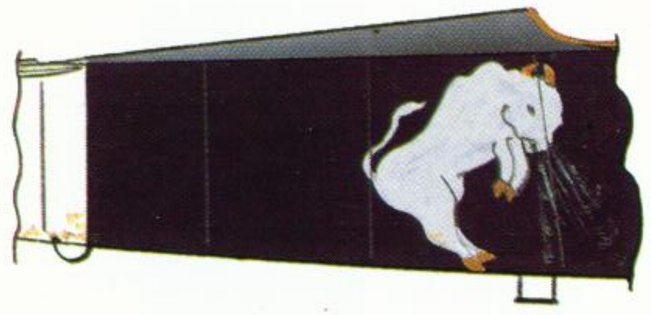
18b) **Upper wing detail, Degelow's D.VII.**

18) **FOKKER D.VII (Alb), *Ltn. d. R.* C Degelow, *Jasta* 40.**

19) **FOKKER D.VII (Alb), *Ltn.* A Auer, *Jasta* 40.**

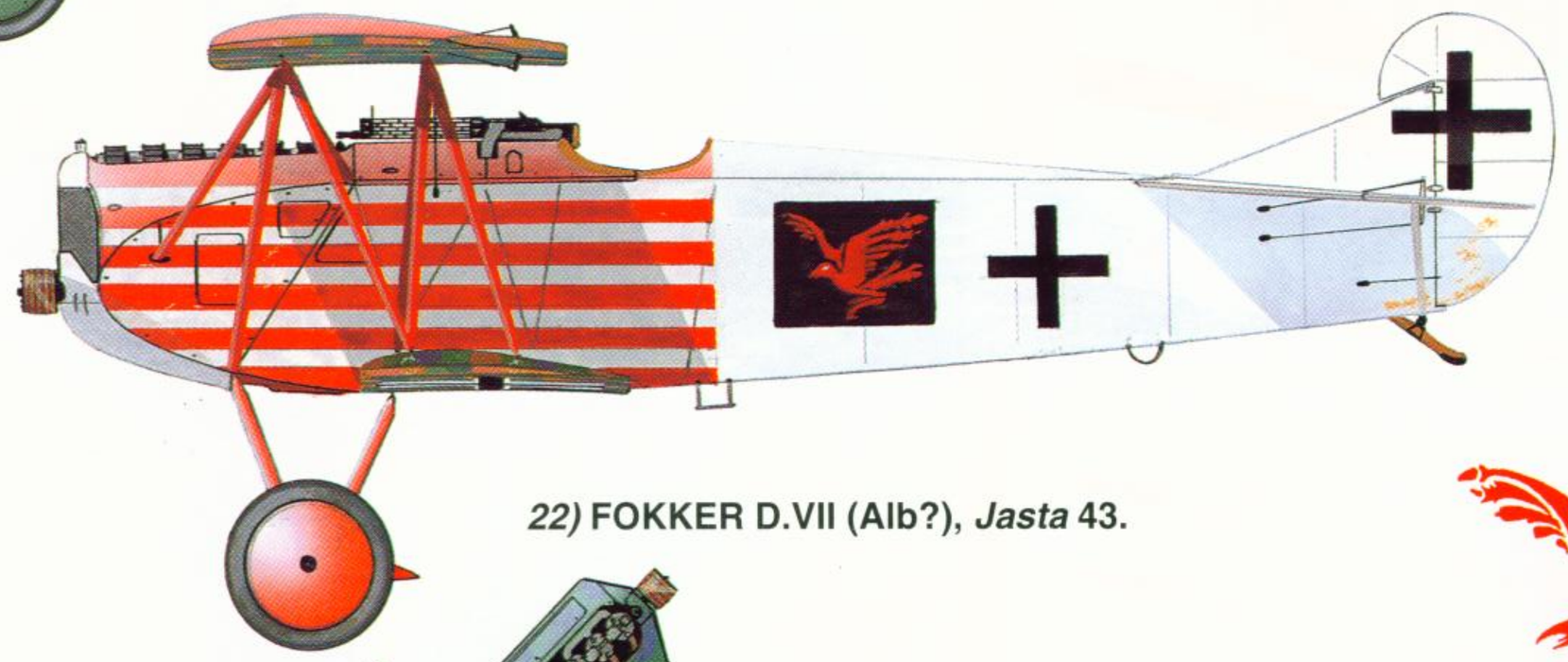
19a) **Tail detail, Auer's D.VII.**



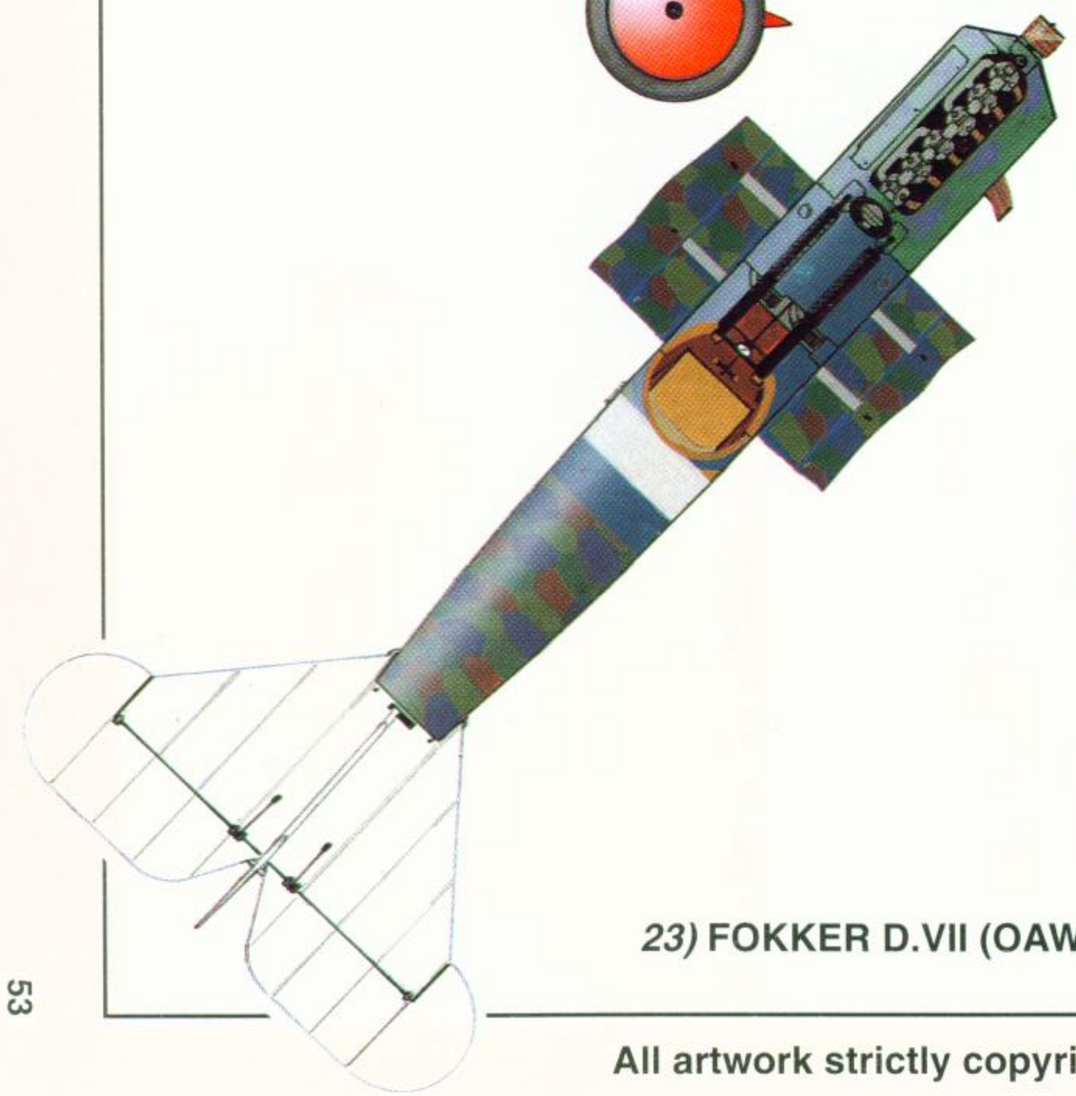


20) Ltn. **H Jeschonnek's D.VII, *Jasta* 40.**

21) FOKKER D.VII (Alb), *Ltn. d. R.* F Jakobs, *Jasta* 43.

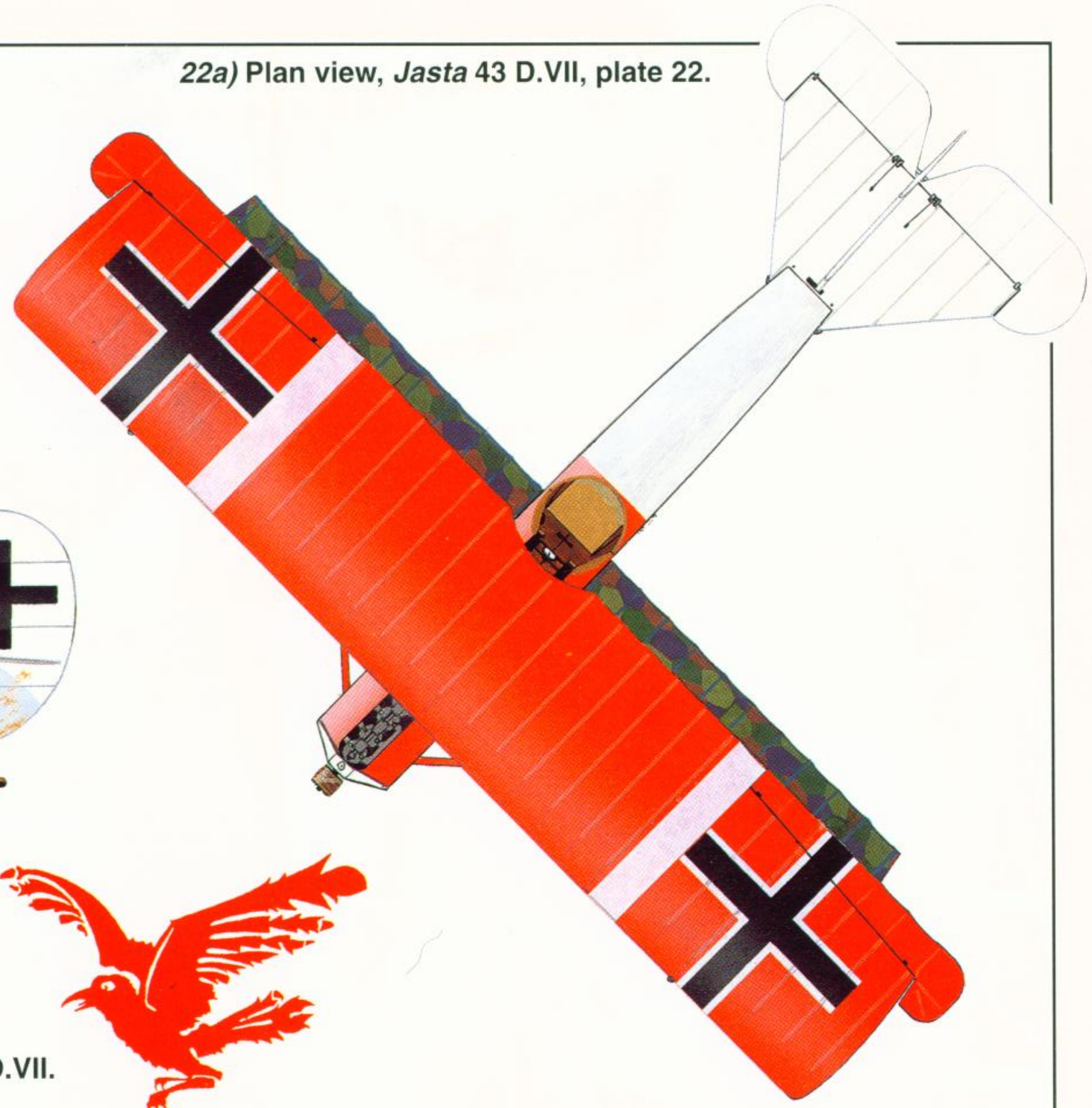


22) FOKKER D.VII (Alb?), *Jasta* 43.



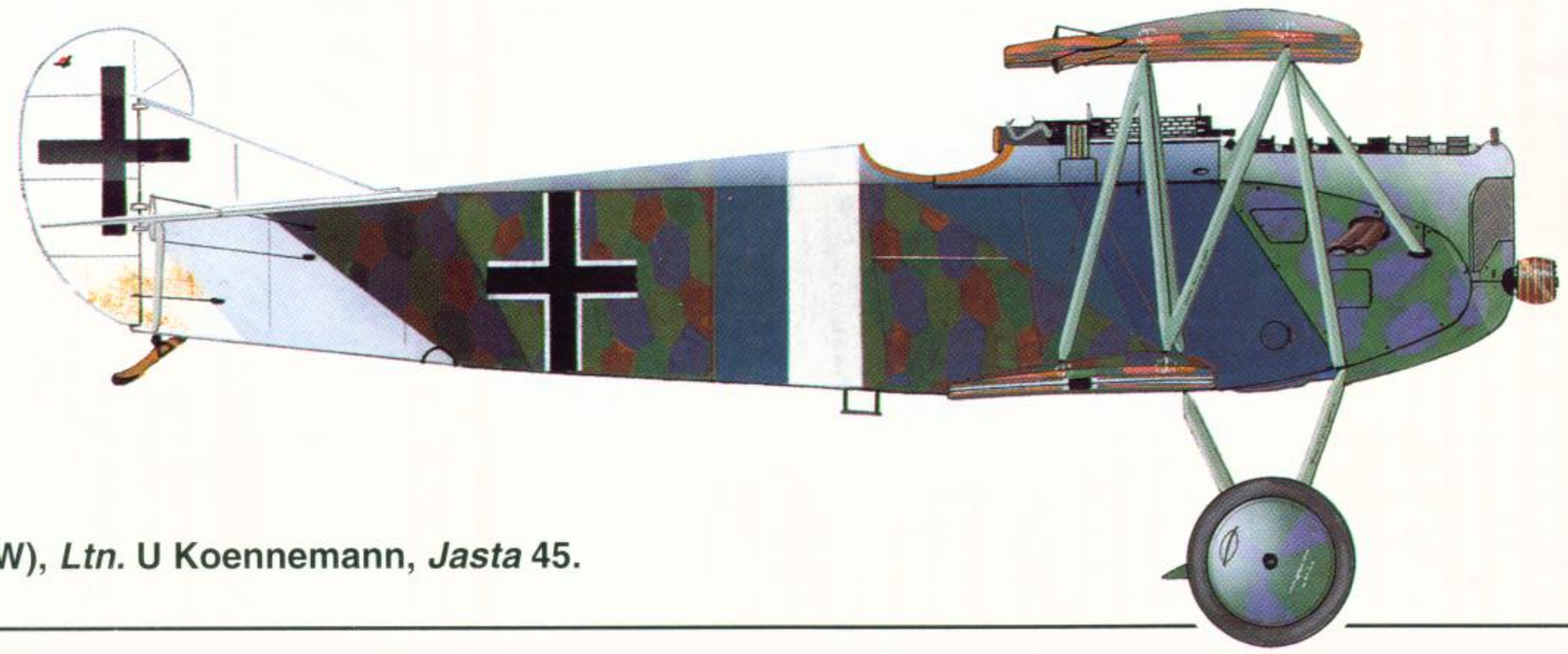
23) FOKKER D.VII (OAW), *Ltn.* U Koennemann, *Jasta* 45.

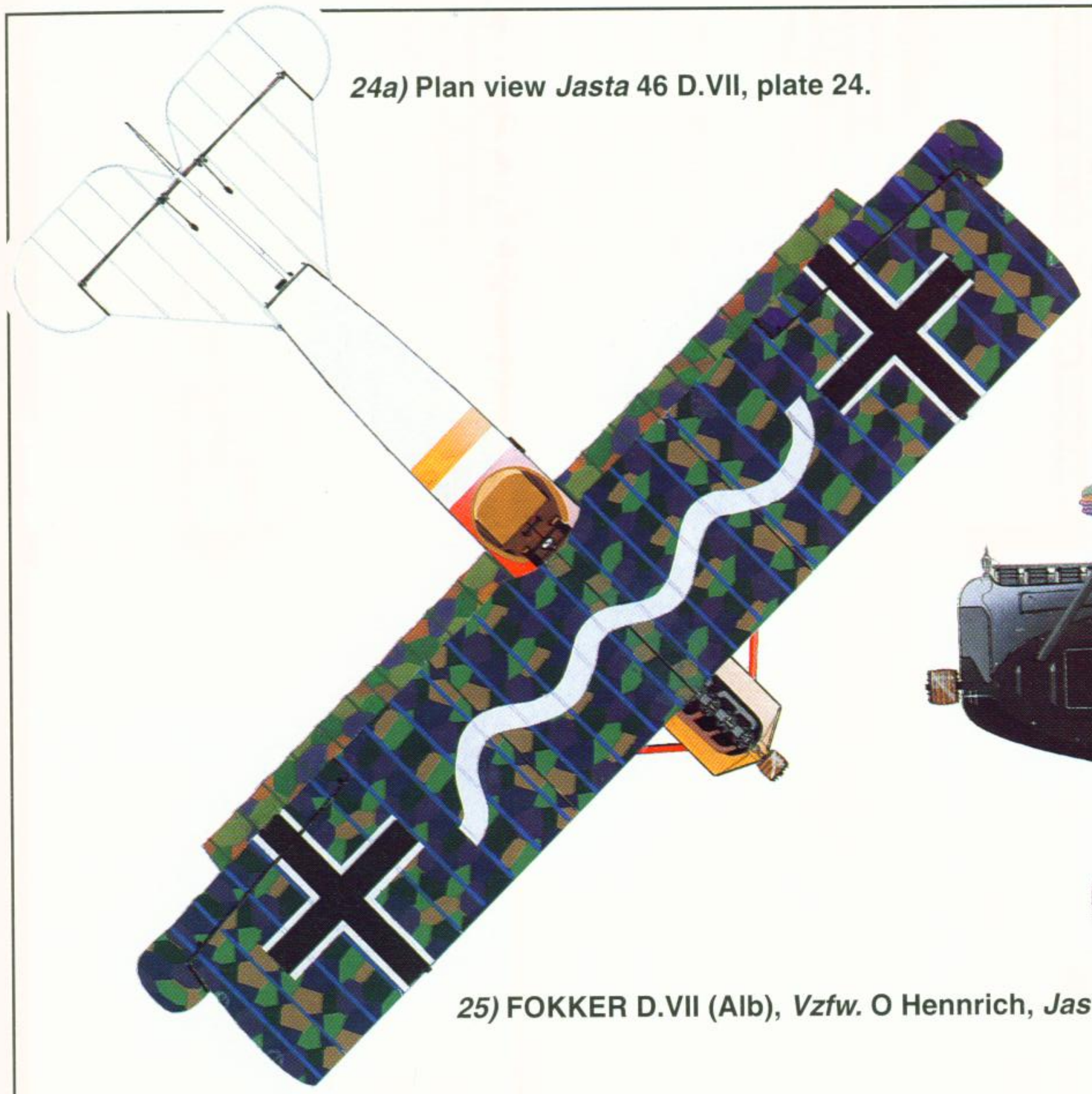
22a) Plan view, *Jasta* 43 D.VII, plate 22.



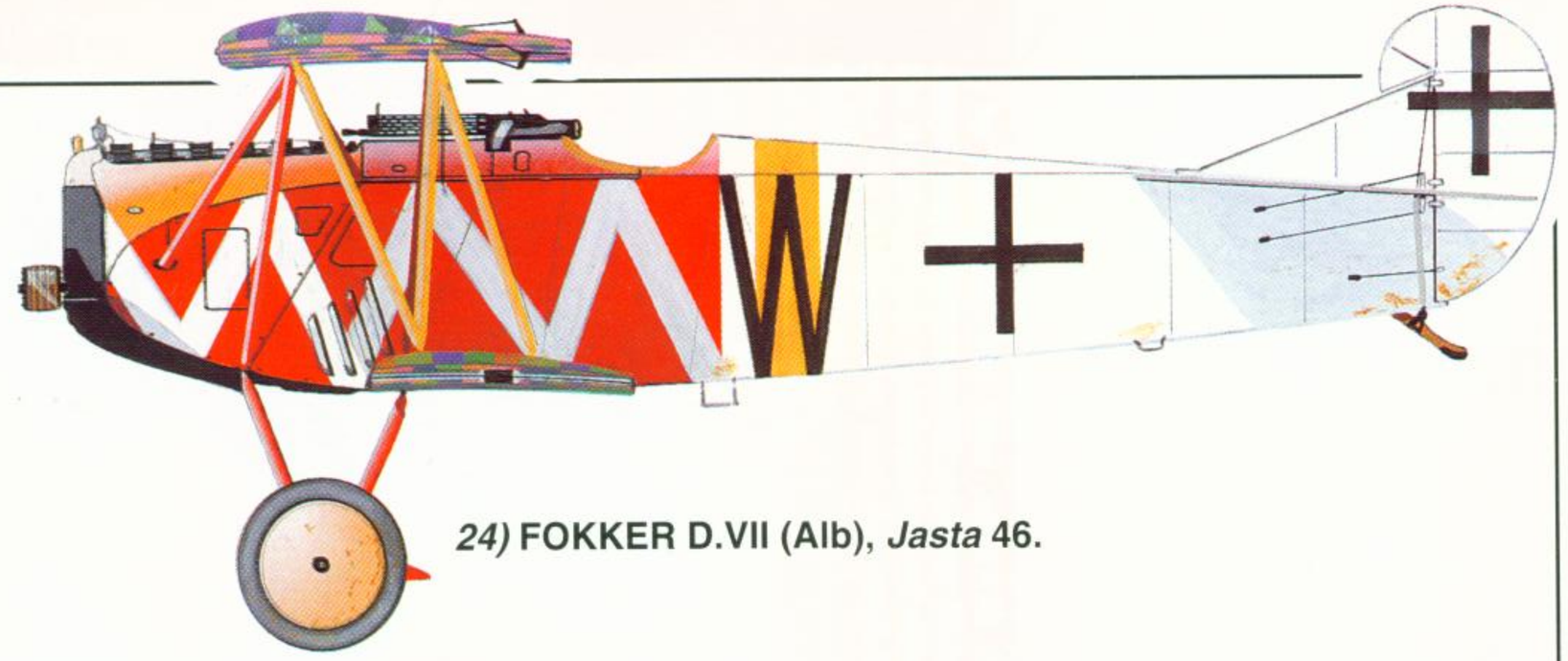
Jasta 18 Raven stencil.

23a) Upper fuselage detail, Koennemann's D.VII.



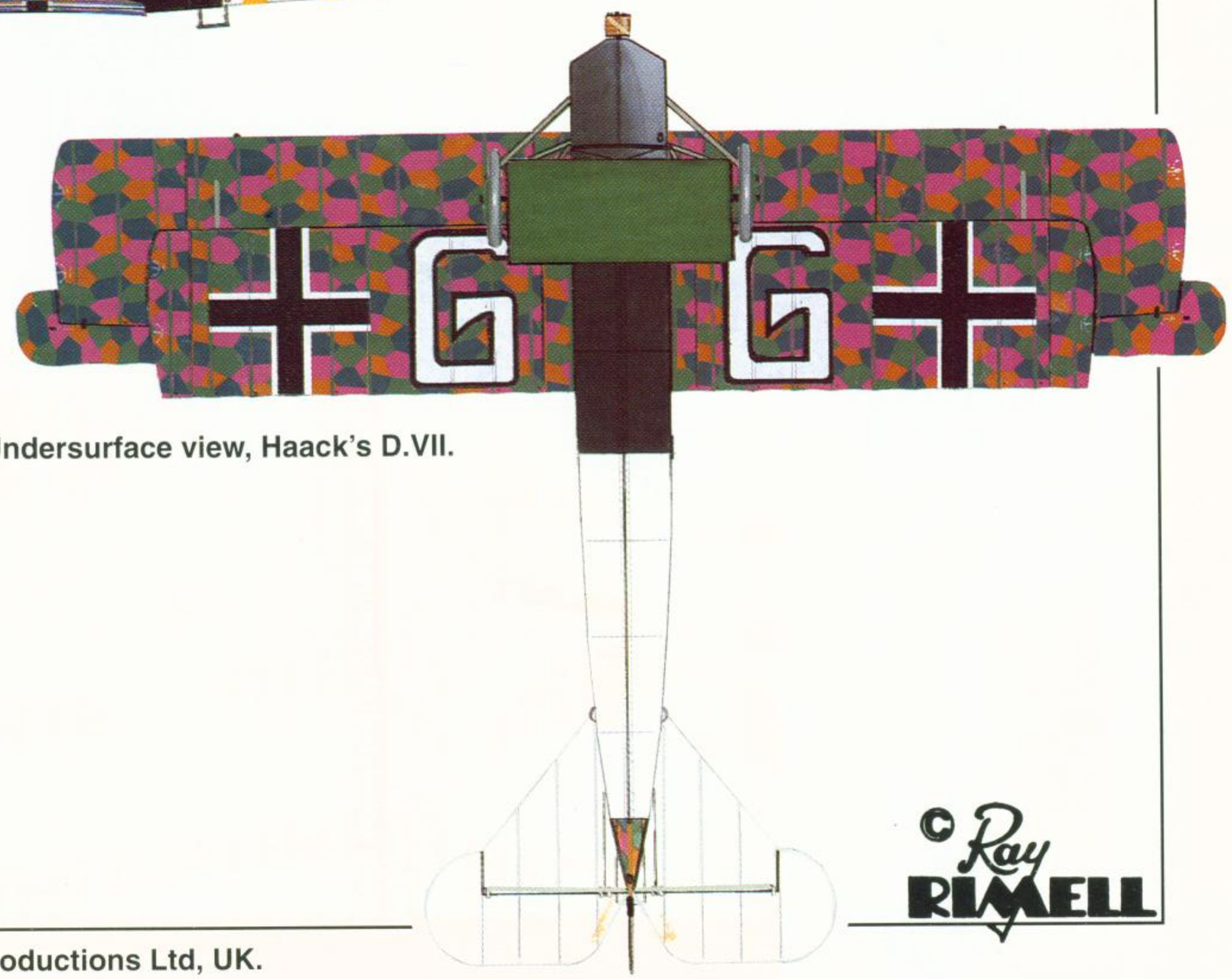


24a) Plan view *Jasta* 46 D.VII, plate 24.

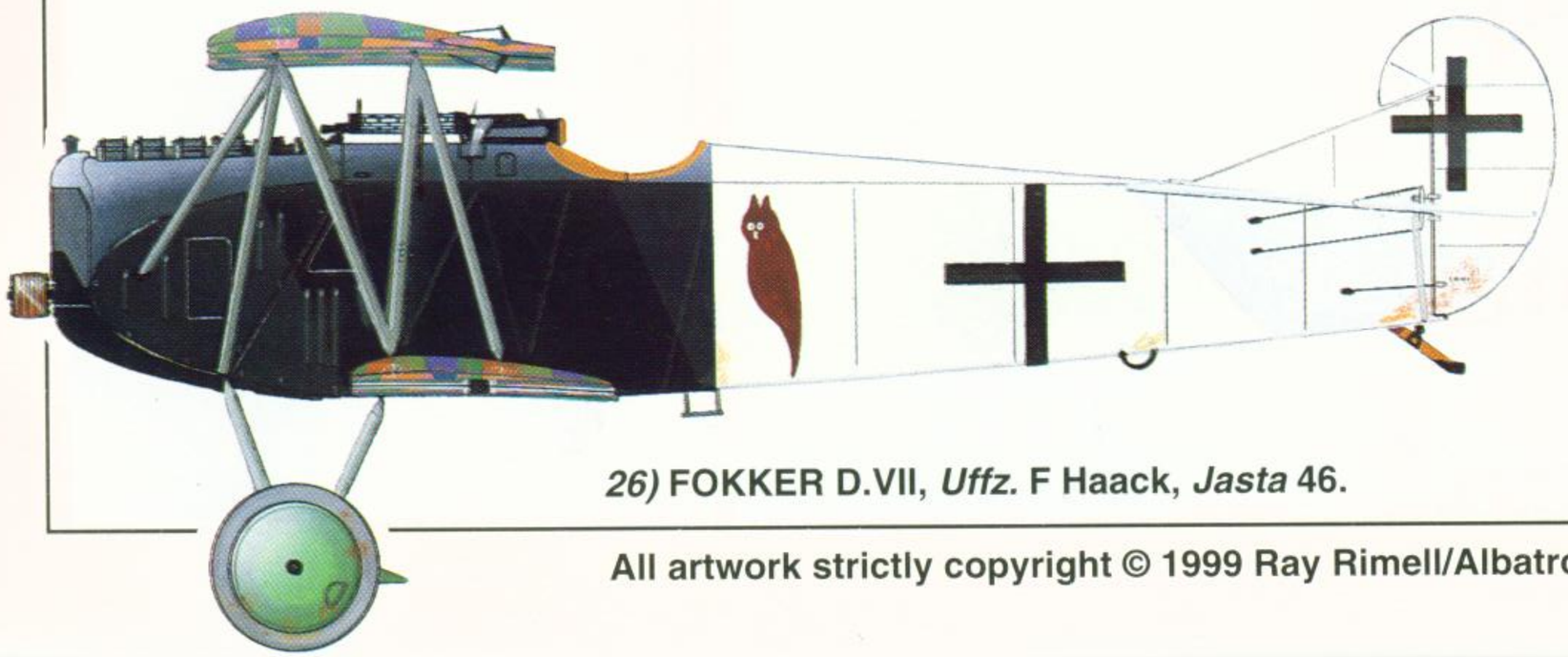


24) FOKKER D.VII (Alb), *Jasta* 46.

25) FOKKER D.VII (Alb), *Vzfw.* O Hennrich, *Jasta* 46.

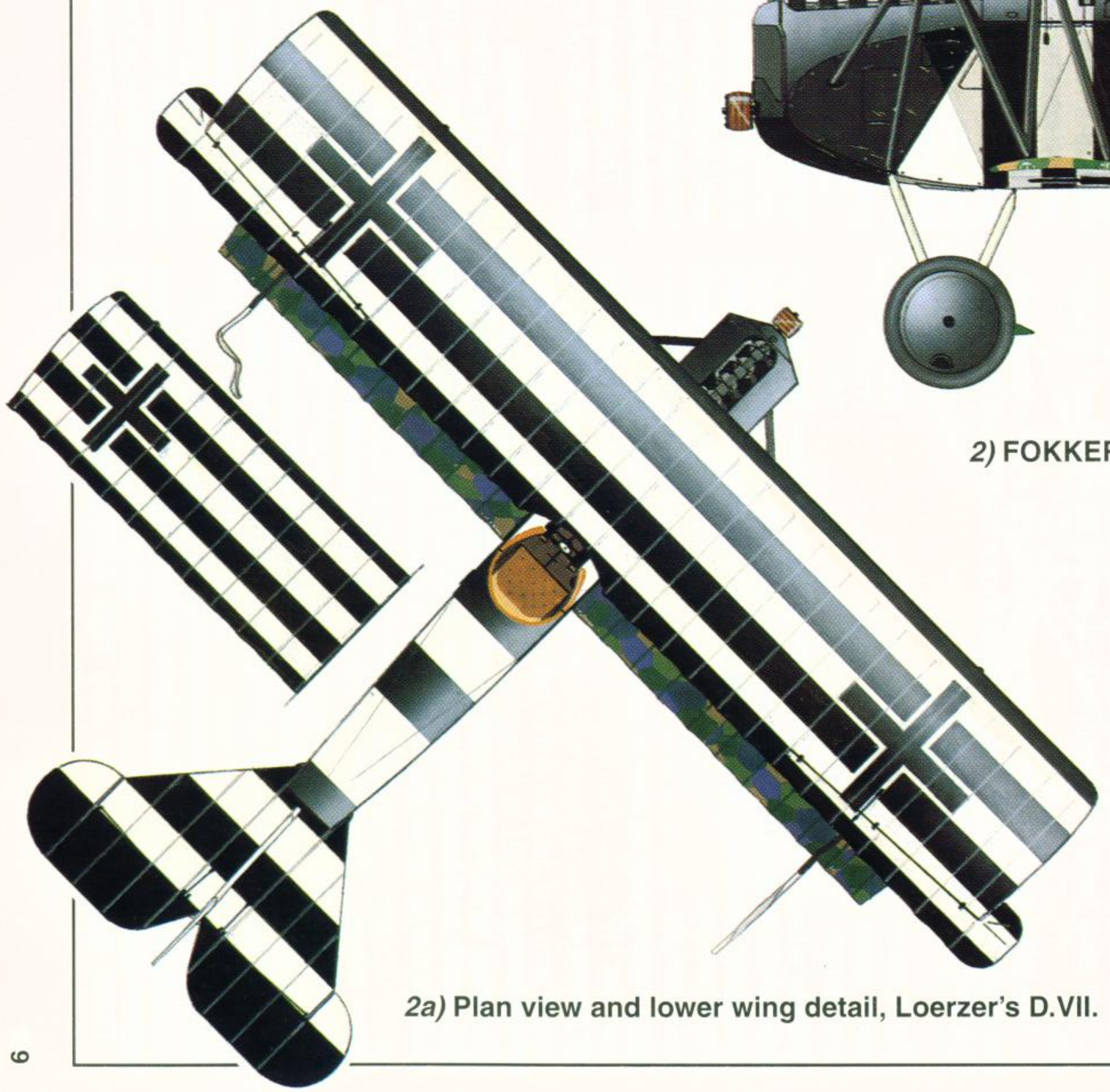


26a) Undersurface view, Haack's D.VII.

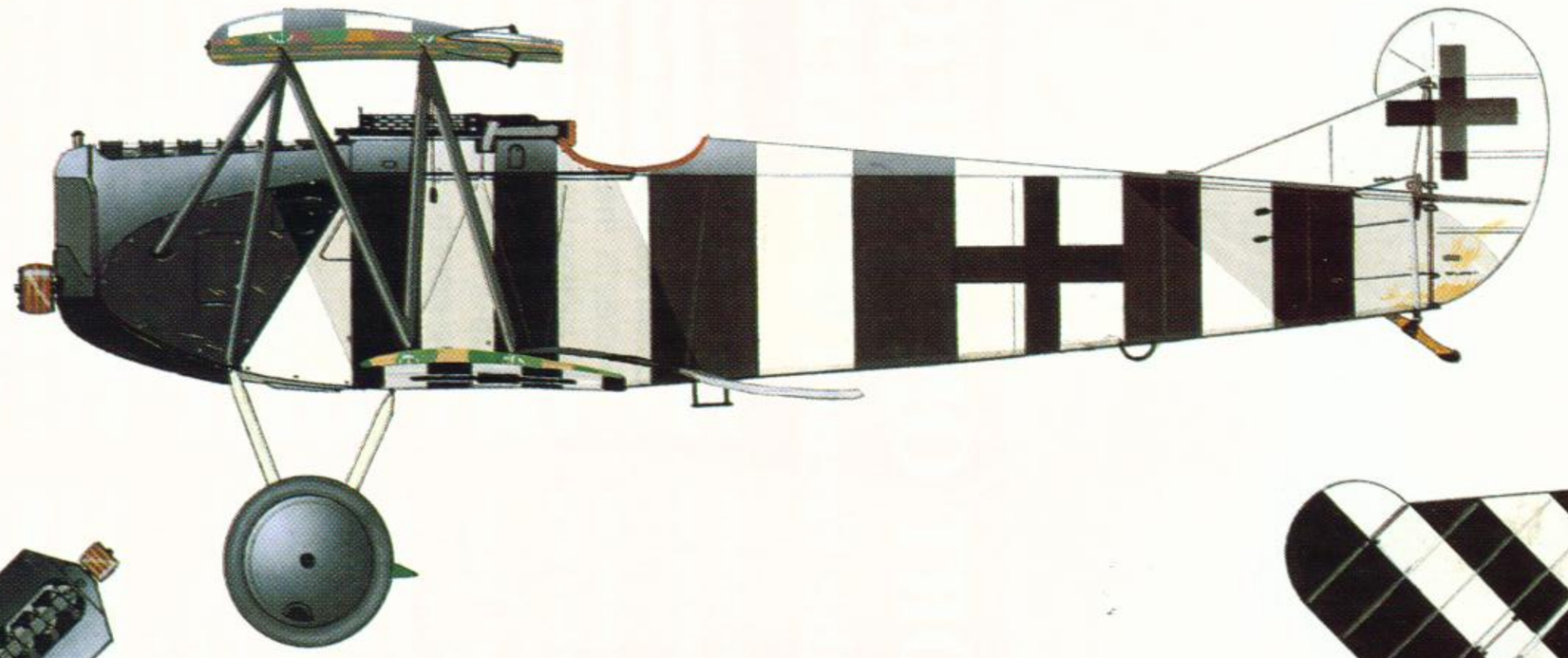


26) FOKKER D.VII, *Uffz.* F Haack, *Jasta* 46.

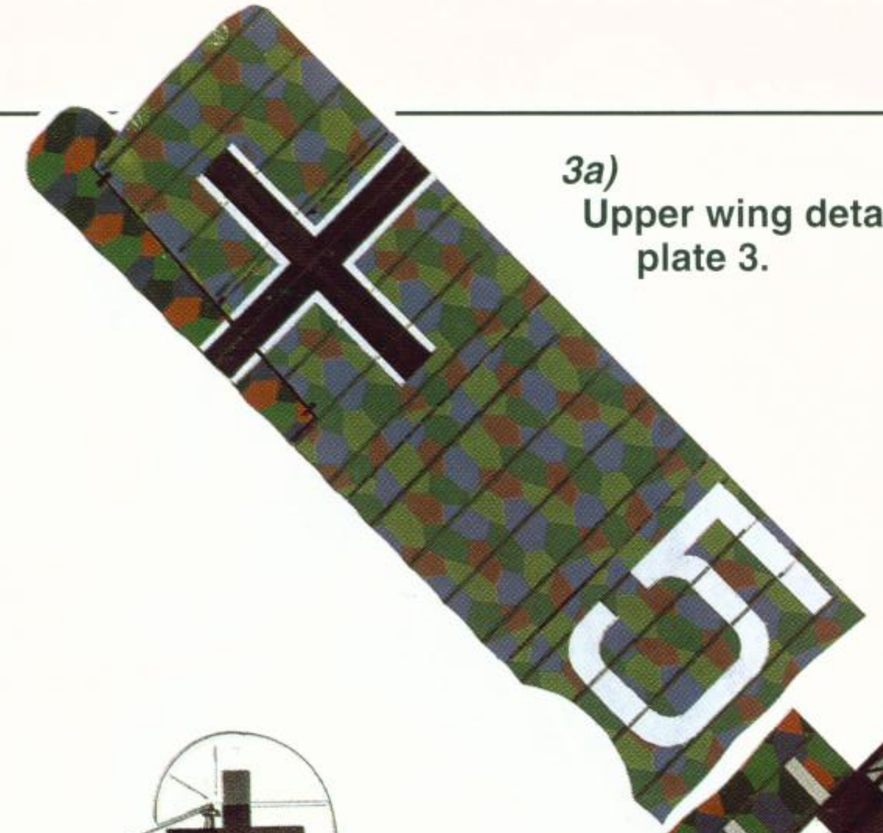
1) FOKKER D.VII (OAW) 646?/18, *Oblt.* H von Wedel, *Jasta* 24.



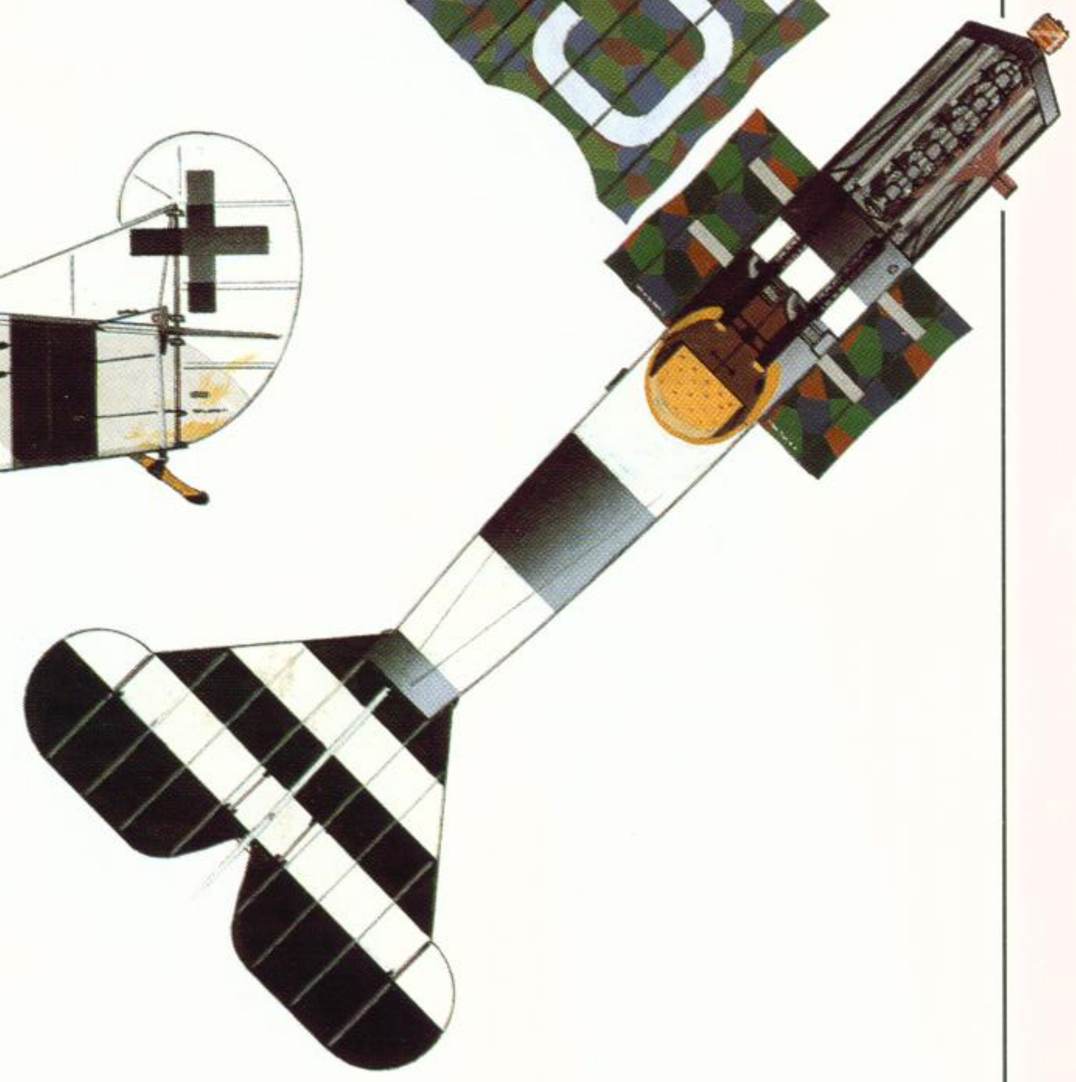
2a) Plan view and lower wing detail, Loerzer's D.VII.



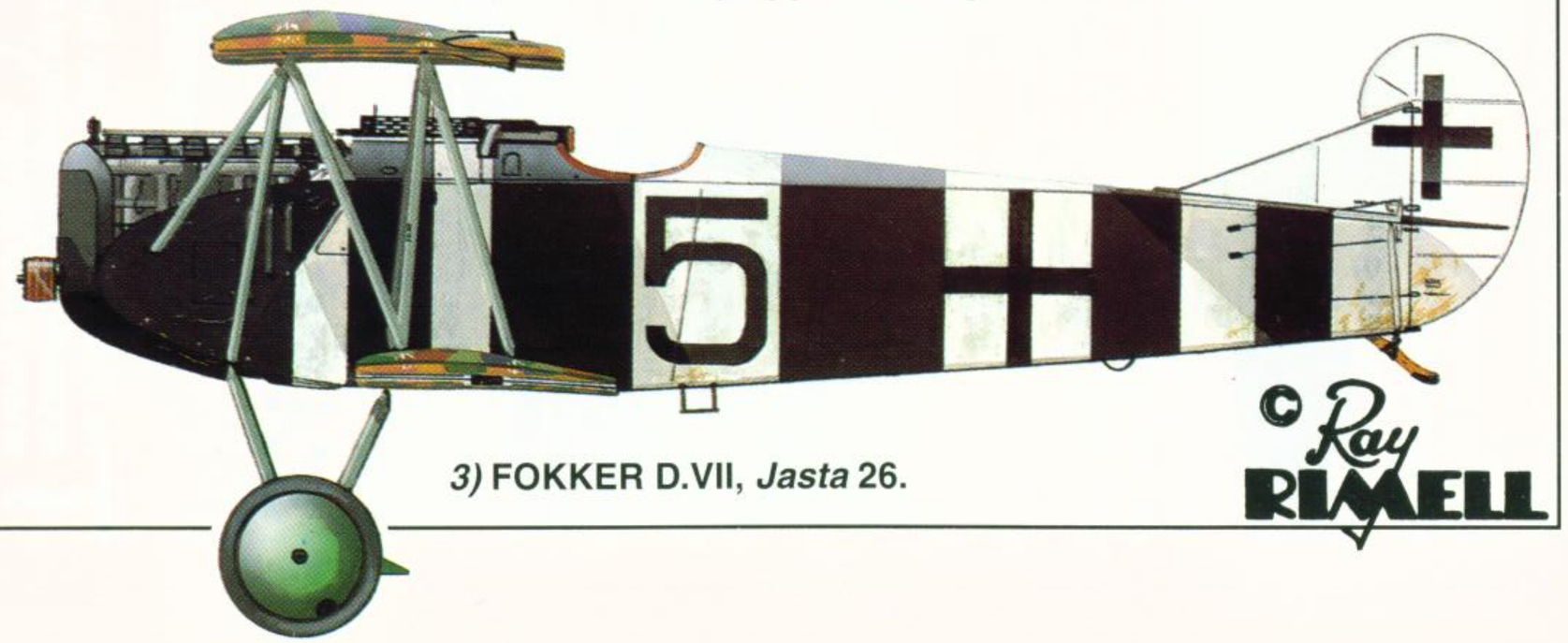
2) FOKKER D.VII, *Oblt.* B Loerzer, *Jasta* 26.



3a) Upper wing detail, plate 3.



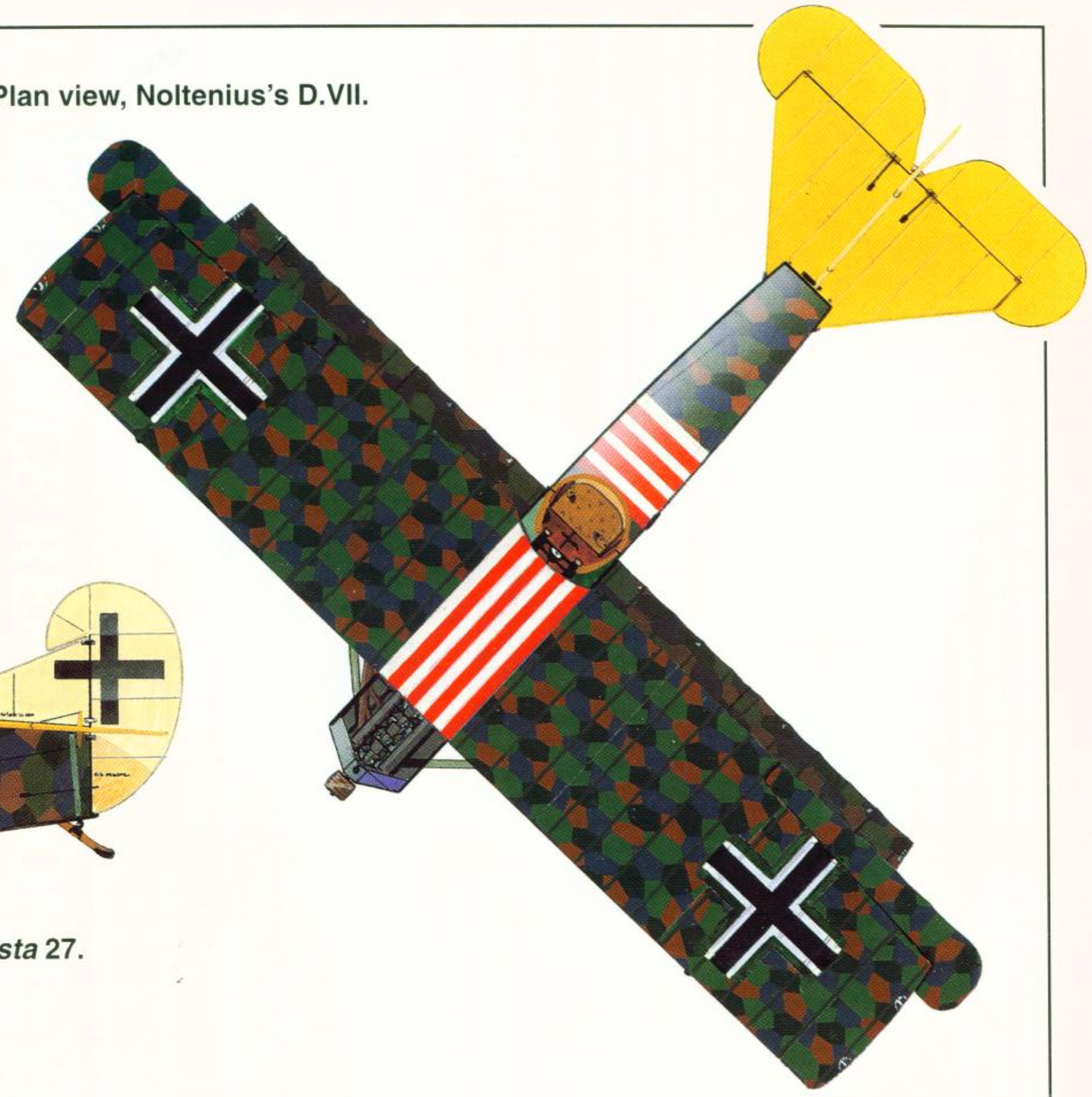
3b) Upper fuselage detail, plate 3.



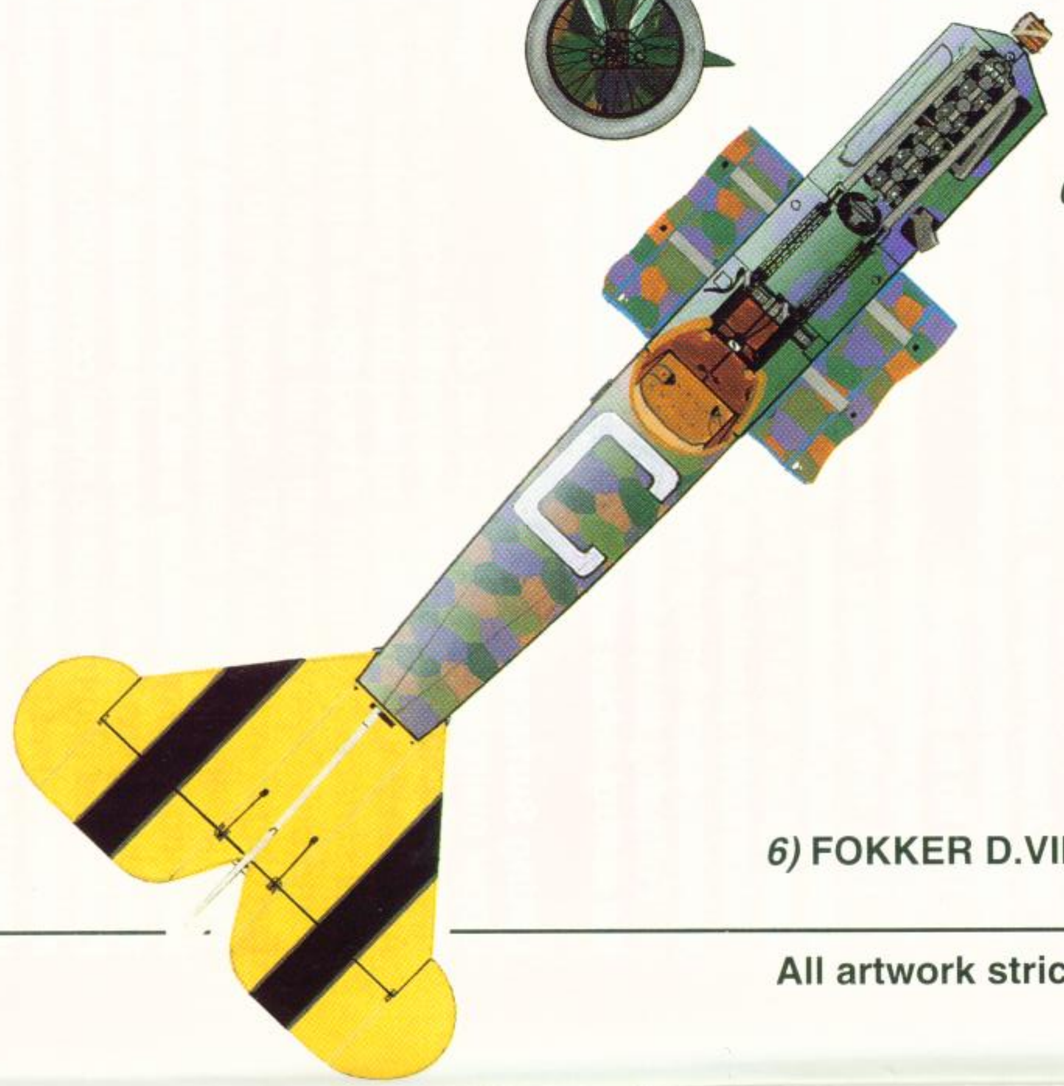
3) FOKKER D.VII, *Jasta* 26.

4) FOKKER D.VII 278/18, *Oblt.* H Goering, *Jasta* 27.

5a) Plan view, Noltenius's D.VII.



5) FOKKER D.VII (OAW) *Ltn. d. R.* F Noltenius, *Jasta* 27.



6a) Upper fuselage detail, Merz's D.VII.

6) FOKKER D.VII (OAW), *Ltn. d. R.* A Merz, *Jasta* 28W.

FRONT COVER:
Attack of the 'chequerboards'.
The strikingly-painted Fokker D.VIIs of *Jasta* 26 were a real thorn in the side of RAF squadrons during August and September of 1918 and were well-known by Allied flyers. As noted in Walter Zuerl's classic book *Pour le Mérite Flieger*, Bruno Loerzer's unit was referred to by the British as the 'black and white Fokkers' - to the French, against whom *Jasta* 26 operated in July, they were *'les Damiers'* (the chequerboards). When seen in side profile, the stark markings on the angular D.VIIs might well have been taken for a chequerboard pattern in the swirling *mêlée* of aerial combat. Here, the *Jasta* takes on SE5as of an Australian Flying Corps squadron 'somewhere over the lines'. *(Painting by Brian Knight GAvA of the Guild of Aviation Artists)*

Top, a familiar but useful shot of D.7 (OAW) 2010/18 reveals early covering and marking practices. All inscriptions were white, and crosses were of approximate 5:1 proportions, with the initial standard 150mm white border. Clear-doped natural fabric covered the vertical tail, with an Albatros trademark transfer on the rudder. (*R Kastner*)

Right, 2010 again, showing the early unlouvred cowling and original radiator with plain cylindrical filler cap. Note the oval covered valve holes in the patch-painted wheel discs, and the 1 in 40 slope of the rigging datum line relative to the top longerons. Four-colour printed fabric was used for most of OAW's production run.

UK PRICE £18.50 (NET)

AN INTRODUCTION

The runaway success of our first Fokker D.VII Anthology took even us by surprise and ever since its publication two years ago, we've been inundated with requests for the promised, subsequent volumes. In your hands is the first of these, Anthology 2, its greater emphasis being on OAW-built D.VIIs with their myriad cowling configurations and finishing practices, and continuation of the chronological D.VII unit markings survey that proved so popular with readers of the first volume. Again, we are indebted to regular stalwart contributors, Juanita Franzi, Dave Roberts, Ian Stair, Greg VanWyngarden and, making a welcome debut to the series, Harry Woodman; their combined talents have produced another invaluable and unrivalled collection of new and authentic reference material.

The Fokker D.VII's influence on post-war American aeroplane design is rarely conceded, but it played a most important part in that country's rapidly burgeoning love affair with aviation. At the same time, Hollywood made a superstar out of 'old square nose' and Harry's account of the fighter's film career makes for fascinating reading. So enjoy the collection of rare photos, the carefully-researched and painstakingly-executed drawings and paintings that appear in the following pages; evocative images that bring to life once again one of the all-time classic fighting aeroplanes of World War I - the mercurial Fokker D.VII.

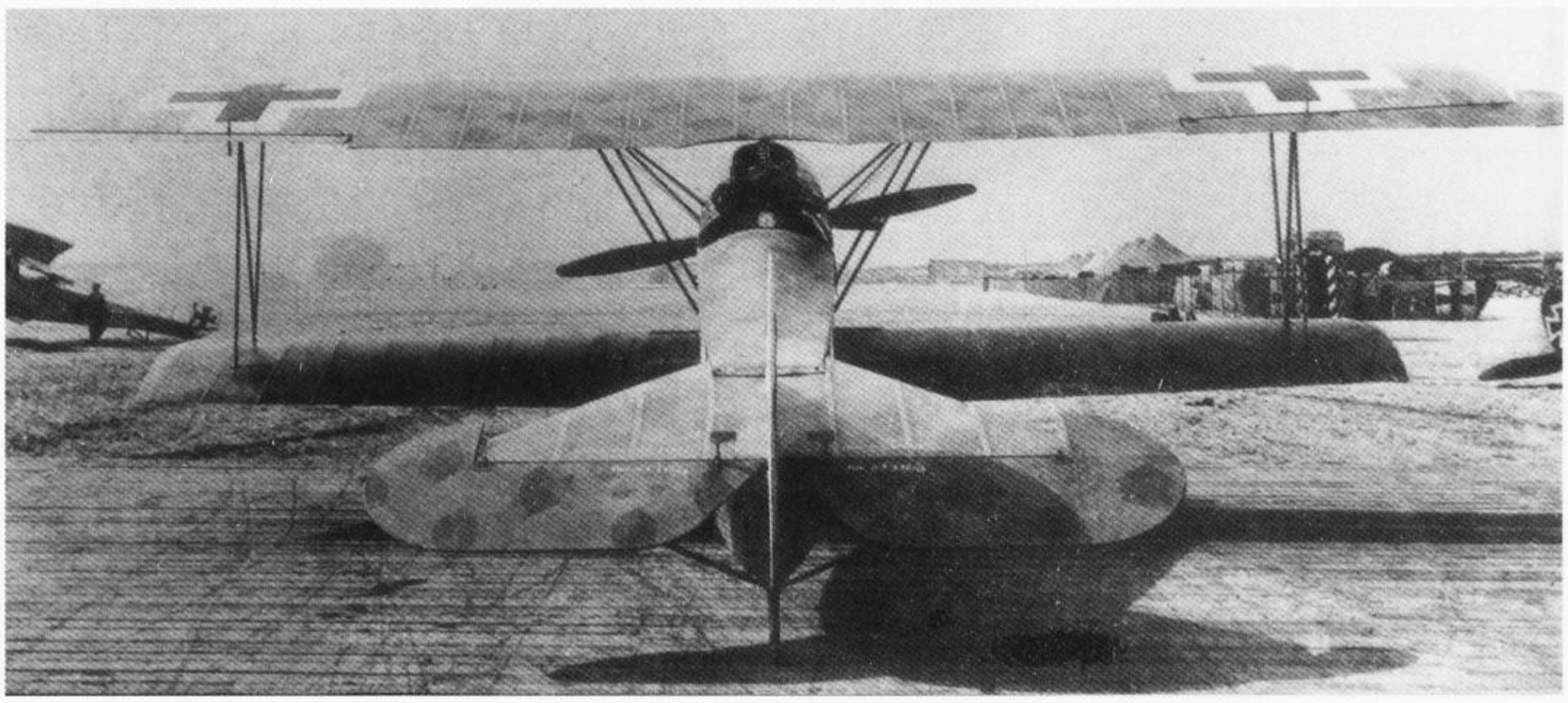
Ray Rimell, January 2000.

THE OAW-BUILT FOKKER D.VII

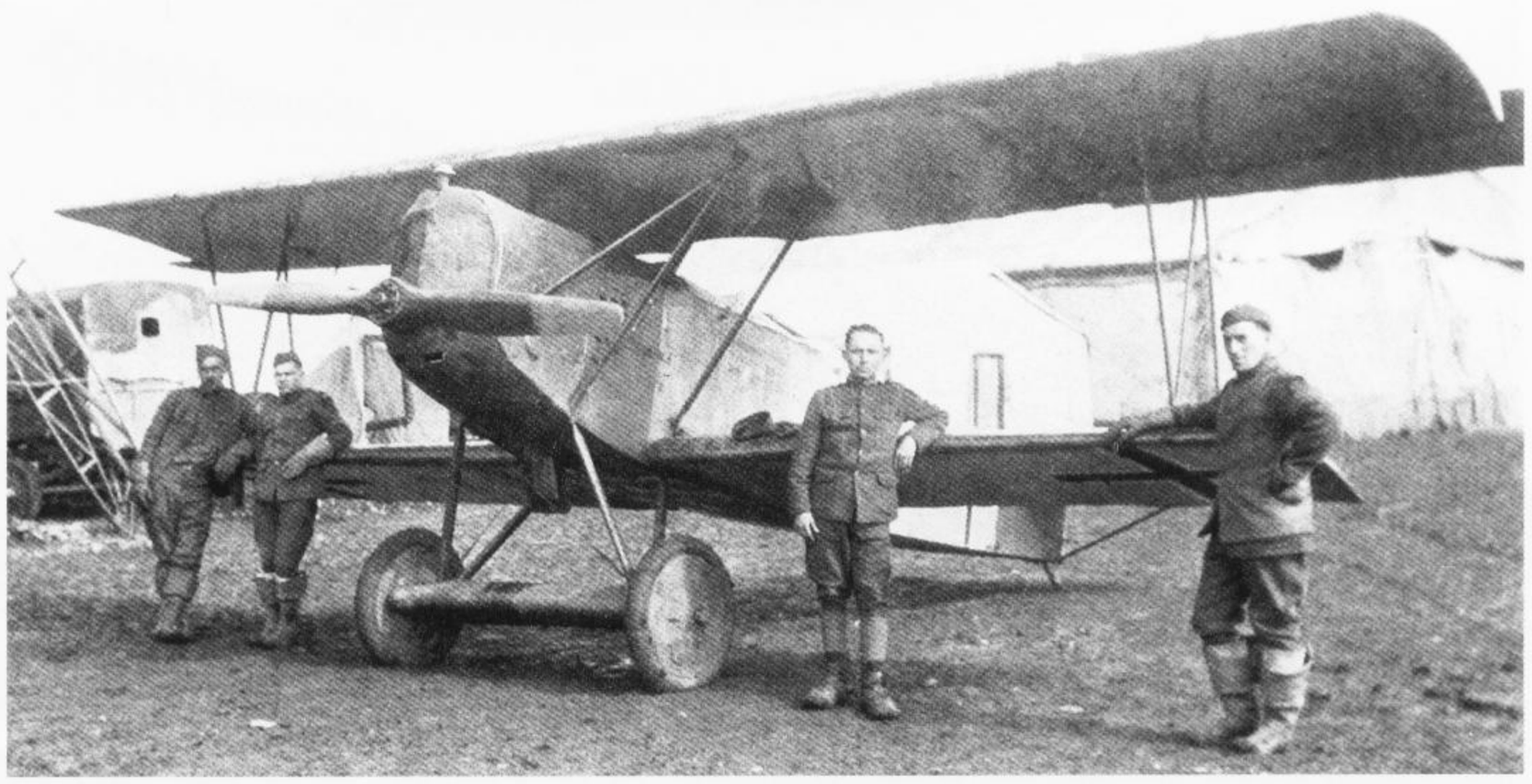
LICENCE VARIATIONS AND FEATURES EXPLAINED BY *DAVE ROBERTS*

When Fok.D.VII 230/18, lent to the *Ostdeutschen Albatros Werken* (note dative plural endings!) as a pattern aircraft, returned to enter service, it had undergone a radical makeover, if indeed much was left of the original. The streaky-green and blue Schwerin paint job had been replaced by overall four-colour lozenge fabric, and the engine cowling had acquired not only a giraffe-like pattern of green and mauve, but also a narrow conformal rectangular door, hinged at the bottom, in the port upper panel. Some drawings show this door, a handy tool tray when opened, with a sharply tapered shape, or even, a manifest impossibility, curved along the hinge line! It would be a distinguishing feature of OAW D.VIIs, as were the upturned lifting handles on the rear fuselage and, from a few weeks into production, a small round door in the side just above the lower wing root leading edge. The starboard upper panel incorporated the radiator half-fairing, a separate piece on Fokker machines. For some reason, the triangular door aft of the main side panel was omitted from OAW's first batch, and the firm never got round to providing external access to the fuel and oil cocks below the tank. Like Albatros, OAW retained the magneto and water pump access door at the upper rear of the side panel for part of the production run. Fokker

Above, a mid-production OAW D.VII (4174/18) in the hands of the US 22nd Aero Squadron has a vented-cap radiator, a triangular rear access door, and crosses of the final form. Multiple short louvres gave way to Fokker-style louvres when rear side panels were introduced. Fin and rudder were painted white by midsummer 1918, and the transfer was eventually omitted. (*Greg Van Wyngarden via Jon Guttman*)



Left, OAW's treatment of flying surfaces is well illustrated here by 2010/18. Like-to-like seaming of the fabric pattern was predominant, but not universal, on Schneidemühl products, and the tailplane was covered spanwise. As usual, the control surfaces lacked rib tapes. Note the early wing cross centred in line with the aileron levers, perhaps a throwback to D.Va practice. (*GVW*)



Right, another view of (OAW) 4174/18 illustrated on the previous page shows the underwing cross position almost universal on OAW D.VIIs. The underside door is open, revealing its lilac painted raised central portion, and the airscrew has tip sheathing unusual on German aircraft. (*GVW*)

Below, the Smithsonian Institution's D.VII (OAW) 4635/18 before its early 1960s restoration. Flown by *Ltn.* Heinz von Beaulieu-Marconnay of *Jasta* 65, it had slate grey fuselage top and sides with reddish brown nose and tail, not repeated on the restored version. The 'U 10' inscription refers to the pilot's former cavalry regiment, the 10th *Uhlans*.

abandoned it quite early. Both doors in the side panel were hinged further aft on OAW aircraft than on Fokkers, though the rectangular one edged forward a little in later production.

A major improvement over Fokker's design was the splitting of the axle wing into forward and after halves to allow its quick removal for servicing of the bungee or steel spring suspension cord. Twelve pairs of T-shaped fishplates attached to the ribs were joined by horizontal bolts which pulled the halves together when tightened. This wing would appear to have spanned 1600-1605mm as against Fokker's 1625mm, but the use of symmetrically-coned wheels kept the track the same at 1800mm or greater at 1850, depending on sources. Oval valve access holes had a cover pivoted along the major axis, but some wheels had open circular holes. Otherwise, OAW machines were like the Schwerin product in most respects.

Each factory went through its own evolution process as the summer brought out the infamous overheating problem; louvres were added to the side cowling panels to increase the flow of air through the engine bay. In OAW's case, a single tall louvre aft of the main side access door gave way to multiple short ones of unique appearance, and finally to an arrangement very similar to

the late Fokker cowling, but retaining the small circular door at bottom front of the triangular rear panels. The latter can sometimes be seen added to Fokker and Albatros machines. Squadron mechanics looking for panels to improve their pride and joy's cooling did not usually care about their provenance, as long as they could be made to fit; so much for the non-interchangeability in which we cheerfully believed up to 20-odd years ago! Some late OAW examples had four louvres instead of three in the main group on the forward panel. As with the Fokker version, the belly vent was deepened slightly as production proceeded.

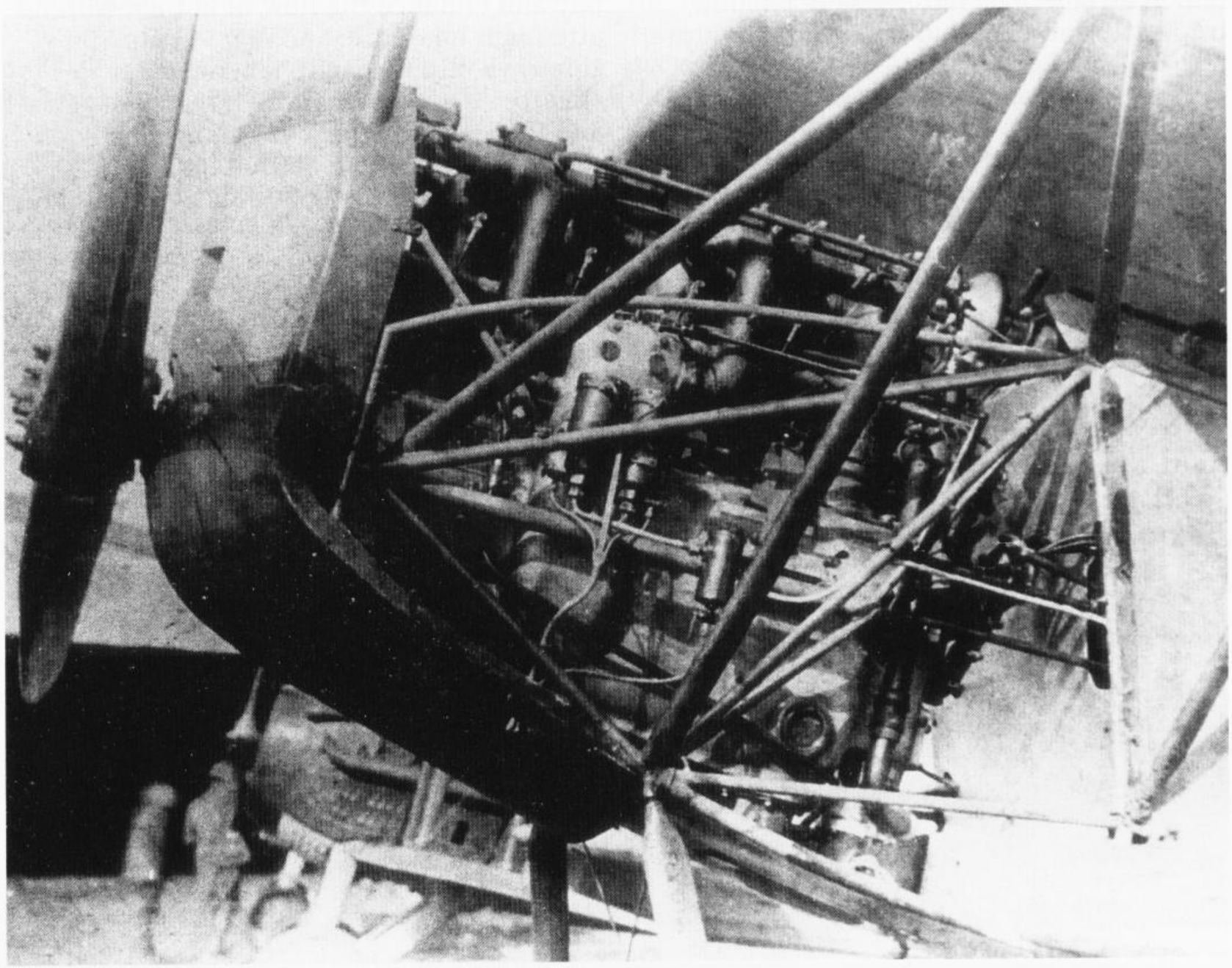
Careful examination of the well-known low-angle view of an early Fokker product in flight reveals that the vent was present from the beginning, created by a difference in cross-section between the undershield trailing edge and the panel above the undercarriage. The latter was of shallow trapezial section with only single curvature, rather like a flexed ruler, echoing the radiator facets and leaving small chordal gaps for air to flow out either side of the central door. It flattened out at the rear. Alex Spencer of the National Air and Space Museum confirmed that their mid-production OAW D.VII has such a panel, and sharp photographs of factory-fresh examples in storage at the war's end show that it remained unchanged. From the side, the bottom profile would appear little interrupted, if at all, before the chin panel was deepened.

An elegant rearward-angled double exhaust manifold/pipe with slightly flared mouths, fitted to both Mercedes and BMW engines, gave way to a high-level single pipe, cowled in at first for most of its length, at about the time the first louvres appeared. This version of the original pipe also featured intermittently on the Fokker product, which used a variety of designs before settling on the high-level type.

Unlike Fokker, OAW tailored the first flat-topped versions of the starboard upper cowling panel around the cylinders, taking it closer to the centreline than the straight-edged port panel. The idea may have been to keep exhaust pipe heat out of the engine bay and enhance the flow of hot air, with its attendant heat haze and oily vapour, out sideways into the right-hand spiral slipstream and away from the cockpit. This and the straight-edged version which soon replaced it remained flat but angled up slightly towards the centreline, following the slope of the exhaust pipe, all the way to the firewall, the upper portion of which was separate and laced to the decking arch. This

Centre, as *Uffz.* Erich Buder of *Jasta* 84 discovered, the D.VII's progressively crushable wings, breakaway undercarriage and tough steel-tubing fuselage protected its pilot from all manner of arrivals. This aircraft had OAW's first high-level exhaust pipe and a single tall louvre in the cowling. The upright air pump, uncommon in mid-1918, and the alternative flat twin pump cannot be reliably used to identify sub-types of the Mercedes D.IIIa engine, as they were interchangeable.

Below, D.VII (OAW) 6576/18 shows off its black inscriptions, full metal jacket and late crosses. Note the Roman VII in the serial; the non-standard Arabic 7 was short-lived, as was the use of white for fuselage serials, datum lines and weight tables. The two air pressure gauges, usually on the instrument panel, appear in this case to be clamped to the crossbar either side of the rev. counter.



Top, OAW's nomadic upper wing cross has settled here on rib 10 from the centre on 8503/18, a position shared with Fokker-built D.VIIs. Note the offset radiator filler and the flat-topped starboard cowling of late models. Serial numbers on tailplane and elevators remain white, as do incidence and *hier anheben* (lift here) markings on the wings. (*NASM via B Nicklas*)

Centre, a partially-clothed late OAW machine (?431/18) displays the water-heated twin-choke carburettor of the Mercedes engine. Though the radiator has an offset filler, it is not the final, much thicker version developed (rather late) for the larger-capacity Mercedes D.IIIavü and BMW IIIa. The cowling chin panel is now much deeper at its trailing edge, creating a sizeable vent. (*GVW*)

Right, 8520/18, unarmed and fitted with a large windscreen after the Armistice, was one of a group of late OAW D.VIIs covered with five-colour printed fabric. Wheel covers were now in concentric dark green and mauve, with open circular valve holes. The aircraft at right has an upright air pump, common again on late Mercedes engines; this negated any improvement in forward view gained by moving the water filler to port. (*GVW*)

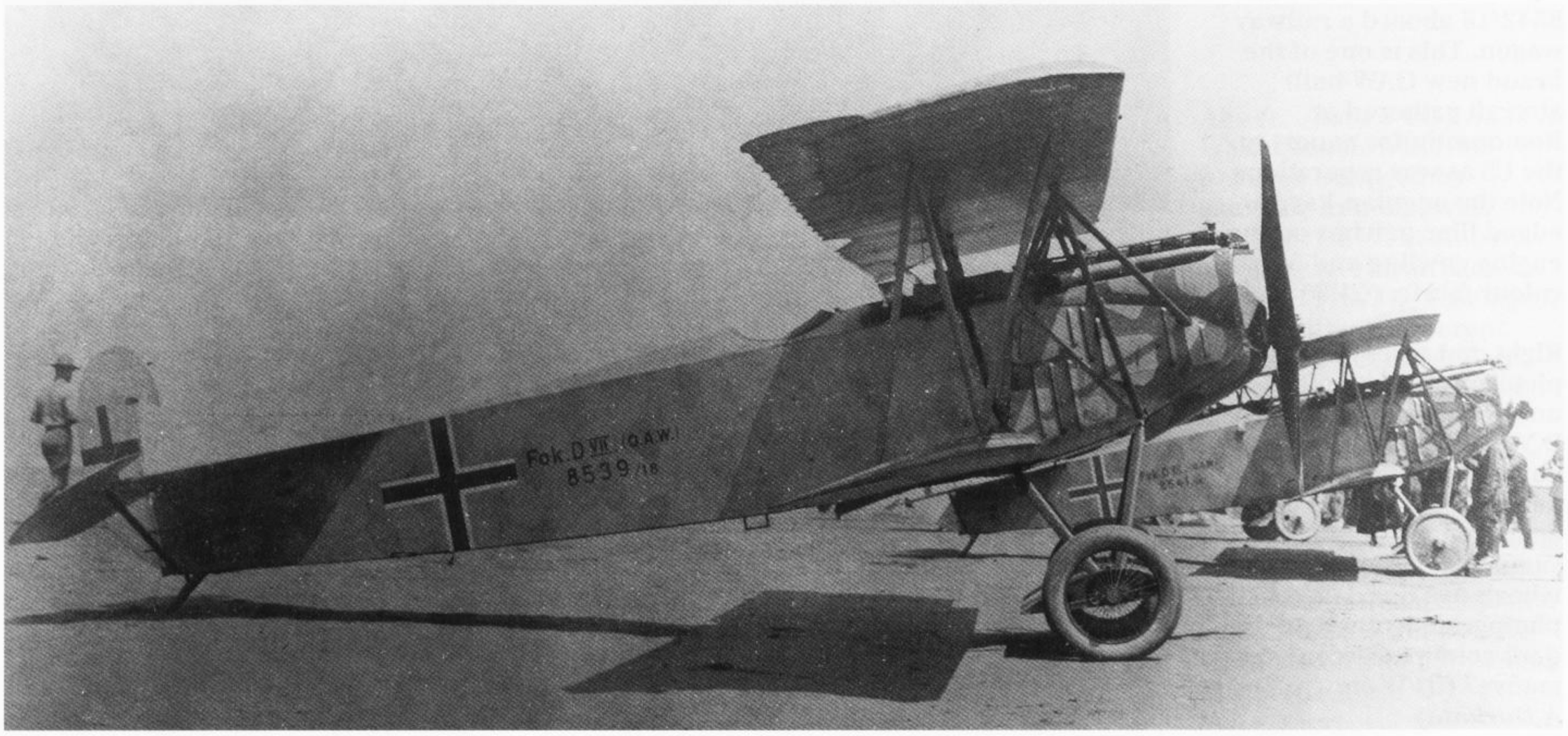
Left, the fuselage spacers and bracing wires of 8541/18 are clearly visible through the four-colour fabric. Samples at the RAF Museum still retain impressions of these wires; the fabric slackened when first doped and moulded itself to the wires, which left their mark when it dried and tightened. (*GVW*)

Below, 8539/18 and 8541/18; these are the straightest-bottomed OAW side and chin panels we have found. Cowls were made and matched individually by skilled metalworkers, with inevitable slight differences in outline. On both these aircraft, the upper engine panels overlapped the side panels – quite a common practice on OAW D.VIIs. The bare wheels reveal the suspension cord and the fasteners for the undercarriage wing halves, and the low end-on viewpoint shows the consistency of mainplane undercamber. The datum line no longer slopes prominently. (*NASM via B Nicklas*)

was a simpler, and possibly less rigid, arrangement than Fokker's, with no firm support for the inner edge of the starboard upper panel; indeed, the slope may have been acquired in service. The next piece aft, over the fuel/oil tank, was unchanged, and thus projected slightly above the engine top panel, ahead of the firewall. On the port side, the engine panel still overlapped the tank panel, and was left high and dry, attached to No. 6 cam box.

A straighter profile to the bottom of the forward side panels on some (not all) OAW D.VIIs might be thought to reflect a significant variation from the Fokker product, but comparison of photographs taken from similar angles and distances reveals no consistent difference in outline. Panels were evidently interchanged, and there was as much variation in shape between individual aircraft as between the two makers; even the depth of the frame could vary, sometimes from one side to the other on the same fuselage! This was very much handmade, almost blacksmith technology; assembly line photographs show workbenches and stand-mounted tools for on-the-spot fabrication and adjustment of parts. The straighter bottom is, in many cases, at least partially a photographic illusion due to the panel being bent outwards at the edge, as happened to nearly all D.VII cowls after some use. Albatros cowling panels, however, were quite different, and created noticeable mismatches at the bottom when combined with others.

According to an illuminating Swiss document sent from Sweden by D.VII replica builder Mike Carlson, factory louvres were made separately and riveted from inside into slots in the the cowling. Louvres added by groundcrew were often simply slit and beaten out of the existing panel.



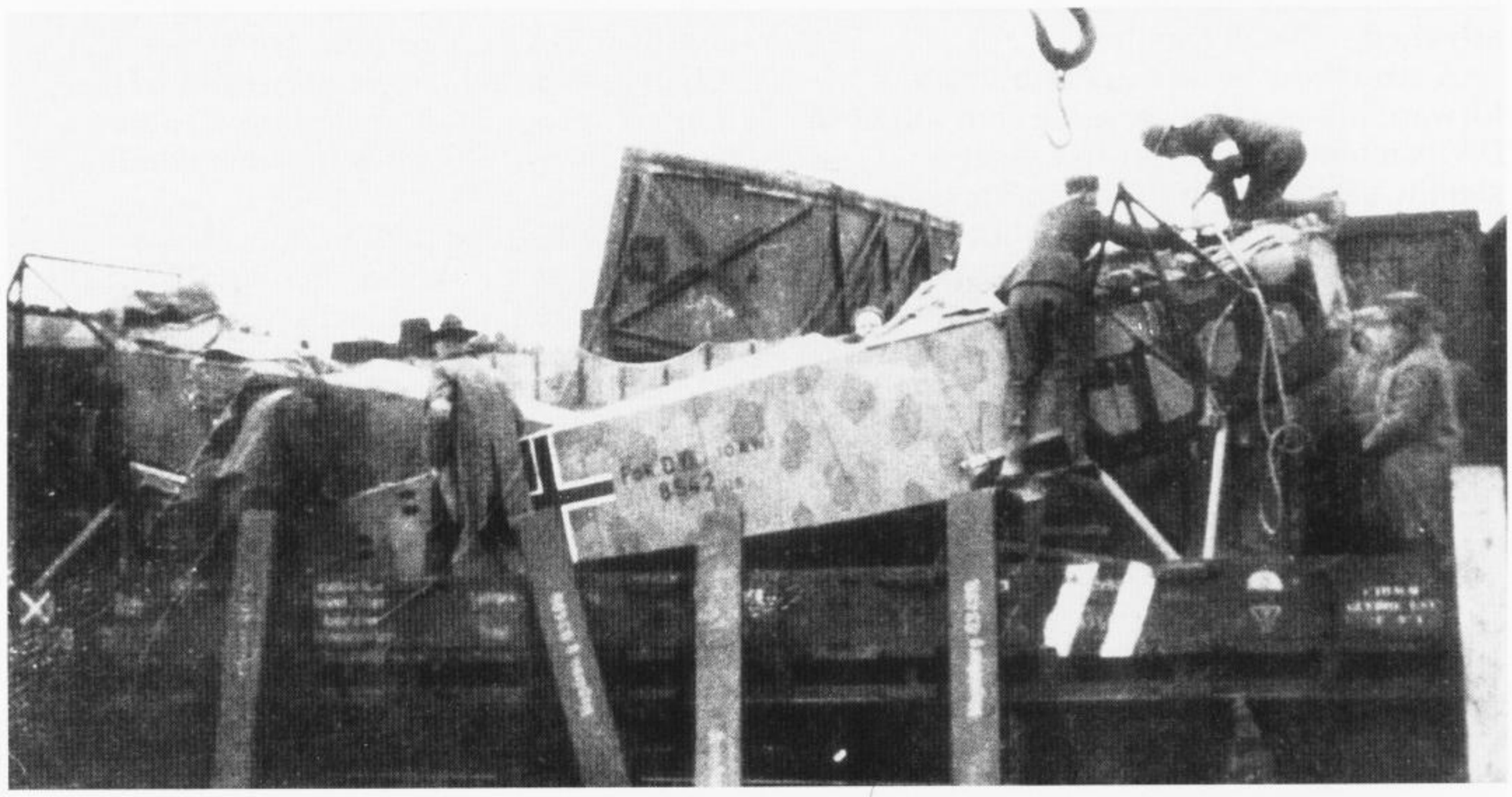
Research by various enthusiasts has revealed differences in the way bracing tubes were attached to the engine bearers. Generally speaking, Fokker and OAW had a very similar arrangement in which the forward cabane strut was welded to the top of the bearer, while the upper brace ended alongside and fully external to the bearer, under the strut leading edge, and the two lower ones were blended in below it. In-service photographs show Albatros machines with the upper brace blended in near the trailing edge of the strut and the lower ones below its leading edge, but the example preserved in Knowlton, Canada has an arrangement like that of Fokker and OAW. Either Albatros changed to match the others, or, perhaps, some of their late production examples re-used old fuselage frames from other builders.

The RAF Museum's ex-Belgian D.VII for most of its career had Albatros cowlings and undercarriage; it still has an Albatros oil tank, a fair indication of late Albatros manufacture for the fuselage. However, this aircraft has a Fokker-style frame, on which an altered inscription suggests (with a little imagination) the original identity of Fok. D.VII 504/18; again, this could imply re-use of salvaged fuselage frames in new aircraft. With skilled welders at a premium, it would make sense; the frame was by far the most resilient part of the aircraft, able to survive hard impacts and even fire without being written off – and, as photographs testify, there were plenty of fires...

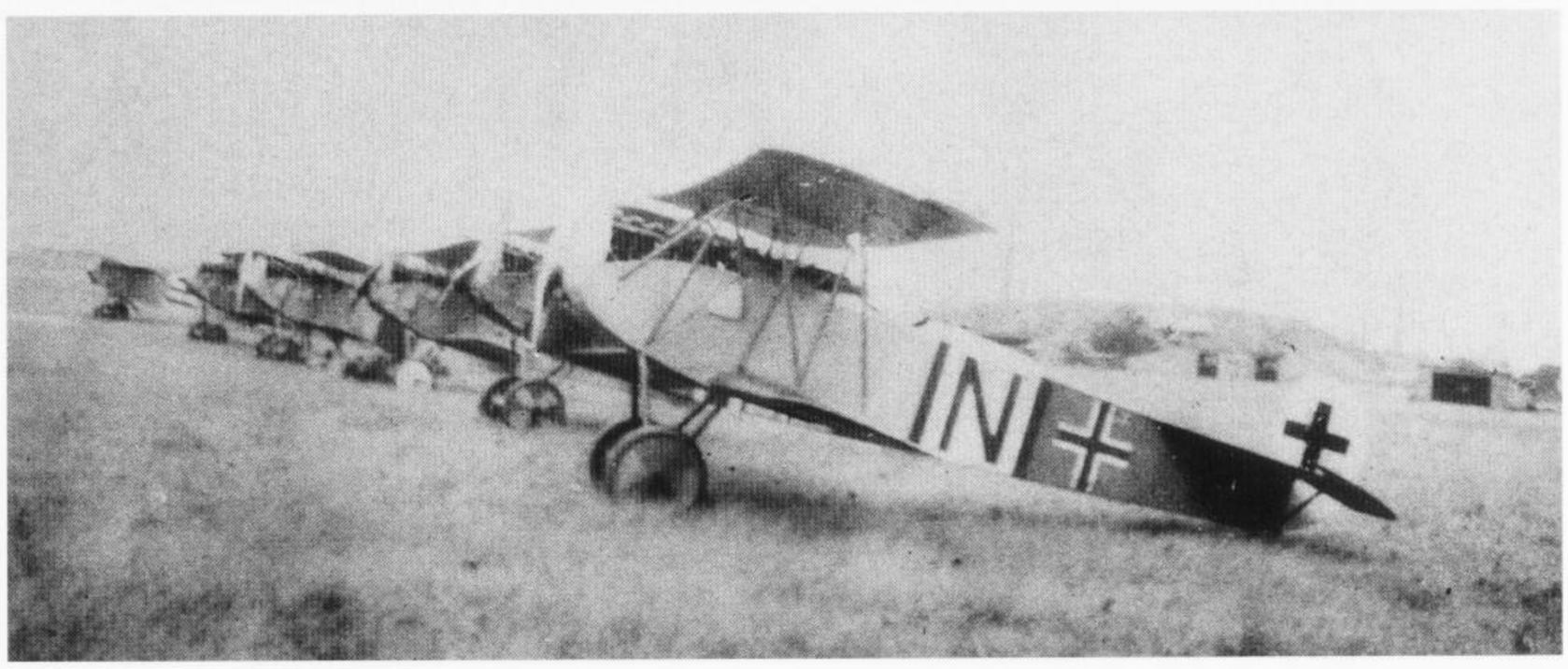
Compounding the confusion, the much-altered D.VII preserved in Munich, dubiously serialled 4404/18, has Albatros-style engine bearers, and the Fokker factory's April 1918 side view schematic, depicting a prototype or pre-production machine, has the same disposition of tubes. The pattern aircraft, probably built without full jigs, must have differed in certain details, which were perpetuated in production by their recipients. The only reliable pointers to the various factories' original framing practices are crash or maintenance photographs of D.VIIs up to about September 1918, which are very consistent.

At first, OAW used the same 8mm AF honeycomb radiator as Fokker, but much of the firm's output had a 7.5mm unit with a wide vented cap which would have made an excellent UFO if anyone had been faking them at the time! The fairing panel below most OAW radiators had two small domes to cover bolts securing an inner stiffener, visible in factory shots. Like Fokker, OAW attached (riveted?) the outer panel to the undershield as a permanent unit, not removable with the airscrew in place.

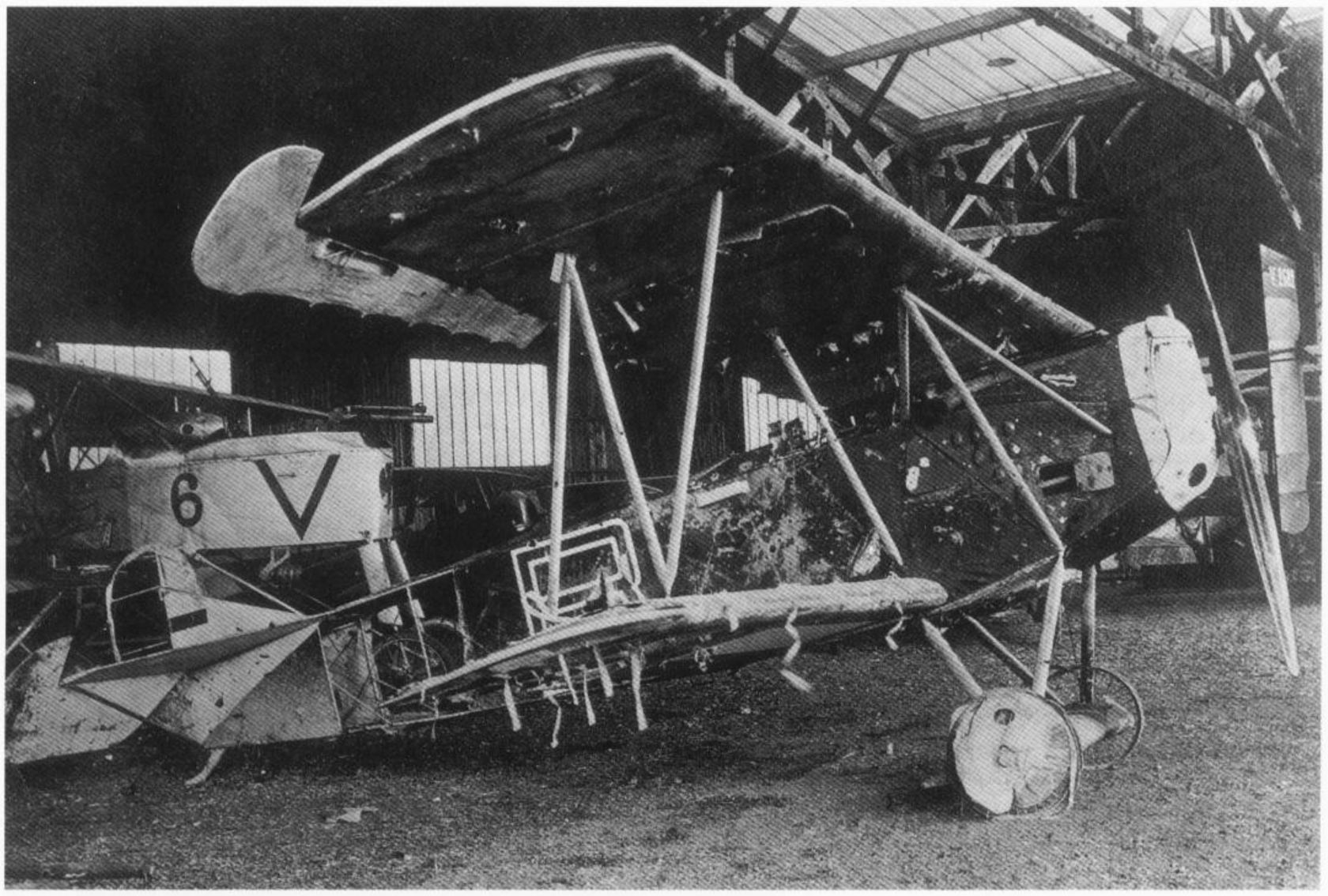
OAW remained faithful to this style of radiator, through the thicker, 7 mm and offset-filler versions, though a new filler cap with a forward-facing funnel vent appeared right at the end of production. Occasionally, too, the NIW radiator, with its distinctive blank centre, temperature gauge and diagonal square matrix, appears on an OAW



Right, American mechanics work on dismantled D.VII 8542/18 aboard a railway wagon. This is one of the brand new OAW-built aircraft gathered at Romorantin for export to the US as war reparations. Note the angular, hard-edged lilac patches on the engine cowling and four-colour fabric. (*GVW*)



Right, not a very sharp picture, and the unit is unidentified, but these OAW D.VIIs in late markings all have their upper cowl panels removed to keep the ammunition cool in the hot summer weather. The wheels are quartered in photographically light and dark colours – green and mauve? (*GVW via A Durkota*)



D.VII. Like the others, the NIW later acquired an offset filler. A third type of matrix, with interlocking alternate fins like those of many car radiators, was made for the D.VII and illustrated in a post-war German book, but the writer has yet to see a photograph of one on a production aircraft.

Airscrews of various makes were used, the commonest being Wolff, Heine and Axial. Inside the cockpit, the layout was much like that of the Fokker version, except that OAW chose a two-handled throttle lever for the control column, and, in at least some cases, a different style of seat harness with wider straps and Y-shaped buckle plates. Incidentally, the stick used by all three D.VII builders was a proprietary item which also appeared in the Junkers D.I. The Morell anemometer airspeed indicator on the port interplane struts was a common OAW fitting.

Like Fokker, OAW did not brace the fin to the tailplane at first, but wires were soon introduced. The ends appear on some aircraft to have passed through eyebolts securing the outboard elevator and upper rudder hinges, but eyeplates, both trapped by the hinge bolts and bent around the fin tip and retained by a screw, have also been seen. In some cases, the wire ran to a plate held by a separate bolt, ahead and slightly inboard of the tailplane hinge. Obviously, modellers must examine photographs of their intended subject very carefully. When captured by the French, the early D.7 (OAW) 2009/18 had no fin bracing, but later pictures of it in French and British service show wires, the need for which must have been pretty obvious.

The OAW fin retained the full-depth sternpost found on 230/18, whereas the Fokker factory changed to a fin not attached directly to the fuselage until a tall, narrow U-shaped bracket was introduced well into production.

The bottom of OAW's fin trailing edge rested in a small channel plate which extended forward to drop over a vertical stud welded into the angle between the upper longerons. This stud reappeared on the Fokker product to anchor the aforementioned bracket; perhaps, and possibly at *Idflieg*'s insistence, D.VII builders were trying to facilitate interchangeability of parts. The RAFM's '8417/18' has a small rectangular steel pad welded to the fuselage to support the foot of the fin sternpost. The fin was secured at the front by the usual stud and nut through a clip to port of centre on the tailplane front spar. Even if there were slight dimensional differences, a good fitter could easily adapt either fin to an airframe, and hybrid tails were quite common. The three main D.VII builders attached the tailplane with two studs through the front spar and one through the rear, though different arrangements appeared on modified examples in the USA.

The Swiss standardised their bought-in D.VIIs in 1925 to match those of their own construction; the fin was attached at the rear by a version of the Fokker bracket in which the uprights were cranked aft of the stud hole, the lower fin/rudder hinge being deleted and the top of the bracket bolted through the sternpost foot. D.VII fins in general had a cut-out at bottom rear to allow access to the fasteners, regardless of the method of attachment. One imagines the nut being awkward to tighten in such a confined space; a thin, short ring or box spanner would be necessary. Could that be why Fokker tried to do without it? Albatros fins generally followed OAW practice.

Wing sections may have varied slightly between manufacturers, though the imprecision of rib outline found on preserved D.VIIs makes it hard to ascertain the original ideal sections. Viewed obliquely from the tip, any existing old D.VII wing looks a bit like a choppy sea! What is certain is that OAW replaced or supplemented Fokker's over-and-under internal bracing tapes with thin battens connecting the ribs

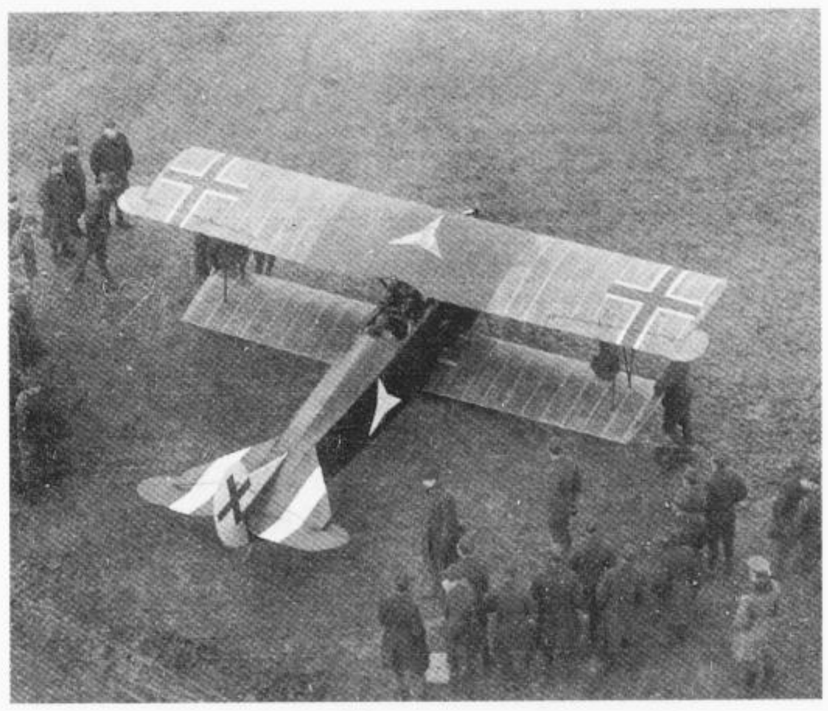
Above, *Jasta* 9 CO *Ltn. d. R.* Walter Blume's D.VII is pictured, ravaged by souvenir hunters, with Voisin 8s of *V.*114 shortly after capture near Laon in August 1918. The fuselage is black, with an apparent light area, echoing the fin, under the tailplane, but this may have been a shadow effect due to the low lighting angle. The only evidence of the 'white wings' reported by Blume is a light rectangle under the starboard lower mainplane, possibly the remnant of a white underside outlined in black. (*GVW via G Schroeder*)

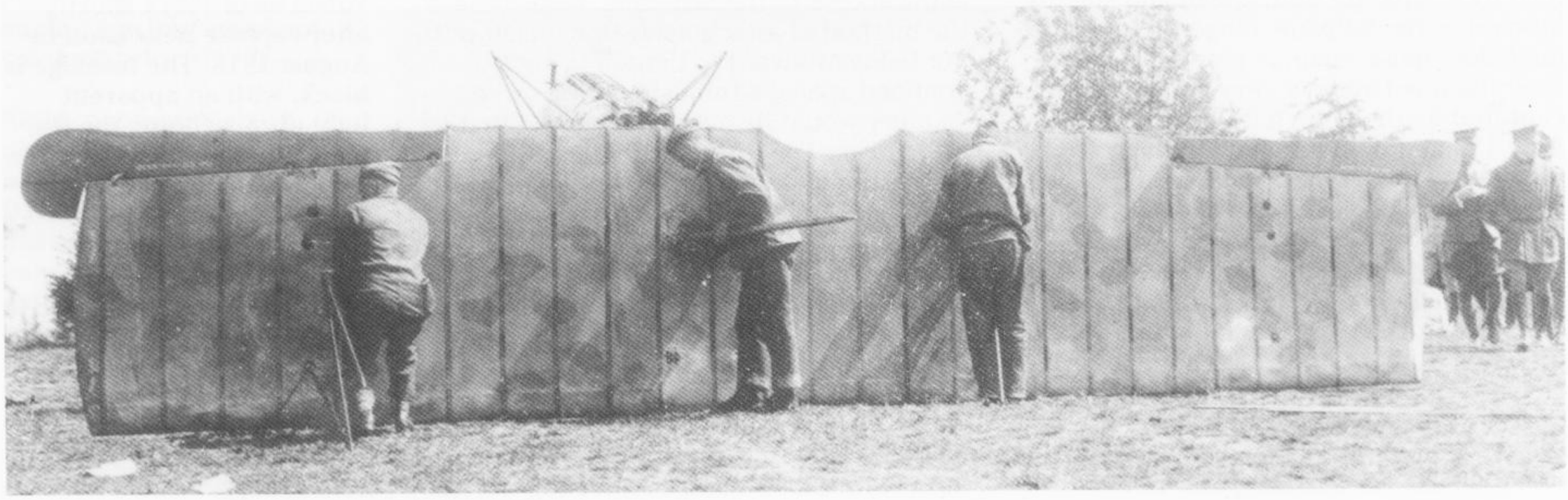
just below the surface and widened the tips of the leading edge ply serrations.

The upper wing fabric had a seam near the centreline, and that on the lower wings was applied with a selvedge at either root, as usual. Four-colour lozenge fabric, occasionally of the greatest available bolt width, was used, spanning almost five rib spaces, though most airframes examined had narrower fabric, including five-colour, spanning just over four spaces. The wider material may have been used at repair depots, or on spare wings. Occasionally, the lower wing had two narrow panels instead of one between the interplane struts and the tip. Pattern orientation seems to have varied less on OAW than on Fokker-built aircraft.Wing fabric was usually seamed with like selvedges together, but some OAW aircraft had all strips running the same way.

OAW taped in either salmon pink or bright blue, and a burgundy cloth forming the rear cockpit partition of the Smithsonian Institution's mid-production machine may also have been used, briefly if at all. Logic would suggest that the light blue tapes, conspicuous on top surfaces, were ideally intended for underside use only, but aircraft manufacturers evidently used whatever they could get. Several late OAW D.VIIs had tapes of lozenge fabric, like those on Schwerin products. Five-colour tapes have been noted on four-colour wings; they can be identified by the shorter repeat interval of their pattern, and are often darker than the wing fabric. A supply of natural fabric was used up, clear-doped in traditional Albatros style, on OAW fins and rudders, which later appeared in white.

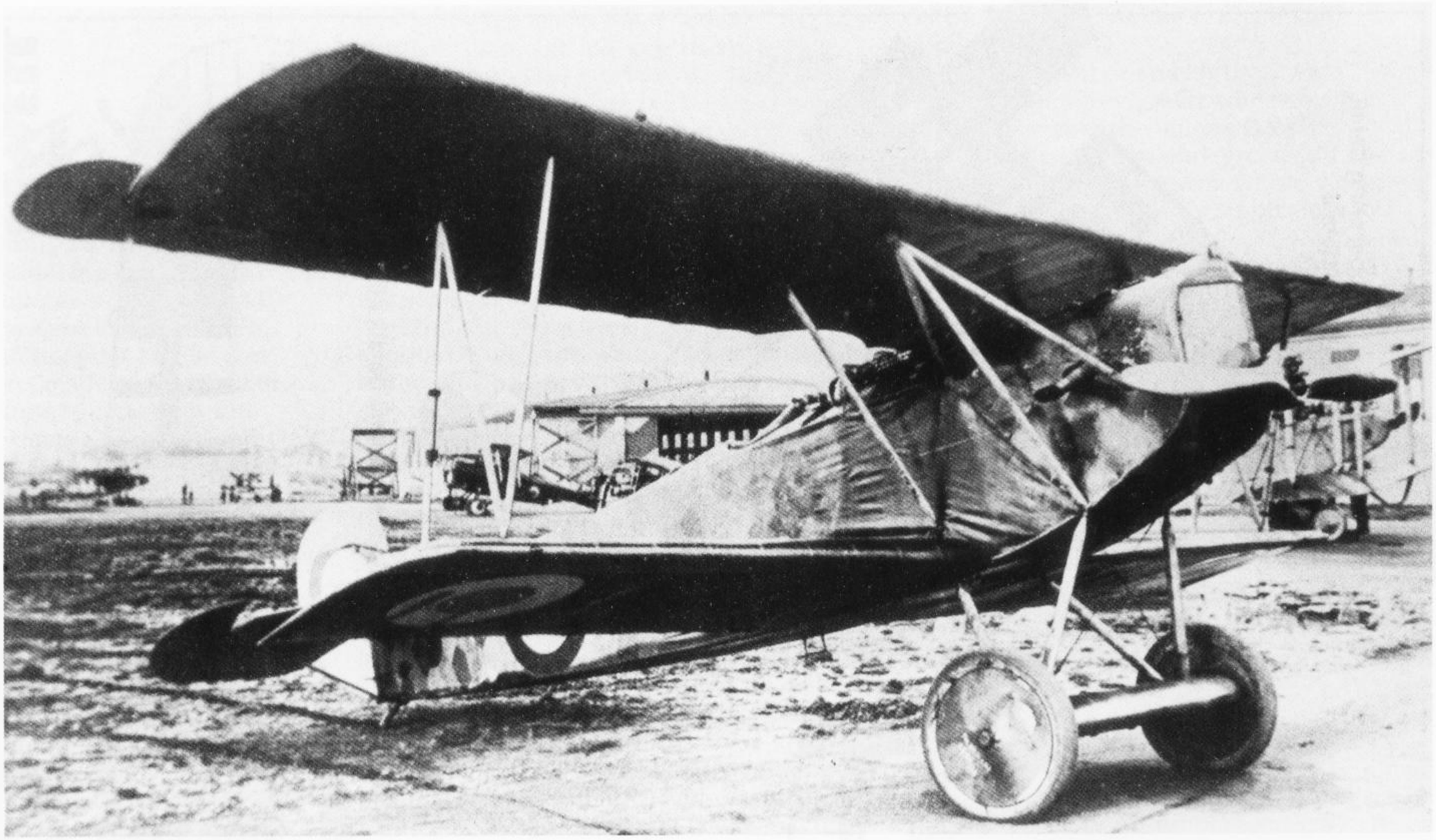
Struts and other steel fittings were normally light grey/green, while cowlings and wheels wore the unique OAW reticulated pattern in dark green and mauve. Wheels could also be green with a vignetted mauve centre, just like the equivalent Fokker version in two shades of green, and axle wings were green and mauve with a division near the centreline. As visitors to Hendon will attest, this was one of the less harmonious factory schemes, and many an aesthetically sensitive pilot must have rushed to cover it with unit paintwork! Sometimes, top cowl panels were removed before an aircraft was overpainted in squadron colours, and replaced, still in factory finish, when the weather cooled in the autumn. ❑





Right and centre, two aspects of D.VII (OAW) 4097/ 18. Its unit and exact colouring are sadly unknown, but this D.VII crashed in March 1919, killing pilot Lt. Fletcher McCordic of the US 88th Aero Squadron. A fine example of the second OAW version, it bore unequal crosses dating its completion to late May or very early June 1918, the tall single square-ended louvre and a small louvre in the door astern of it. The Anker airscrew resembles a Heine, but has a straighter leading edge almost out to the tip. Note the holes cut in the undercowl, and the radiator filler angled well forward to clear the upright air pump. Thanks to Dan San Abbott for information. (*GVW*)

Below, a late OAW wing wears four-colour fabric and rib tapes, but the (odd) ailerons (starboard aileron is stencilled Fok D.VII OAW 9539; the port reads: Fok D.VII OAW 8530) are in five-colour. A feature also seen on 4635/18 before restoration is a form of leading edge reinforcement under the fabric, tacked to the spanwise lath under the serrated ply. This looked like linen or canvas, hemmed under at the edges to create a noticeable ridge. Plain or dyed fabric doped in contact with a surface becomes, like a wet T-shirt, translucent enough to reveal the shading of underlying detail. (*GVW*)



L'AEROPHILE REPORT ON D.VII (OAW) 2009/18

(Translated from the French by *DAVE ROBERTS*)

The Fokker D.VII, a new German biplane which recently appeared on our section of the front, is classed among the enemy's best fighters.

The distinctive wing layout, the absence of bracing wires, the shape of the radiator and the provision of a supplementary wing on the undercarriage, are all equally innovative.

One also feels that lightness of structure has been sought after.

The table below gives the dimensions and main characteristics of the Fokker D.VII, and corrects those mentioned in our edition of 1st-15th July 1918, p.200.

Upper span	8m.93
Lower span	7m.01
Total length	7m
Height	2m.815
Mercedes engine (modified)	160 HP
Wing area (including axle wing)	21 sq m.65
Empty weight	757 kg
All-up weight	959 kg
Wing loading per sq m	44 kg.30
Load per HP	5 kg.55
HP per sq m	8 kg.3

Mainplanes

The wings have flexible trailing edges. They are unequal in span and chord, and heavily staggered (0.645). Their taper in depth towards the tip gives the underside a dihedral angle.

Upper wings. – Their span is 8m.40, ailerons not included, and their chord is 1m.60.

Their shape is rectangular with slightly convex tips and, at the centre, a cutout 0.14 x 0.91. They carry balanced ailerons which extend beyond the tips.

The upper wings are constructed in one piece.

Thirty (*sic*) wooden ribs, 10mm thick, are spaced 30cm apart on average.

Quite apart from their very high thickness-to-chord ratio, which attains 0.235 at its greatest, it is remarkable that while the top of these ribs is strongly curved, the bottom is almost flat.

As on the triplane of the same make, the wing tips are chamfered.

Beneath the fabric, a strip of plywood runs from the leading edge to the front spar. The spar centres are 64cm apart, the front spar being 33cm from the leading edge and the rear spar 63cm from the trailing edge.

The construction and shape of the spars are noteworthy.

They consist of two laths of red fir (*sic*) to which are nailed the plywood vertical faces; the whole is then wrapped in fabric tape. Their depth is greatest at the centre of the cellule. Here, the front spar measures 0.23 x 0.074, the rear spar 0.165 x 0.072. The underside rising towards the upper translates as a dihedral angle of 2 degrees.

The ailerons are of steel tubing, hinged at an angle to the spars.

These span 2m.195, including the balances which extend 0.33 beyond the wingtip ribs. Their chord is 0.18 at the inboard end, 0.29 at the wingtip, and 0.54 at the balance, which overhangs the hinge line by 0.23. (*Translator's note:* this presumably means 23cm beyond the tip bow, 33 beyond the last rib.)

The ailerons are controlled by 2mm cables running close to the rear spar of the upper wing.

Lower Wings

They are similar in shape to the upper wings. Each lower wing spans 3m.135. Including the fuselage width (0.74), we obtain a total span of 7m.01; the wing chord is 1m.20.

The spars are in one piece as in the upper wings, and pass through the bottom of the fuselage. They are retained by clips bolted through the lower longerons.

The front spar is situated 0.12 from the leading edge and the rear spar 0.48 from the trailing edge: the spars are thus 0.48 from axis to axis.

The method of construction is the same as that used for the upper wing spars; like them, they also diminish in width and depth towards the tips. Their dimensions, however, are smaller: 0.17 x 0.075 for the front spar, and 0.13 x 0.075 for the rear spar.

The dihedral arising from the tapering of the spars is 1⅓ deg.

The ribs are of wood, numbering 12 in each wing; those touching the fuselage are 0.03 thick, the remainder 10mm.

The angles of incidence are as follows:

Port wing
2nd rib ..... 1.6 deg
4th – ..... 1.5 deg
7th – ..... 1.6 deg
10th – ..... 1.5 deg

Starboard wing
2nd rib ..... 1.5 deg
4th – ..... 1.5 deg
7th – ..... 1.5 deg
10th – ..... 1.6 deg

On both wings, and on each spar, a small rectangular metal plate (0.075 x 0.30) between the first and second ribs serves as a step.

All stitching and plane borders are covered with glued tapes.

The wings are separated by an assembly of three streamlined steel tubes, 0.042 x 0.02, the middle one having its ends welded to the foot of the front strut and the top of the rear strut.

Centre-section struts, of streamlined steel tubing (0.045 x 0.024), numbering eight (four on either side of the fuselage) are all divergent. The brackets to which they are bolted are 2 metres apart.

They all start at the upper wing.

Two of them run from the rear spar to the lower longeron at the juncture with the rear undercarriage leg.

Two others, the shortest, run from the front spar to the longerons at the upper rear end of the rounded cowling subframe.

The last four, welded in pairs, run from the front spar; two are attached to the tops of the undercarriage legs, and the other two terminate at the front end of the tubes serving as engine bearers.

The complete absence of external bracing is noteworthy.

Tail

Elevator. – The balanced elevator comprises two surfaces with semi-circular tips. Its span is 3m.045, its chord 0.515 to the axis. The balancing part overhangs the hinge by 0.285.

The tailplane has the aspect of a truncated triangle. It is a one-piece structure of tubing covered with fabric, and fits into a recess atop the fuselage. At its base, (*ie,* trailing edge – *trans.*) a piece of wood 0.04 thick is channelled to receive the elevator leading edge.

Rudder – The rudder is also balanced. It extends down to the base of the fuselage. It is ear-shaped.

Its overall height is 1m.29. Its chord reaches 0.552 at the height of the balance, which overhangs the hinge by 0.25.

The fin is triangular.

These surfaces are all made of tubing covered with fabric.

The only bracing consists of two hollow metal struts connecting the elevator hinge housing to the base of the fuselage.

The control cables are of 3mm gauge; those running to the elevators pass through the tailplane.

Following the practice adopted on all recent German aircraft, the control cables are almost entirely within the fuselage.

Lifting Surfaces

Upper mainplane	13 mq 50
Lower mainplane	6 mq 95
Axle wing	1 mq 20
Total surface	21 mq 65

Fuselage

The fuselage is fabric covered and narrows to a vertical edge at the rear. The top decking is rounded; the sides and the bottom are flat. For the D.VII, as for previous models, the Dutch engineer Fokker has had recourse to metal construction. The fabric is thus stretched over a framework of welded 20mm tubing, and laced under the fuselage. At the front, the sides end in two removable sheet metal panels.

Below the fuselage, from airscrew to rudder bar, are two metal panels, removable to give free access for examination or adjustment to the assemblies which they protect.

All the metal panels are retained by wingnuts having just one wing. This system ensures firm attachment, but makes assembly and dismantling a lengthier procedure.

From the pilot's seat aft, we find five bays of tubing doubly braced, both laterally and longitudinally, with piano wire. The cockpit is framed in steel tubing, and the rear upper decking consists of an arched sheet of plywood, nailed to three small stringers.

Control of the aircraft is via a control column with three wooden grips. The right-hand grip is fixed. Those on the left control the throttle by means of flexible cables attached to them. These handles form an obtuse angle, and pivot on a horizontal axis.

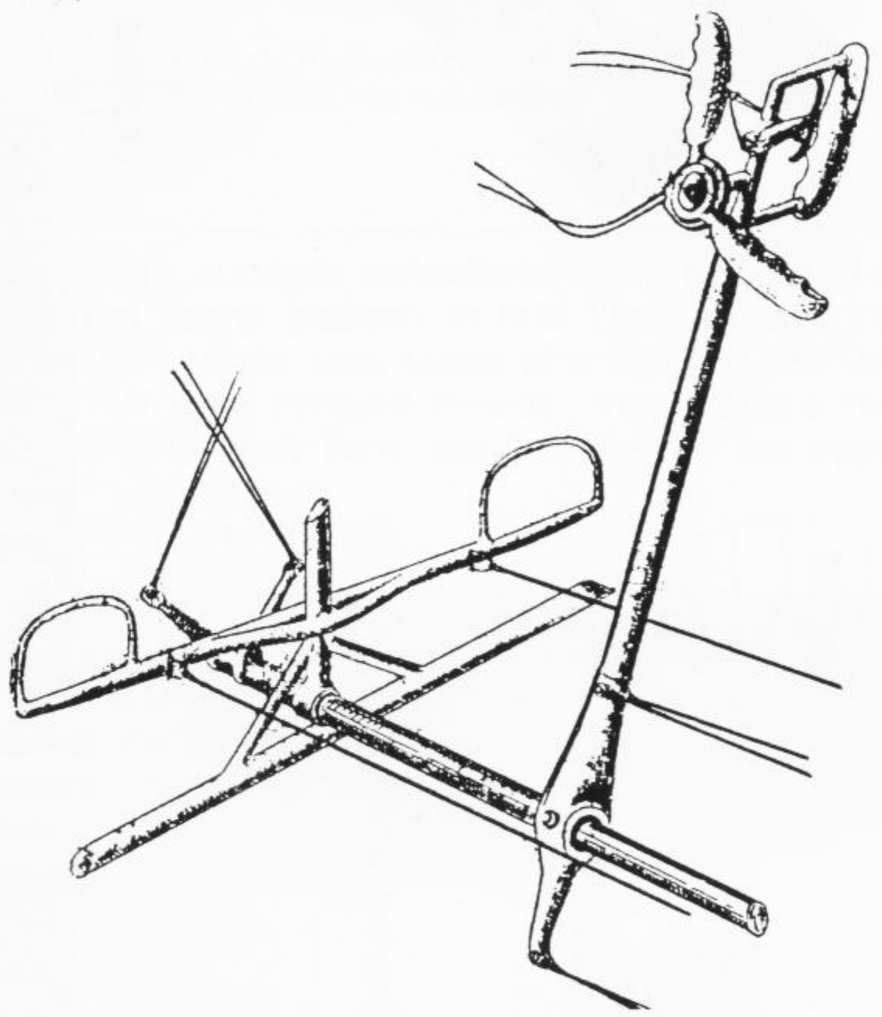
The gun trigger levers are mounted horizontally to be operated by the fingers of the right hand.

The rudder bar has metal stirrups. Two arcs of textured metal sheet, one under either stirrup, prevent the pilot's heels from slipping on the wooden floor.

The seat is fixed, covered with coarse varnished cloth and stuffed with vegetable fibre.

The Bosch starter magneto is on the left side of the instrument panel; the main throttle lever is also on the left, but attached to one of the spacers.

Among the instruments are an improved altimeter graduated from 0 to 8,000m.; a "Maximall" fuel gauge and a "Deuta" revolution counter. The wooden tail skid, of modern type, has two large, short coil springs.



Above, the control column with its fixed right handle and the firing levers. On the left, the two movable throttle levers; below, aileron cranks and cables, rudder bar with metal stirrups.

The airscrew is a Wolff, composed of nine laminations of wood. Diameter: 2m.80. Pitch: 1m.89

The radiator is very similar to those used on automobiles. Its shape, swept back with a 10cm flat in the middle, is a new departure for German aviation. It has a capacity of 100 litres.

On the inside, a vertically-pivoted shutter serves to modify the cooling of the water. It is operated by a cable which ends in a handle to the right of the pilot.

The engine is a modified 160-hp Mercedes 6-cylinder inline, with double Bosch magnetos.

The cowling covers all but the tops of the cylinders.

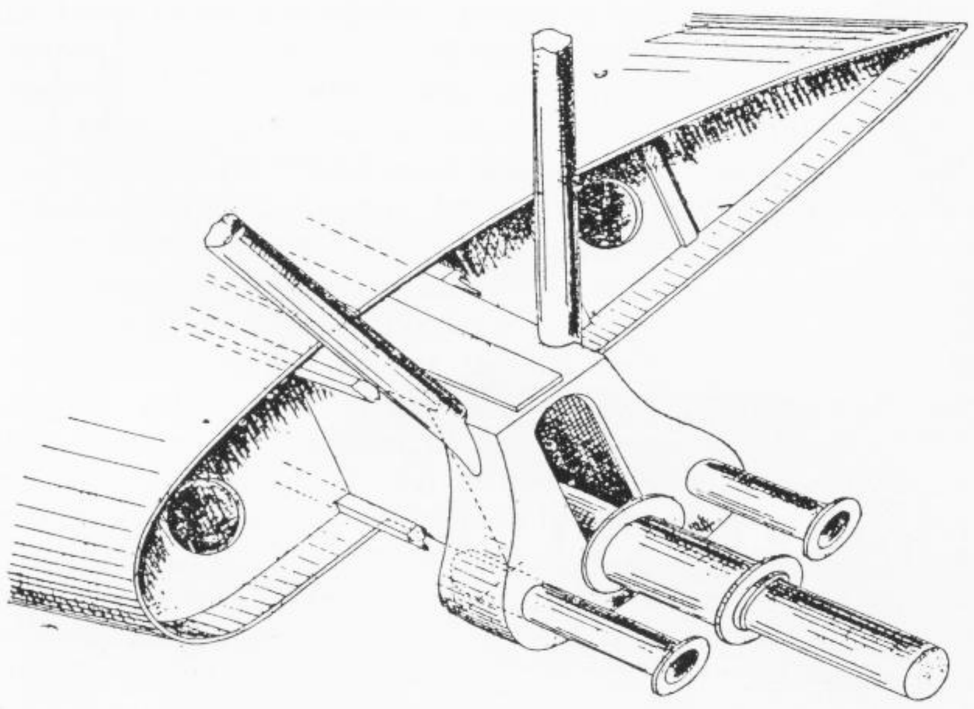
Two horizontal exhaust pipes on the right hand side curve gently astern. Each receives the exhaust from three cylinders, and they are joined at the mouth by a collar.

The fuel and oil tanks are located side by side in a single unit, mounted transversally inside the fuselage between the engine and the pilot. The two fuel tanks contain 33 and 60 litres respectively, the oil tank 25 litres.

Armament. – The two fixed Spandau machine guns, firing either singly or together through the airscrew disc, are mounted above the cowling and carry small stuffed pads to protect the pilot in the event of a crash.

Empty cases are ejected laterally.

Undercarriage. – The undercarriage is composed of four legs of streamlined steel tubing, welded at their base to a hollow metal spreader bar of unusual shape through which the axle passes. The vertical travel of the latter is 0.085.



Above, the axle and its streamlined wing. Note the hollow box girder in which the axle slides, and the tubes around which the suspension springs are wrapped.

Suspension is provided by three coil springs covered in braided fabric and wrapped around two bobbins built into the spreader bar.

This assembly is enclosed in a streamlined plane of 7mm plywood, the dimensions of which, 1m.60 x 0m.75, allow it to count as a supplementary flying surface.

This plane is in two parts, joined by six small longitudinal brackets and containing four plywood ribs pierced for lightness.

The explanatory drawing will enable our readers better to understand our description.

The track is 1m.85; the wheels are by Continental, 760 x100.

The undercarriage is braced at the front by 4mm cables.

The camouflage consists of irregular hexagons printed on the fabric.

The shades chosen are as follows:

Violet, blue, mid green and light brown for the fuselage sides and the top of all flying surfaces.

Blue, light green, pink and yellow for the undersides of wings and horizontal tail.

The rudder and fixed fin are the colour of natural fabric and are simply given a coat of clear cellulose acetate dope.

The engine cowling and axle wing are camouflaged in purple and dark green.

The Fokker D.VII is equipped for a flight of about 1h.50. Its performance figures are interesting, and dispel the mixed impressions left by the Fokker triplane.

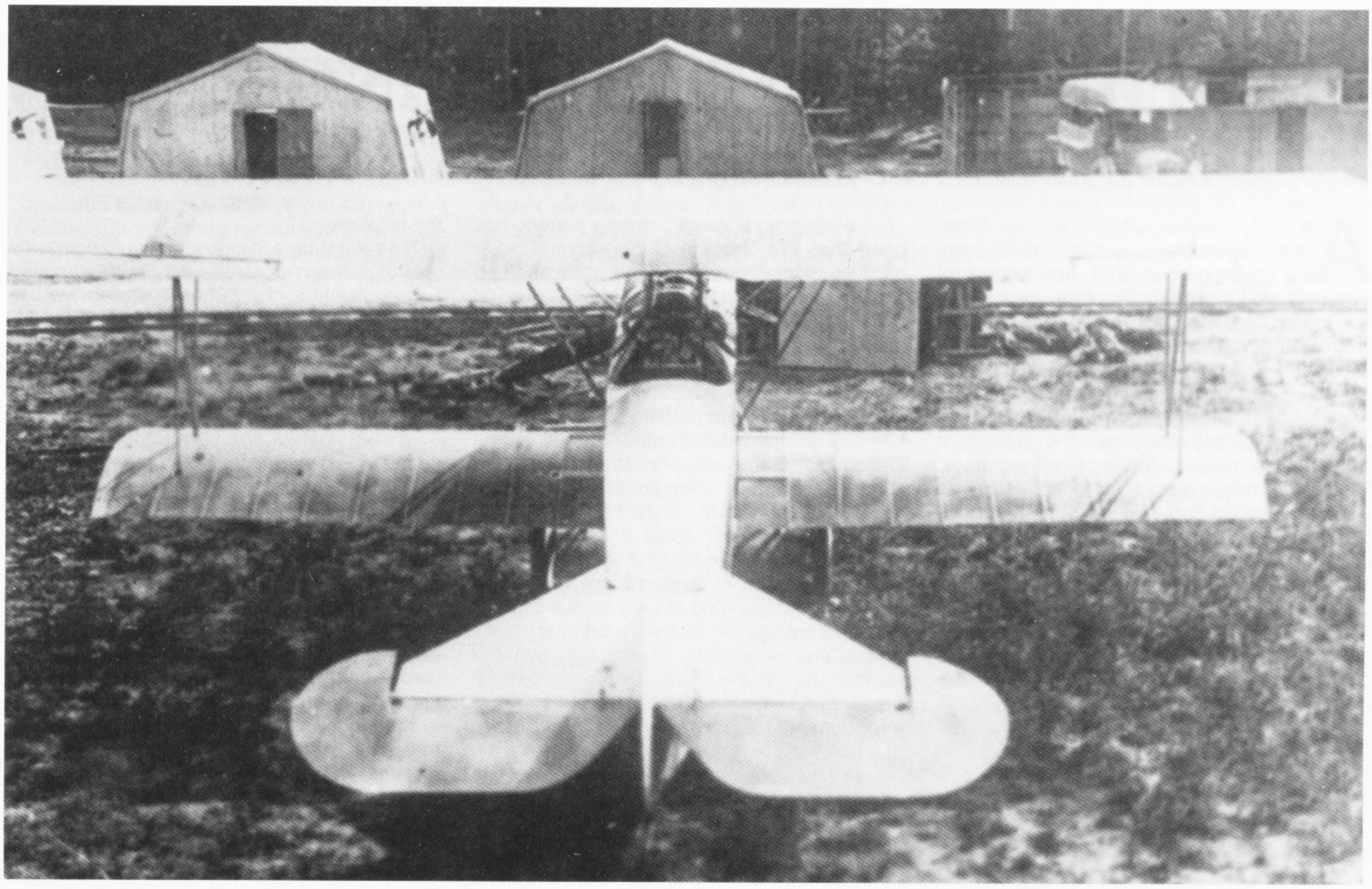
The speed achieved in level flight is 190km. per hour for about 155km. at 5,000 metres altitude. It climbs to 4,700 metres in half an hour.

Note the inscription *Albatros O.A.W. Schneidemühl*, found on the rudder, tanks and various other parts, and which neatly establishes that this firm is cooperating to a certain degree in the production of Fokker D.VIIs.

The photographs reproduced in this article have been kindly provided by the S.T.Aé, to whom we once more express our sincere thanks.

P. de G ❑

Below, bright sunlight reflections have obscured most of the printed fabric pattern in this view of captured D.VII 2009/18. This photo was taken shortly after the OAW-built Fokker fell into French hands, and before roundels obliterated the early form and location of the upper wing crosses.
(SHAA B84/621 via GVW)



(AE Ferko)

THE IMPORTANCE OF BEING ERNI'S

DAVE ROBERTS DISCUSSES A 'WELL-KNOWN' D.VII...

An early Fokker D.VII flown by Ernst Udet, Germany's second highest-scoring fighter pilot of WWI, has fascinated and confused modellers and enthusiasts now for many decades. Known for certain only from a rear view photograph taken on 28 June 1918, the day before it was shot down, and with the pilot obscuring the entire fuselage (see above), this striped and boastfully-inscribed machine has been the subject of innumerable models, drawings and paintings. Seeing correspondence from the late and sadly missed Ed Ferko, in which he had obviously been thinking along the same lines as myself, I resolved to tiptoe into the Udet minefield and contribute to the debate about *Du doch nicht!!*.

This article, a tribute to Ed and his level-headed approach to aviation history, includes some of his more printable comments. We cannot offer a definitive *exposé* of this aircraft, one of four or more D.VIIs flown by Udet, but it has at least been possible accurately to reconstruct some of its markings, and to correct certain misconceptions. If this article saves you from making a demonstrably inaccurate model, we hope it will be worthwhile. If you already have - sorry!

A widespread opinion among pundits has been that this *Jasta* 4 D.VII was a Fokker product, painted in the red and white used on a later aircraft of Udet's, the BMW-engined D.VIIF 4253/18. Neither assumption is certain; *Jasta* 4's unit colour, applied to engine cowlings, wheels and interplane struts, was black, and one would logically expect its leader to use it prominently on his aircraft. While Udet was a rising star in the Richthofen *Geschwader*, and occasionally led combined sorties of its four component *Staffeln*, red properly belonged to *Jasta* 11, which Udet had left to take over *Jasta* 4. This does not rule out the use of red on the early machine - far from it - but it does prompt caution in describing it. The wing stripes appear to have been a continuation of the (weathered black and white) *'optische Täuschung'* scheme worn by the triplane which Udet inherited from *Leutnant* Kirschstein of *Jasta* 6. He may have been attracted to this Dr.I for its similarity to the *décor* of his former command, *Jasta* 37, which had diagonally striped tailplanes in black and white. Another traditional marking which Udet revived on a *Jasta* 4 triplane and at least two D.VIIs was his personal chevron from *Jasta* 37 days, here applied to the top of the tailplane.

The aeroplane in question was apparently one of a batch of OAW-built D.VIIs serialled consecutively in the 2060s-70s, delivered to *Jasta* 4 on 13 June 1918 (*J.*4 war diary via AE Ferko.) Single-colour rib tapes, probably light blue, are clearly visible on the lower wing; there is no clear evidence in the picture for a Fokker origin.

A rare *Jasta* 4 line-up photograph, reproduced in *Fabric Special 1* and repeated opposite, shows an OAW D.VII in Udet's markings, minus the wing stripes and elevator inscription, but with an identical chevron. Other pictures of *Jasta* 4 D.VIIs reveal the apparently common early OAW arrangement of a ring sight on the starboard gun only, and a small metal shield on the top decking outboard of either gun. The LO! monogram, a tribute to Udet's *fiancée* Lola Zink, is present, and the fuselage bears a narrow black(?) and white border common (in various colours) on machines of this squadron. Apart from these and the unit's black wheels, struts and cowling, it is in factory finish of four-colour lozenge fabric, clear-doped natural fabric fin and rudder, and an undercarriage wing split roughly along the line of flight into dark green and

mauve. This picture has been dated as late as August 1918, and the second-stage altered crosses would seem to bear this out. The *Staffel* evidently kept its initial allotment a long time; no Fokker products are visible, though some were present by then. The serial number (wouldn't you know it) is not visible in either of the two known shots of this machine. It was apparently a replacement for *Du doch nicht!!*, perhaps a squadron spare kept unmarked until a machine was lost.

The D.VII shot from under Udet on the 29th must have been embellished progressively, probably during several days of bad weather recorded in the *JG* I war diary. The camouflaged tailplane was overpainted, as almost certainly was the top decking of the fuselage, to create a consistent setting for the chevron which projected onto it. The sides, and probably the bottom, were also painted, but a photograph visible in the background of a shot of Udet's study, and so far not rediscovered, shows no fuselage borders. What some illustrators have seen as a longitudinal stripe visible under Udet's right arm may have been something completely different; over to Ed:

'If you take a moment to try to lay out the fuselage contour it is all but impossible to have a white bar so far to the side of where the fuselage should be - actually Udet has a book under his arm! Moreover, that white thing between arm and body has a radius which makes it impossible for it to be a white stripe or bar.'

Checking against other rear view photographs of D.VIIs, we find that the top of the line is indeed too far left to be on the fuselage. It bends the wrong way; the port upper longeron should turn right, not left, and from such a low viewpoint, the effect is even more pronounced. The white area is almost exactly the reverse of how a white stripe on the top decking would appear; flip it 180 degrees around its top right hand corner and it looks like a stripe. Apart from Ed's book theory, the other possibility is clumsy retouching for publication in *Mein Fliegerleben*. Udet's shoulder outline looks as if someone has tried to clean it up, and the starboard aileron horn has been obliterated. So, were there eventually white stripes or borders on the top decking? Maybe. Maybe *nicht!!*

The inscription on the elevators has been translated in various ways. Word for word, it means 'Thou however (or surely) not!!' - stilted and archaic in English, but perfectly ordinary modern German. While Ed Ferko wondered if it might have been a Biblical quotation, something like 'Thou shalt not', it was simply a macho colloquialism, equivalent in sentiment to 'You'll be lucky, mate!' or 'You and whose army, pal?' - or even, in a more recent vernacular, 'No way, dude!!' Perhaps the most timeless translation would be, 'Oh no you don't!!'

Doch has several approximate equivalents in English, generally with the idea of contradicting an assumption, but it is often put in just to give a sentence rhythm, like *now* or *well* in an English sentence.It could have been left out in this instance without changing the sense, but the human ear likes triplets, and *Du nicht!!* would not have fitted on the elevators! The familiar *du* is used between friends and relatives. In the German army, it was also the traditional form of address to someone of lower (non-commissioned) rank than oneself, though Udet with his civilian background was perhaps less conditioned to think in those terms. He did not use the inscription again; the irony of being shot down (if true) by an observer who never saw it cannot have been lost on him. A beautiful piece of signwriting, it resembles lettering on Udet correspondence held at the RAF Museum, and may have been to his own detailed design.

Contrary to many published drawings, the tips of the chevron were not semicircular, but followed the trailing edge arc of the elevator at the same separation distance as that of the forward edge of the chevron from the tailplane leading edge. Small radii blended the broad curves into the straight sides.

Now for that infamous upper wing. The wide-angle picture, taken by an amateur from waist level in detail-swamping hazy mid-day sunshine, gives us very little to work with, but careful perspective reconstruction out to the wing tips reveals 160(?) x 1000mm crosses, centred near the interplane struts. Similar crosses, with wider black bars and 150mm white borders, centred in line with the aileron lever, are visible on shots of the OAW-reworked 230/18 and a factory-fresh 2010/18, and implied by the roundel location on the captured 2009/18.

The exact cross location on *Ddn!!* is crucial (ouch!), but not easy to establish; it does not match any known Fokker location, and the stripes, being irregular, were not much help. Relating the upper wing trailing edge of *Ddn!!* to visible rib spacing on the lower wing (allowing for a slight upward convergence and progressive foreshortening away from the line of sight), the cross centreline is established as standard early OAW, in line with the aileron levers. In the end, I built a paper wing in 1:32 scale and experimented until everything fell into place. The model wing also helped reveal the true foreshortened appearance of the stripes for my drawing overleaf.

Jasta 4 usually modified these crosses with green(?) paint only, covering the border at the tips and reducing it elsewhere. Crosses on OAW lower wings were full chord, including the border, from the beginning, but on the upper wing they were kept off the ailerons for a while; 1000mm was the largest cross thus possible with a 150mm border. Bars of various widths seem to have been used.

Udet's D.VII had 33 stripes, including fragments on the balance of the port aileron and leading corner. A piece of string or tape laid along the trailing edge and folded in half five times would give the required spacing. The stripes slanted across 2 spaces. The white stripes are wider than the others; perhaps someone used strips of cloth or paper to mask them off, but did not cut them the right width to allow for the slant. Alternatively, blame the retoucher for this and maybe even for the absence of cross borders.

Anyone familiar with heraldry will recognise this slant from bottom left to top right as a *bend sinister*, signifying illegitimacy; was Udet ever aware of this, we wonder? He probably reversed the slope and reduced the angle to avoid confusion with Kirschstein, whose D.VII in neighbouring *Jasta* 6 was striped in *bend dexter* like his old triplane, and logic would dictate that Udet use a different colour. He obtained his 31st and 32nd victories on 23 June, and No.33 - almost a third of a century - the following morning, before poor visibility restricted flying. *If* the stripes were a scoreboard, the afternoon and evening of 24 June are a likely time for their application.

As the stripes were not simply matched to the rib spacing, which would have been easier, I suspect that the number was significant. It would also add weight to the photo caption in *Mein Fliegerleben - 'Hochmut kommt vor dem Fall'* - 'Pride comes before the fall'. We must, however, assume *nothing*; victory bars were rare on German aircraft in WWI, and the number may be coincidental. It is actually the same number as on the triplane, so a superstitious insistence on continuity may have played a part. Neither Udet nor any of his contemporaries mentions the subject in known reminiscences.

A published drawing showing 37 stripes appears to be based on a misreading of the cross position, which is clearly somewhere above the interplane struts in the photo. At this viewing angle, with the tail down and the camera about nine feet from the elevator hinge line, the upper and lower trailing edges are almost equidistant from the camera; having found the centreline, you can transfer rib stations from bottom to top with fair accuracy. Dan San Abbott has speculated that the underside of the top wing may also have been striped like that of Kirschstein's triplane; it's possible of course, but there is no reflection of any striping in the interplane struts, which might be expected to show something. Equally, we have no way of knowing whether or not the underside of the lower wings was striped or otherwise decorated.

Just at this point in Udet's career, a complication creeps in: *Jasta* 11 obtained 22 BMW-engined D.VIIs. Udet managed to 'wangle' (Alex Imrie's translation) a pair of these for himself and his deputy, *Ltn.* Heinrich Drekmann, and evaluated them in the days leading up to the loss of *Du doch nicht!!*. His account of his experiences with the D.VIIF is exasperatingly vague - he mentions only one example, 4253/18, built too late to have been his first - but any aircraft coming, perhaps on loan, from *Jasta* 11 might already have acquired some red paintwork, and this is a likely source of his subsequent use of that

Below, a line-up of *Jasta* 4 D.VIIs with Ernst Udet's OAW-built machine marked LO! at extreme right. It sports the unit's then usual edged fuselage, probably in black and white. This D.VII apparently replaced the famous *Du doch nicht!!* as Udet's *Jasta* 4 mount. *(AE Ferko)*

likely source of his subsequent use of that colour. The only conceivable reason for his retention of the old scheme on one aircraft is that he kept the BMW machines for *Geschwader* flights, and flew most of his patrols with *Jasta* 4 in the lower-powered OAW D.VII.

Ed Ferko contended that the red-fuselaged D.VII with which Udet was most photographed was *not* 4253, but 273/18, *w/n* 2359. While we cannot at present check Ed's source, 273 had a Mercedes engine, and the aircraft in the photographs definitely had a BMW. If its lower wing was original, unequal crosses would place its serial in the high 400s to low 500s. Perhaps this was Udet's first D.VIIF, a partial side view photo of which has surfaced in the album of *Jasta* 4 member Oskar Rouselle. Almost certainly from the block 458-469/18, this had the same cross proportions, with bars widened and extended to reduce the borders, as the aircraft in the other pictures. For factory markings, see 461/18 and, for nose arrangement, 507/18. We now suspect that, having been misled by Udet's article all these years, we may in fact have *no* photos of 4253/18 in his colours! Thanks are due to Greg Van Wyngarden for finding and forwarding the new photo; any faults in its interpretation are mine! In the light of this ambiguity, readers of *Fokker D.VII Anthology Vol. 1* should treat text describing this machine as 4253, and the cowling drawing which may combine details of 4253 and another aircraft, with caution. Either way, this aircraft had too many Fokker features to be 2076 (or 2078)/18, whose upper wing it carried when photographed.

Meanwhile, back at the hangar in late June, little Ern and his merry men were putting the finishing touches to their ephemeral butterfly. The paint could have been black for *Jasta* 4, or red to match a D.VIIF borrowed from *Jasta* 11, or even some other hue; as Ed pointed out, '*One thing apparently overlooked is the documented remarks that* J.4 *had blue tails - is it possible* Du doch nicht!! *had a blue stab?*'

Jasta 4 tails, where overpainted, were possibly of various colours, but there was a precedent in that Udet had flown a blue-tailed triplane in *Jasta* 11. The reference to light blue tails in *Jasta* 4 came from a prisoner; if he actually said *'hellblau'*, it could mean anything from, say, *Luftwaffe* No. 65 *Hellblau* to a fairly intense blue such as de Havilland *Kingfisher*, which would appear as a medium grey on panchromatic film, a bit lighter on ortho. *'Himmelblau'* - sky blue - would imply a shade too light for the photograph, on which the paint tone is very close to that of Udet's field grey uniform. Whatever the colour of *Ddn!!*, it photographs slightly lighter than the one visible wing cross, and considerably lighter than the black portion of the tail streamers. It is also fractionally lighter than the top of the black engine cowling, lightened by atmospheric perspective, on the OAW D.VII in the background.

A thin, washy black would not have hidden the tail serials so effectively, and a bluish black, which orthochromatic film might have rendered lighter, is questionable. Use of a filter with ortho film could offset the extreme red-darkening effect seen on some WWI pictures. If this is a true, minimally retouched rendition, it would put bright red ahead of other contenders, if only because the cross would have less need of a white border. A pilot adopting a solid colour would, I think, tend to stick with it, and we know his later aircraft were red. *Jasta* 4 triplane pictures taken with what looks like the same camera and filmstock in similar light show clean black as denser and darker than the freshly painted surfaces of *Ddn*!!. I do not feel bold enough even to *open* the **Methuen** book where this aircraft is concerned!

It may be that, to minimise down time, a spare wing was painted separately, allowed to dry, and swapped for the original, in which case there is a *slight* possibility that *Du doch nicht!!* was Fok.D.7 (OAW) 2076 or '78/18, the donor of the replacement wing fitted to one of Udet's BMW-engined D.VIIs. The RAF Museum's restorers have stated that, despite the upper wing's bulk, three good mechanics could change and adjust it well within an hour. Come to that, the tailplane and elevators, a matched set, could have been similarly treated. Black unit markings I would be tempted to leave in place; plain red came with subsequent aircraft painted from scratch, and black takes a lot of covering. Interplane struts were probably black; they certainly did not remain in OAW greenish grey. Remember, much of this paragraph is *conjecture*. Using William of Ockham's principle that *'It is vain to do with more what can be done with fewer'*, I have tried to rationalise what very little firm evidence we have. Udet's choice of words in his BMW article implies that he had only one personal D.VII before the F arrived.

Red, black or blue; the choice is yours, and so far, nobody can prove you wrong. No detailed eye-witness description, documentary or anecdotal, has been published of any aircraft flown by Udet between June and August 1918; anyone who tells you *Ddn!!* was such-and-such a colour without hard evidence is *guessing* - as am I. If the complete combat report for 29 June ever turns up (only an extract – if that is what it is – appears in *Jagd in Flanderns Himmel*), it will probably divulge the serial number and colouring. In the meantime, you can always do a monochrome diorama, perhaps in sepia! The unanswered questions and, above all, its epic fate, only add to the appeal of this aircraft.

The circumstances of its loss have been variously reported. According to Udet's report, he took off with the *Staffel* at 0715 (in his autobiography he says he was off duty and took off after them) and intercepted a French Breguet XIV directing artillery at 800 metres altitude over Cutry near Villers-Cotterêts at 0740. In the ensuing *Kurvenkampf*, in which he was most impressed by the way the (still unidentified) French pilot threw his heavy machine around, his first attack, from the rear, seemed to have disabled the observer, who disappeared below his cockpit rim. Udet then tried a flank attack, expecting no further opposition, but the observer reappeared and opened fire at point blank range, riddling the Fokker with bullets which damaged the guns, fuel/oil tank and, crucially, the elevator and aileron controls. Miraculously, Udet was not hit, and nothing caught fire, but his aircraft reared up *'like a shying horse'*, stalled and recovered into a stable attitude, while the Breguet headed for home. Using all his considerable skill, Udet made slow progress back towards the German lines, balancing the throttle against what little rudder control remained. The dying D.VII flew in wide descending ovals like a free-flight model until, just before 0800 at a height of 500 metres, something broke and it fell into a steep dive.

Intriguingly, the *JG* 1 war diary for that day attributes the loss to a *Flakvolltreffer*, a direct hit by anti-aircraft fire, and only Udet in his autobiography mentions how long the aircraft stayed airborne. Most accounts imply that it dived immediately, but the times quoted make that rather doubtful.

Udet bailed out, but his parachute harness caught on the rudder balance, and he managed to free himself just in time. The 'chute opened at about 80 metres, depositing him in the shell craters close to the burning wreck of his D.VII. The story of his limping run through machine gun fire, high explosive and gas bombardment has been told, and doubtless embroidered, in many publications, but the man seems to have had enough lives for half a dozen cats. In his autobiography he describes a chance meeting with an old friend, Carl Moser, in an artillery battery dugout. He flew a patrol late that afternoon in a 'new' D.VII (not the VIIF or any previously mentioned reserve), and, using the D.VIIF the next day, began a run of four victories in as many days.

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Fok.D.7 (OAW) 20??/18 flown by *Ltn.* Ernst Udet, *Jasta* 4, 29.6.18. Drawn by Dave Roberts. This largely conjectural drawing is based on other aircraft in *Jasta* 4, including a reserve or replacement with the same tail chevron and, for wings and tailplane, the famous shot of Udet obscuring most of the fuselage. The striping, lettering and crosses have been tested on both model and computer-drawn surfaces.

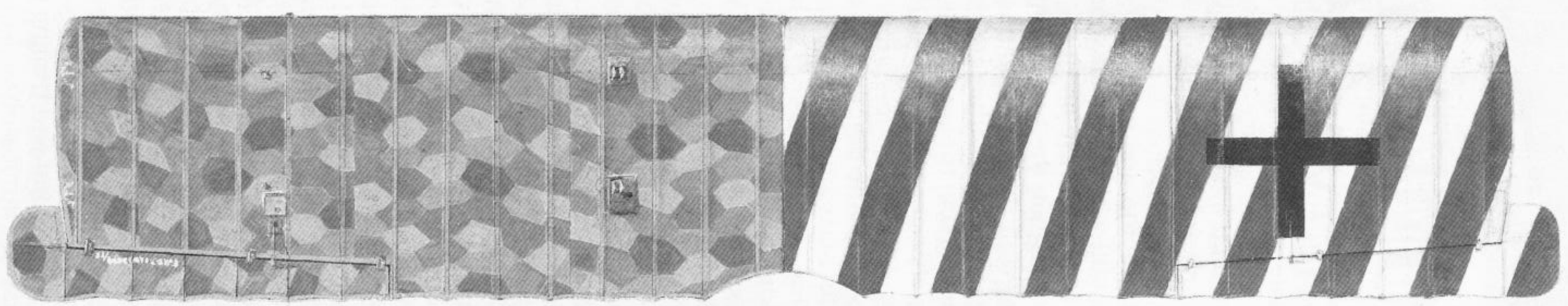
Nothing is known of the underside; the stripes *may* have been repeated under either upper or lower wing, and the bottom of the tailplane could also have been painted, with or without the chevron. The stripe angle on the wings seems to have been chosen to bisect the crosses equally, starting at the trailing edge.

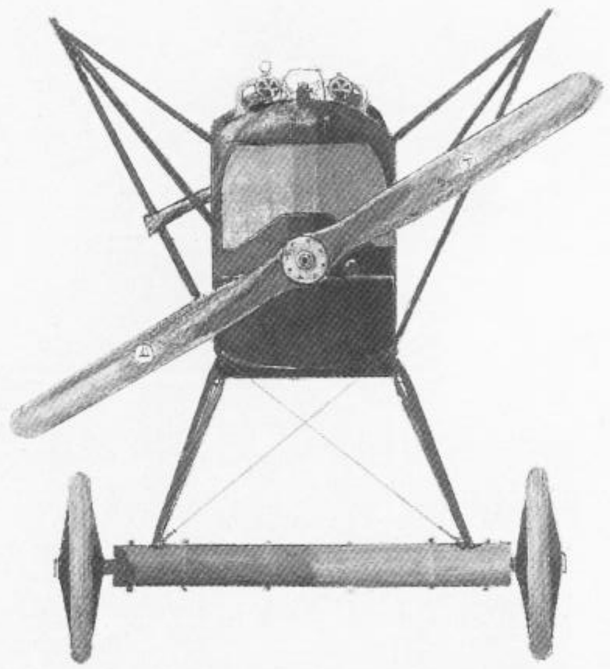
As no confirmed colour detail is available, the drawing is in monochrome; red is traditionally assumed for the overpaint, but black and blue are also possible.

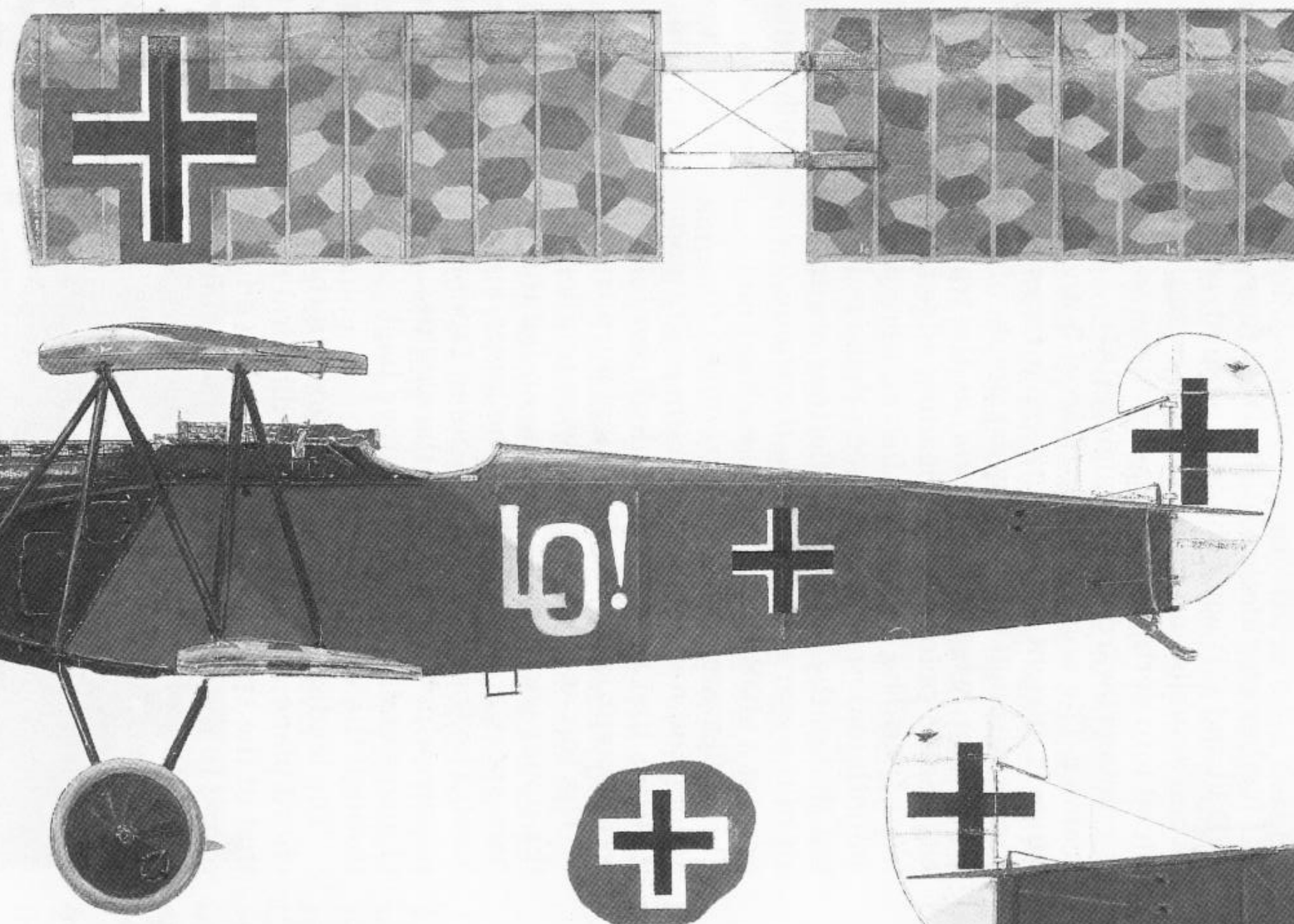
The fuselage scheme, similar to that of Udet's bright red D.VIIFs, owes much to a sketch by Greg VanWyngarden from a lost photograph glimpsed in a US television documentary. Alternative styles of *Lo*-go are based on other Udet machines.

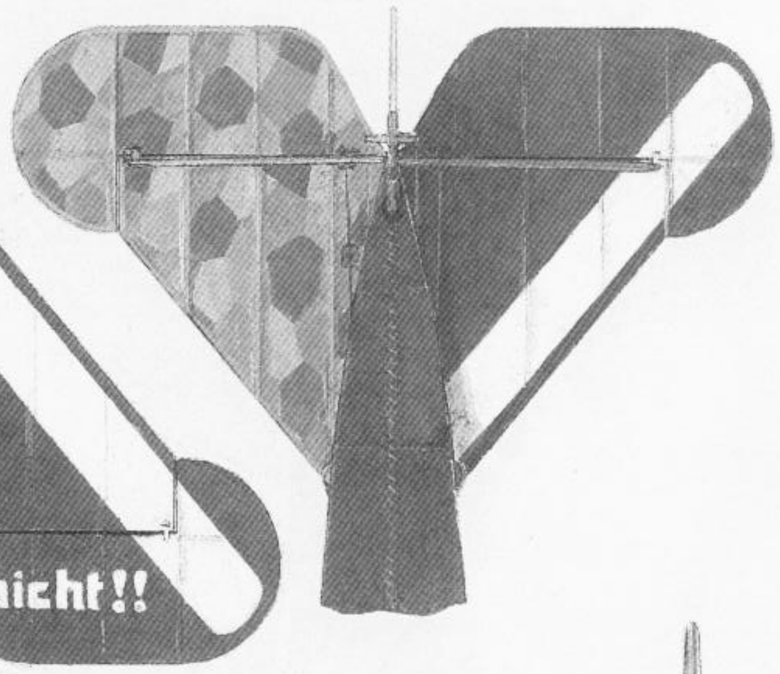
Fuselage crosses in *Jasta* 4 soon had their borders reduced with dark green(?), presumably covered here by the overpaint, but as this short-lived machine *may* have been lost before that was done, the factory cross is also shown. A further alteration, widening the border inwards to squeeze the black bars down to 8:1 proportions, was applied to the OAW survivors, still the bulk of the *Staffel*, around late August.

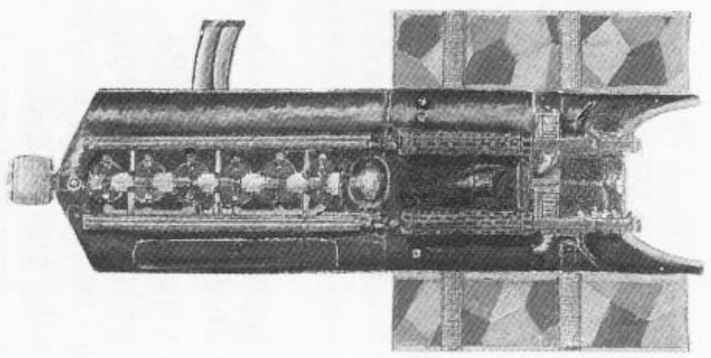
Black struts are confirmed, and the wheels and metal panels were probably black as well. All-red fuselages came later.

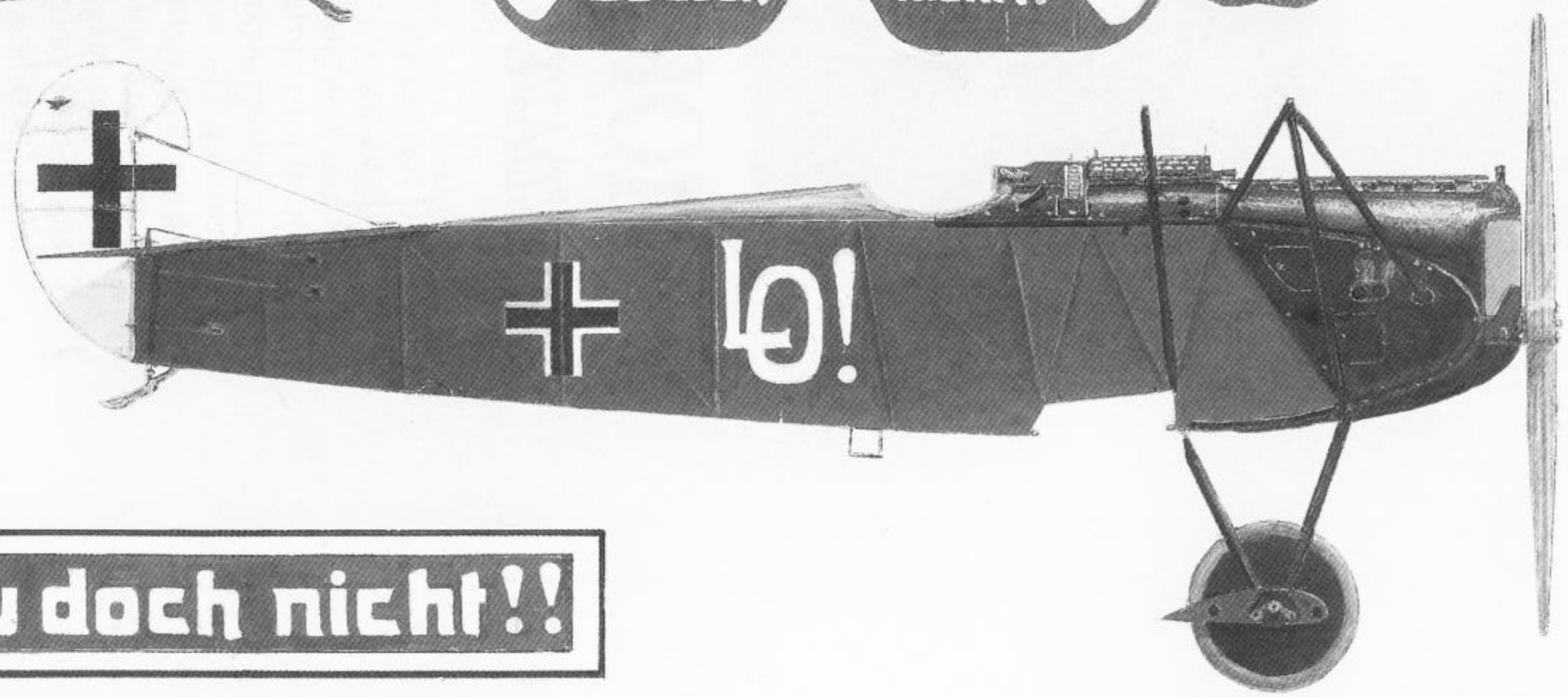




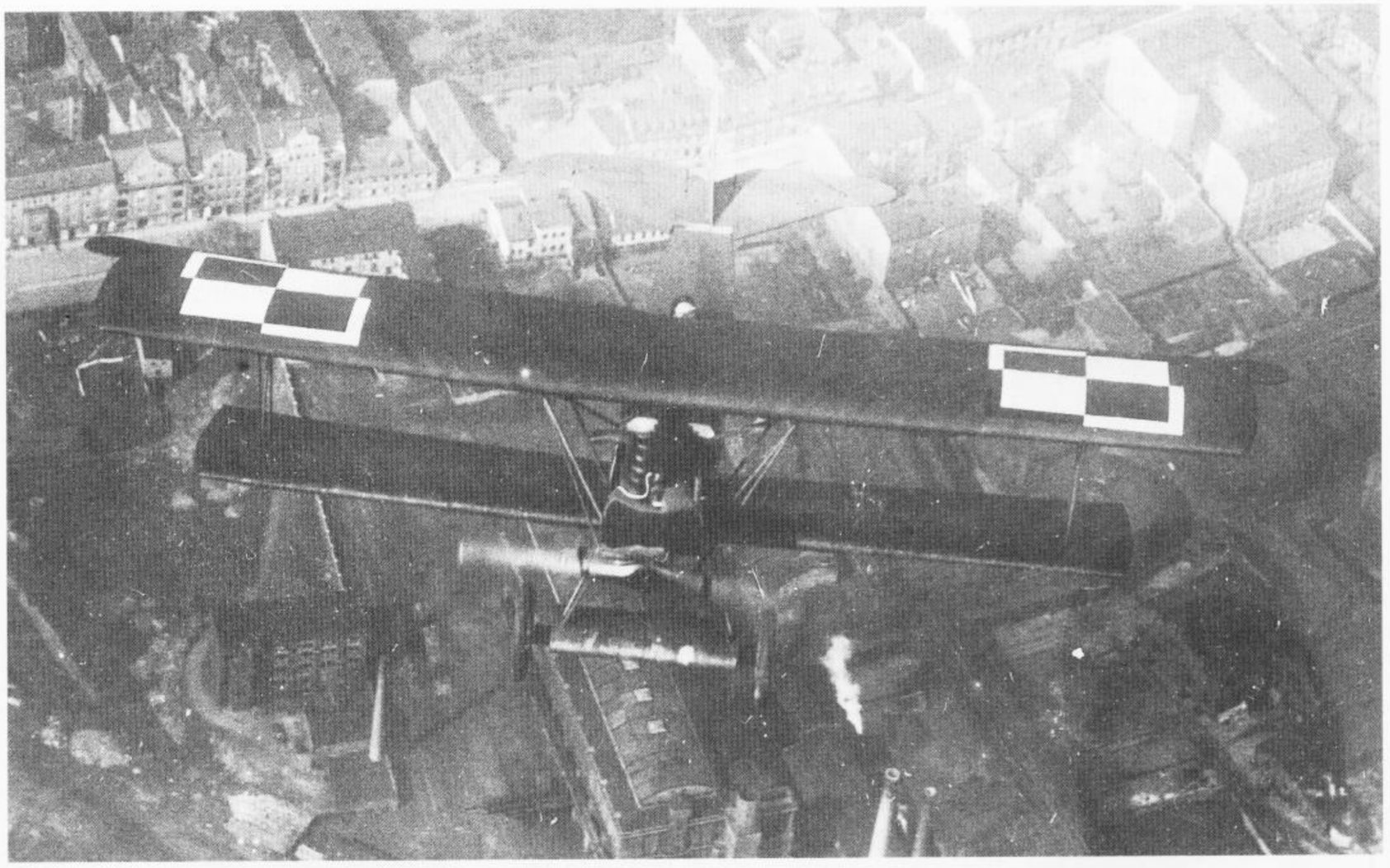








Du doch nicht!!



MORE D.VII WING GEOMETRY!

DAVE ROBERTS SIFTS THROUGH THE EVIDENCE

If further elucidation of the D.VII (and D.VI and C.I) wing shape is needed, we can visualise an upper or lower wing sliced into vertical spanwise sections as if it is coming towards us through a CAT scanner. The nominal chord line of both wings is at right angles to the spar faces and passes through the two lowest points of any given chordwise wing section, *ie,* the trailing edge and a point between leading edge and front spar. The lower wing has continuous smooth undercamber between these points, but that of the upper wing flattens abruptly aft of the rear spar, reaching the trailing edge at a shallow angle to the chord line. This reflex was probably introduced to accommodate the ailerons more easily, and it shows that theoretically 'ideal' aerofoils were compromised for practical purposes.

The top and bottom spanwise profiles of the upper wing centre-section, and of the bare spars at the middle of the lower, are level. The top profile of the outer, tapered, panels, which we shall call the skyline, changes continually as we move back through the wing.

The leading edge is a line, close to the chord plane, with slightly less dihedral than that of the spar bottoms and trailing edge, owing to the reduction in extreme leading edge radius from root to tip, which is less than the reduction in spar depth. If the leading edge tapered as strongly as the spars, it would look very bulbous at the root, but in fact it is quite slender and looks almost drooped. This may well have contributed to the type's good handling at high angles of attack. Some early *BB* and factory drawings of Fokker thick wing sections show a slightly thinner wing and a more open leading edge radius, Dr. I – style, at the root/centre, so it looks as if the sections were modified for production. The Fokker side view schematic agrees with Allied drawings.

Moving astern, the top and bottom profiles separate, still with dihedral which immediately starts to decrease on the skyline and to increase on the bottom. At the line of contact with the chord plane, the underside dihedral attains its ultimate value, which then remains theoretically constant, despite changes in height, all the way to the trailing edge.

Further back, we see the dihedral on the skyline steadily decrease until, at the spanwise centreline of the front spar, it has disappeared, leaving a straight line from tip to tip. This is how the wing usually looks when photographed from the front on the ground, as it is tilted back from the camera so that the top of the front spar forms the skyline. Often though, wing droop imparts slight anhedral even here.

Aft of this line, the skyline starts to rise at the centre until, at its peak, it has noticeable anhedral, clearly visible against the level centre-section in 3/4 rear shots and head-on views along the thrust line. If we now view the wing from the tip, we see the root and all intermediate ribs peeping up above the tip rib, but only between the spars. At the front and rear, the root rib tops drop out of sight as they curve steeply down to the leading and trailing edges; the curves coincide only at the top centrelines of the spars. The top camber is like the trajectory of a continually-firing rocket; the steeper the launch angle, the higher it will climb before dropping back. The launch and terminal angles of D.VII ribs reduce progressively as the leading and trailing edges rise towards the tip. Result – shallower tip ribs with flatter top curves.

Top, stirring in-flight shot of Polish D.VII 530/18 over Poznan on May 11 1921 shows evidence of wing flexing - note particularly the gently curving dihedral of *both* wing trailing edges. ***(Tomasz Kopanski Collection)***

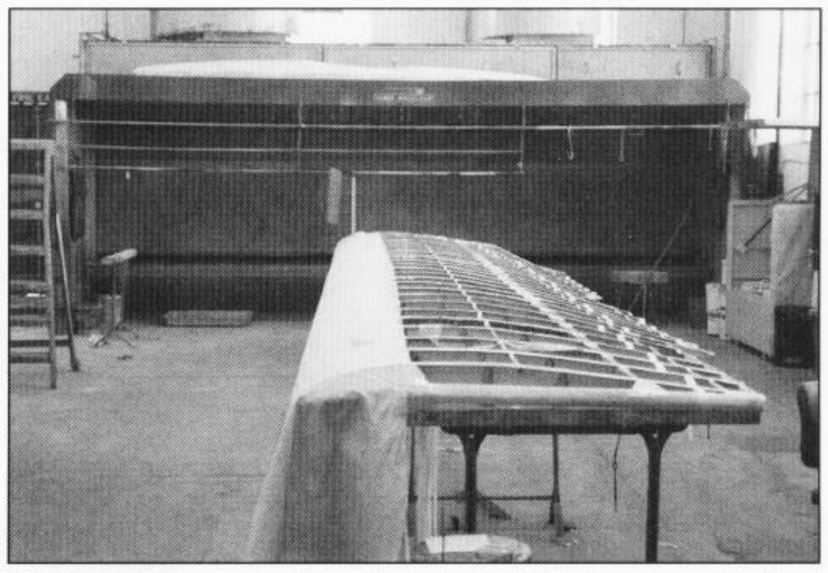
Back with the head-on view, the anhedral reduces as we approach the rear spar, and disappears at the centreline of that spar, which is straight like the front one. Dihedral now reappears on the skyline and increases until top and bottom profiles merge at the trailing edge.

My statement in *Anthology 1* about constant undercamber, made only after careful checking of many sources and personal measurement and extensive photography of the detached OAW wings of the RAF Museum's D.VII, was condemned by one correspondent. There are directly contradictory views on this matter; the badly flawed *Flight* drawing shows deeper undercamber at the roots, while a highly mathematical and theoretical article in *WW1 Aero* had more at the tip. It also gave the wings about 1.5 degrees of underside washout which they certainly never possessed. As the equivalent of washout was provided by the change of curvature on the upper surfaces, none was needed on the bottom, no doubt to the relief of jig designers and spar builders. Excellent air-to-air photographs of Polish D.VIIs (see one example opposite) show distinct in-flight flexure of the thin lower tips, creating washout proportional to airspeed and angle of attack, but no twist is visible on the ground.

Both the best contemporary section drawings, in the official French analysis of 2009/18, and sections generated by Charles Cash from tracings of C.I ribs, indicate no significant change in undercamber from root to tip, and my own visit to '8417/18' confirmed this. The ribs are admittedly not of the most accurate manufacture – you could not get definitive sections by measuring this or, probably, any other D.VII – but it is clear from surviving airframes and many contemporary photographs that the undercamber depth was designed to be constant.

Incidence markings near the trailing edges confirm the absence of intentional twist, giving the measured angle to the nearest tenth of a degree at various ribs uncompromised by gussets. Owing to the imprecision of rib manufacture, alignment on the spars and slight differences in ply leading edge covering and fabric stitching, the angle was often not quite consistent across the span. The markings vary from one OAW airframe to another. Fokker marked only the ribs adjacent to the root and, later, the tip.

Photographs suggest that lower wing incidence was slightly increased after the first Fokker examples. These pre-production airframes had the trailing edge almost level with the bottom of the fuselage, but on most subsequent aircraft it was lower. The smaller figure in Fokker's lower wing root incidence marking, usually interpreted from photographs as a degree symbol, was more probably a decimal number 5 or 6, as applied to aircraft from the other builders. In the close-up photograph of Fokker-built D.VII 7656/18 used with my article on D.VII weathering in *WINDSOCK* Vol. 14, No 1, the smaller figure looks to me like a 5. Everyone



▲ 1

knew the inscription was an incidence angle; Fokker even wrote *Anstellwinkel* in full, so who needed a degree symbol?

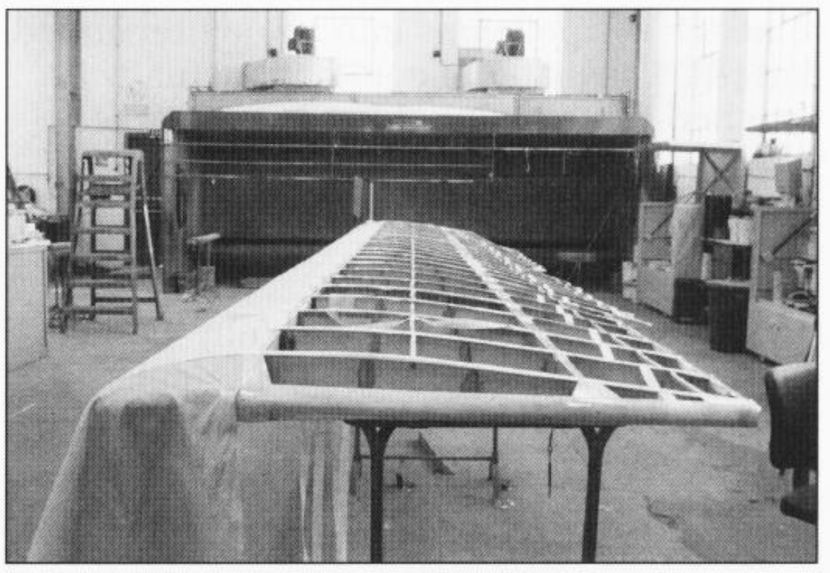
Upper wing incidence remained throughout at nil, in theory if not always in practice, leaving the small decimal 0 open to interpretation as a degree symbol. It's a thought. Buckingham or *Phosphormunition* please to the author care of Albatros Productions, Ltd!

This said, it must be noted that the wings measured on D.VII (Alb) 5324/18 post-war by the RAF in Bulgaria were all over the place, with the port lower root at an astonishing 2 deg. 40 min. as against 1 deg. 50 min. for the starboard root and 1 deg. 40 min. at the interplane struts. Clearly, there were design criteria, and then there were individual aircraft. The machine in question allegedly flew well, but the report does not make clear whether it was 'as found', or reassembled after stripdown, or whether some clumsy person had stood on the trailing edge. The upper wing, supposed to be at 0 degrees, was actually set at 10 min. at both inner struts, 20 min. at both outers... wash-in!

D.VII data are approximate at best; with all the variables inherent in lightweight wooden cantilever wing construction, each airframe was 'tuned' like a piano at the factory, and even the angle of the rigging datum line to the top longerons varies naked-eye-visibly in photographs. On D.7 (OAW) 2009/18, according to the French Section Technique report, the line sloped down towards the nose at 1 in 40, but on some Fokker and Albatros machines it looks almost parallel. This would at least partially account for the wide variation in quoted incidence angles. Clearly, builders of flying models have *carte blanche* when it comes to trimming.

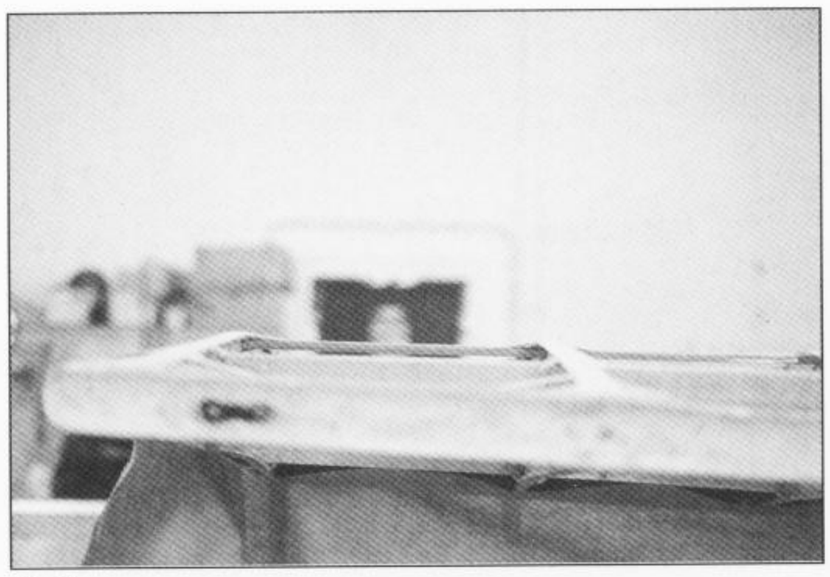
The wing looks more like a clever

▼ 2



1. The OAW-built upper wing of the RAFM's D.VII receives new leading edge reinforcement at Cardington in 1996. Clearly visible are the straight top of the rear spar and the anhedral of the thin strip connecting the rib crests.

2. A view along the top of the wing shows the progressive increase in top camber from tip to centre-section. Note the irregularity of the rib outlines – no wonder there are so many versions of D.VII wing sections!



▲ 3

compromise, designed to enclose the tapered spars and accommodate the ailerons as simply as possible, than the complex mathematical construct postulated by some pundits. Of course, key ribs in each wing were carefully worked out aerofoils to a proven formula, but with spar coordinates established by loadbearing requirements and the chord by aerodynamic theory, the rest were simply a matter of joining the dots to make templates. This may have been done by tracing along a piece of pegged piano wire, like a surveyor plotting a road alignment. That the wing worked so well, combining good lift (especially at high *alpha*) with strength, stability and manoeuvrability, testifies to the Fokker team's flair for combining structural and aerodynamic elements into a true design classic.

D.VII 7756/18

As my letter in *WINDSOCK* (Vol.14, No.3) about the intriguing upper wing fitted to D.VII 7756/18 in the USA provoked some interest, I should like to offer some observations omitted or edited from it in the interests of brevity. The style used on most Schwerin-covered wings is evident from a three-quarter rear view of Fokker's wooden-fuselage machine; the regular hexagons of the naval printed camouflage, probably unique on a D.VII, are interrupted and staggered at the seams, revealing a panel spanning the upper centre-section if slightly off-centre to starboard. Many other D.VIIs assembled at Schwerin over the rest of 1918 exhibit a similar arrangement, though often shifted a bit to port.

The Fokker firm came late to lozenge fabric; the first few D.VIIs had wings covered with plain linen and painted streaky green on top, bright turquoise blue underneath. As Dan San Abbott has reminded us, *Idflieg* asked manufacturers to put a seam on the aircraft centreline and try to match the polygons into an uninterrupted pattern. The material could not actually be matched – much of it did not even come with the complete pattern – and the added complication must have been heartily cursed in fabric shops. However, Albatros and OAW, using lozenge fabric on their D.VIIs from the beginning, dutifully worked out from the centreline, seaming similar selvedges together. I have discovered subsequently that the second feature was indeed common on OAW machines – it is more readily apparent when the fabric is

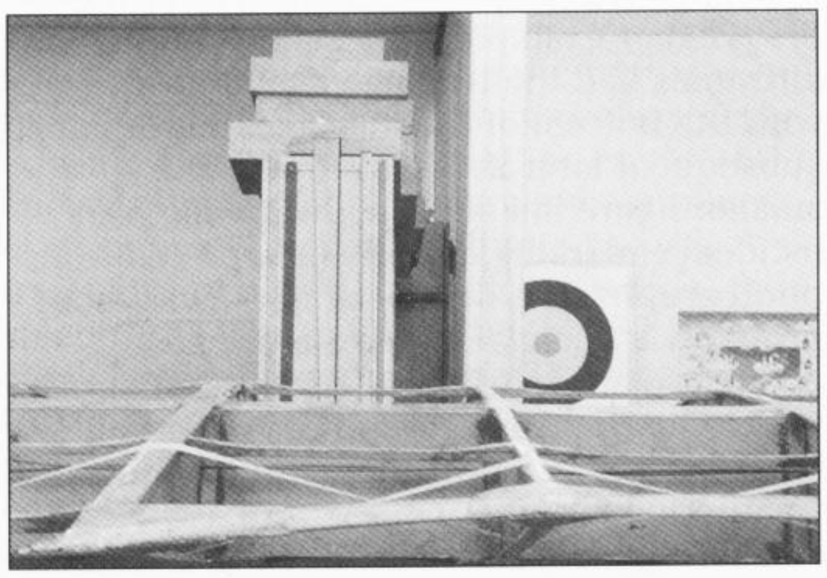
3. The port upper wing tip, seen from astern minus the aileron. With the tops of rear and front spars aligned, the thin crest strip lies low above them.

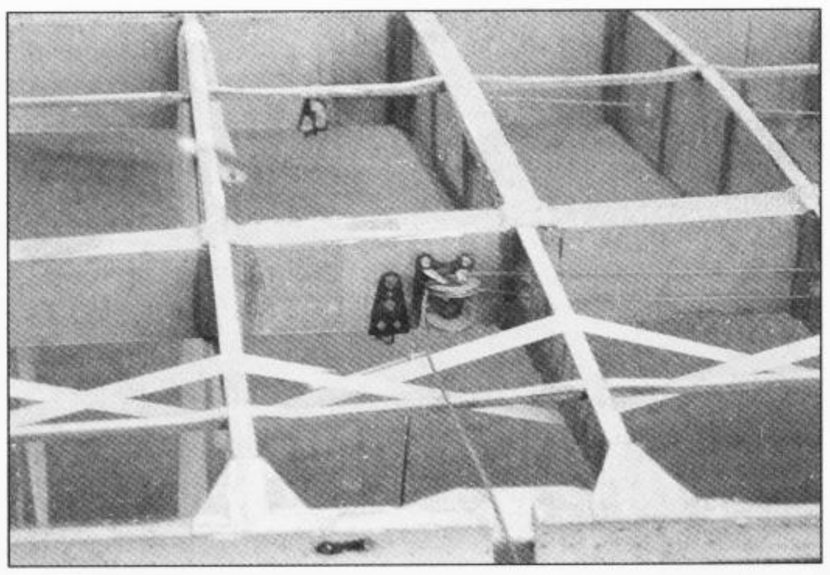
4. At the centre-section, where the spars are wider, and therefore appear to have deeper tops because of their bevel, the crest strip is noticeably higher than it is at the tip.

five-colour. Fokker, for much of D.VII production, ignored this procedure; it appears that their usual method was to work in strips from the starboard upper tip. A head-on view of the experimental V.11 clearly shows the silhouetted seams in the plain fabric, at the typical Fokker interval of just over four rib spaces. No seam is anywhere near the centreline, and the D.VII's upper wing cover was made in the same way. When lozenge fabric was introduced, it was simply cut to the existing design, probably with *Idflieg*'s assent; not even the most zealous bureaucrat would delay production of a vitally – needed aircraft over a minor detail irrelevant to its safety. At least some D.VIs, built only at Schwerin, had a central seam, but as the upper wing spanned almost exactly six strips, that was automatic.

In a letter to *WINDSOCK International* one correspondent opined that the position of the dark diamond shapes on the upper wing of the up-ended D.VII (shown on page 21 of *Anthology 1*) indicated a seam on the centreline. This seam was masked by the matching of dark polygons at the selvedge with others '*of a different colour*'. I – and others – have tried very hard to see the layout as described, even experimenting with shaded tracings on a model wing, but we just cannot make it work. Despite the mud thrown up by the impact, all (and *only*) the turquoise polygons are visible in exactly the right places for a bolt of fabric spanning the centre-section, with every edge angle within normal limits. You can also extrapolate the seam spacing to the tips, and the pattern still fits, with all strips running the same way. The five-colour version has three instantly diagnostic features; the diamond, the pentagon shaped like the end of a house near the other selvedge, and, most obvious, the short repeat interval of just three polygons. As both diamond and 'house' are visible and the latter almost complete, the strip must be trimmed close to the diamond to fit the standard seam spacing, unless Fokker used dope capable of shrinking it by about 100mm! In fact, this is the same 1270 mm/50 inch trim as was found on the late Rockcliffe Fokker D.VII. With the diamonds (wrong way round) between starboard ribs 1 and 2 you cannot *reach* the aircraft centreline, and there is no dark shape to account for the row in the middle. To introduce an elusive hexagon exactly as dark as the turquoise but 'of a different colour' and matching

▼ 4





▲ 5

something also not part of the usual pattern is to recall the old 60's song, 'Bend me, shape me, any way you want me!'

Turn the actual pattern 180 degrees with the diamonds in the same location and a seam just outboard of them, and everything falls into place. The fabric near those seams still present catches the light quite noticeably. As with any weathered aeroplane, there are many chordwise streaks which can be confused with fabric seams, but the immutable proportions of the pattern never lie.

Incidentally, every confirmed D.VII sample I have handled, and all the capture and technical reports I have read for the type, indicate straightforward clear doping of the fabric, without any special finishing coat. Some aircraft apparently had brown varnish or matt lacquer applied, but it was far from universal.

Wings produced by Perzius Bros. as spares may have bypassed the Schwerin works; what reason had they to go there? The centrally seamed upper wing fitted to 7756/18 in the USA was built and marked either before or just after the Armistice, and I suspect that it originated as a genuine Fokker spare, covered somewhere other than Schwerin in the style recommended by *Idflieg*.

However, the OAW hypothesis is also worth considering; several of that factory's late D.VIIs have been noted with five-colour tapes on four-colour wings. The typically Fokker black patches at the lift points look glossier than the black of the national markings, implying application at a different time – or perhaps just repainting in Dutch or English. OAW used at least two widths of four-colour fabric, depending on availability; the wing seen on 7756 has the narrower strips, spanning just over four rib spaces, which was also the standard Fokker dimension; no help there! The pattern layout with all strips running the same way is comparatively rare on OAW D.VIIs.

The transfer of Fokker stock and plant from Schwerin to Amsterdam and Trompenburg in May and June 1919 has been described by some writers as a 'smuggling' or 'rescue' operation. However, according to Frits Gerdessen's fascinating and very detailed article 'Nederlandse Fokker D.VIIs' in *Aviahobby* magazine for May 1980, Fokker signed a contract with the Dutch government for the delivery of 98 D.VIIs (presumably all he had managed to amass by that date) and 118 C.Is on February 22 1919, a full three months before the exodus. It would seem that, for all Tony Fokker's swashbuckling *persona* and tales of his private two-seater being impounded by workers (a wise move if the man owes you money), this was not a romantic moonlight flit but a legitimate export. Negotiations over the sale of D.VIIs and C.Is to Holland had begun back in 1918.

Fokker wanted to clear the Schwerin works for possible airliner production, starting with the F.II, which in the event was briefly produced at Staaken after testing at Schwerin. With poor prospects for the aircraft industry in Germany, the Schwerin works closed soon after the Amsterdam factory opened.

After the D.VII was named in the Armistice document, the German government became reluctant to accept the type. In December 1918, when production ceased, Fokker owned an unconfirmed number of Schwerin-built D.VII airframes, possibly including about 60 delivered to the *Fliegertruppe* but not test flown by the military (and thus in a commercially favourable limbo), some engine-less D.VIIs intended for Austria-Hungary, plus a few V.38s (C.Is), around 20 D.VIIIs in dubious condition, and an unknown number of spares, perhaps dispersed in various facilities. It is not certain if 98 D.VII airframes could be assembled at this stage.

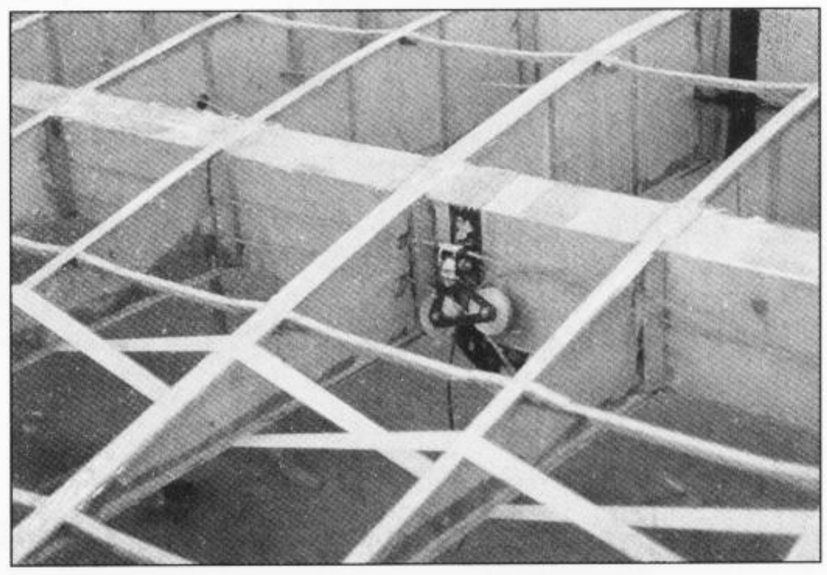
Photographs taken at Schwerin in 1919 show many components, notably bare D.VII wings, in very poor condition, piled up and crushed; if Fokker was having as much labour trouble as some sources imply, it may have been necessary to fulfil part of the anticipated Dutch order by buying D.VII components in, and any number of extra spares would be useful. Air forces do not buy aircraft without a reliable back-up service.

As for smuggling, how realistic is the idea that six long trains could be loaded with contraband aircraft and equipment and sneaked unnoticed almost 400km across a Germany awash with spies and revolutionary busybodies? Special trains require, in British railway parlance, a path; unlike road transport which can just load and go, they must be integrated into a complex timetable. Forget *Northwest Frontier* and *von Ryan's Express*; steam locomotives can work for only about ten hours before the firebox must be emptied and the boiler tubes and smokebox cleaned out. At least one change of engine would be

5. Detail of the locally-widened rib at the port aileron pulleys. Note the chamfer in the aileron sub-spar to allow the levers to rock. Dark patches on the spar are dope-sodden fabric reinforcements, where the skin has sagged onto the spar and stuck – the wet T-shirt effect!

6. A straight-edge placed spanwise on the wider rib at the end of the constant centre-section lies on several adjacent ribs at the spar centrelines, but can be rocked like a see-saw at the highest point of the rib in mid-chord. This confirms straight spar tops and *anhedral* between them. Aft of the rear spar, the straight-edge cannot reach the rib in question because it is at the *dihedral* juncture.

▼ 6



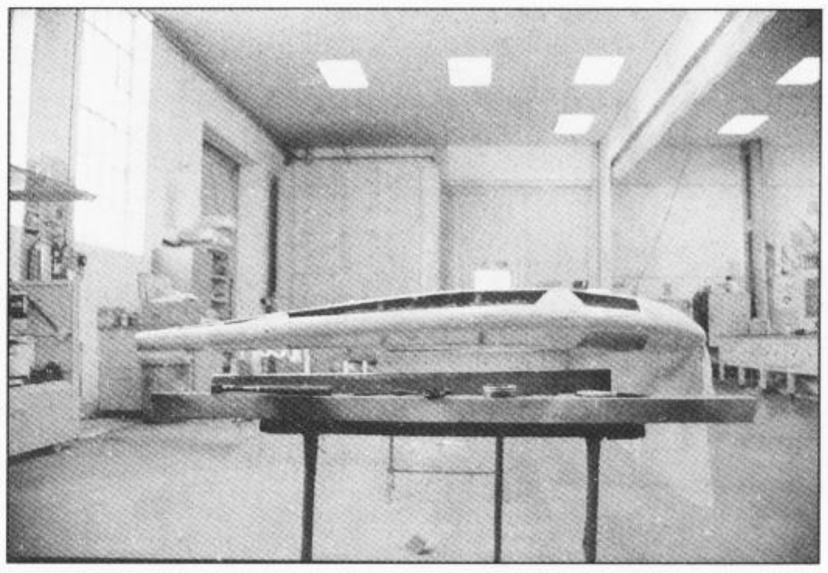
needed, and there would be stops to allow faster trains to pass. I expect Fokker did have to bribe officials, give redundant staff a generous payoff, and donate to 'party funds' to organise trains amid the post-war chaos – it took three months, after all – but a Dutchman taking his unsold stock home was a minor, if any, breach of the Armistice terms. If he had conspired with a foreign power to steal aircraft from the Inter-Allied Control Commission, he would surely have been prosecuted. Indeed, the Allies may have quietly assisted the move – Fokker was well enough in with the Americans in particular to sell them D.VIIIs and, eventually, to have airliners built under licence in the States. The acquisition of a ready-made modern aircraft industry could be viewed as an incentive to Holland to keep an eye on the exiled *Kaiser* too.

The exported D.VIIs, many with BMW engines, were sold over the next year or so, mainly to the Dutch and Soviet governments. Some were assembled at the Netherlands Automobile and Aircraft Factory in Trompenburg, while Fokker established his own works in Amsterdam. The Dutch armed services eventually reduced procurement to 46 D.VIIs and 65 C.Is and their derivatives. It is unlikely that C.I production ever got going in Germany; if it had, Fokker would have needed more than six freight trains to carry them along with the D.VIIs, 20 D.VIIIs, spares, jigs, materials, tools and documents. D.VIIs and D.VIIIs, just fitting onto 10-metre wagons, would account for at least three trains, and the C.Is, with their longer wings, would be fewer to a train. First deliveries of C.Is in 1920 suggest that most or all of these aircraft were completed in Holland.

While most of the early Dutch-assembled D.VIIs were 100 per cent Fokker, a few showed distinct OAW features, such as rear cowling panels with round doors and undercarriages with symmetrically-coned wheels and round valve holes. Some Albatros-style wheels and short axle wings were also in evidence. If these 'foreign' parts were used, why not wings, too? The allotment of new constructor's numbers, 1 to 98, replacing any Schwerin *Werke Nummern* the D.VII fuselages may have had, rather clouds the issue of identity, but there would have been more wingsets and other expendable parts than fuselages. Complete tooling obviously existed for the C.I, but with a limited market and so many airframes and components already in existence, it would not seem an economic proposition in 1919 to build D.VIIs from scratch. The type's continued popularity came as a surprise; subsequent limited production was by Alfred Comte in Switzerland and Julius Huffer in Germany, Fokker having lost interest.

A few Dutch-built or reconditioned D.VIIs, dating from the 1920s, had blunter side cowling panels, with straighter bottoms, than any before; this implies that the supply of old spares had dried up, and panels were being made from new patterns. Intriguingly, the panels on the Deutsches Museum's mysterious '4404/18', which has an engine bearer arrangement typical of Albatros, are of this shape, but incorporate stiffening ridges.

In the face of conflicting sources and much embroidery by writers over the decades, we may never know the full story of the exodus, but there is some circumstantial evidence to support the idea of subcontracted components being rebadged by Fokker. Whether or not this happened, conscientious modellers should look carefully at any late D.VII wing to see which covering method was employed. ❑



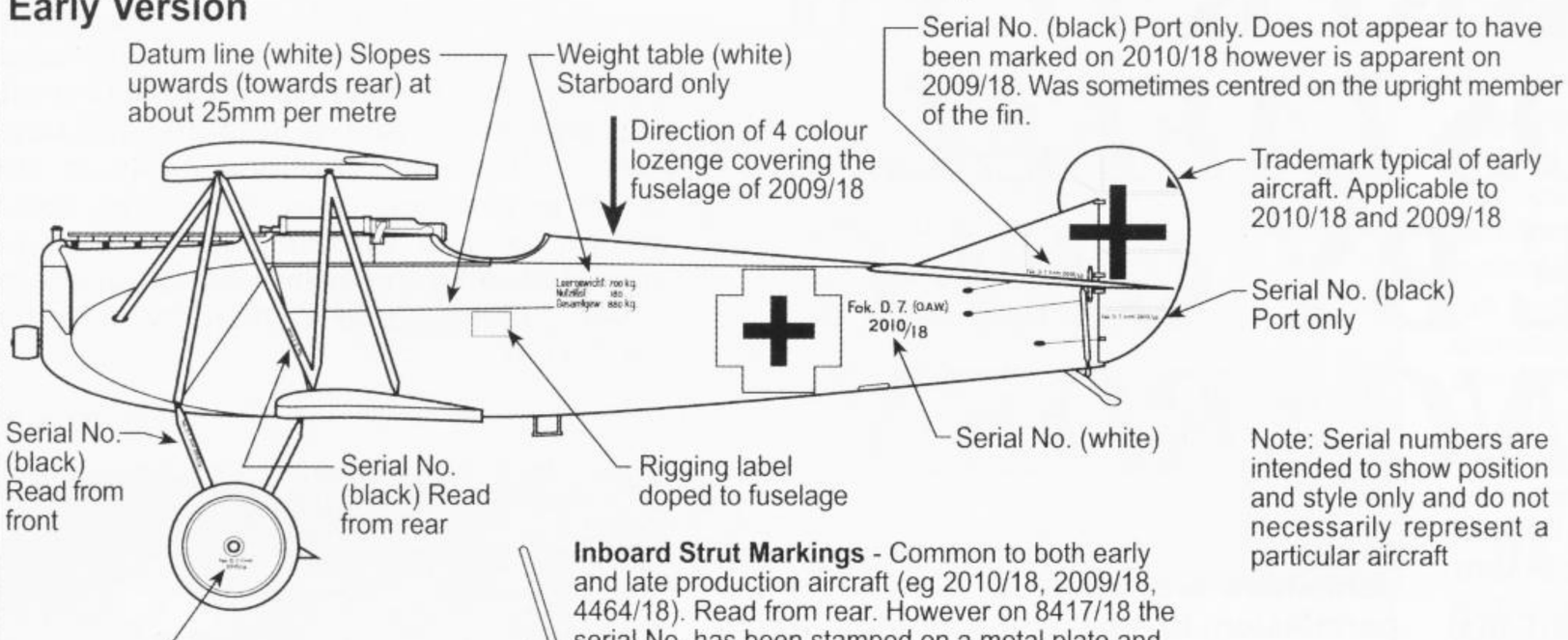
▲ 7

7. A fine view of the starboard wing tip showing the straight line on top from about 2/3 chord to the trailing edge. The tip bow, being closer to the camera than the rib, masks the extreme trailing edge of the latter. Undercamber depth here is very similar to that shown on a centre-section rib in the Fokker side GA of April 1918.

Below, extensive weathering appears to indicate an active career for D.VIIF 7716/18 between its completion in November 1918 and sale to Sweden in 1920. The aircraft, seen here with Fokker demonstration pilot Hermann Goering and unidentified mechanics, was specially painted at the Schwerin factory for Bruno Loerzer of *Jasta* 26, but never reached that unit. The Allies left Fokker's stock of surplus D.VIIs alone, and appear to have imposed few if any flying restrictions on them; stories of aircraft 'smuggled' out of Germany in 1919 are almost certainly exaggerated.

Inscription Positions

Early Version

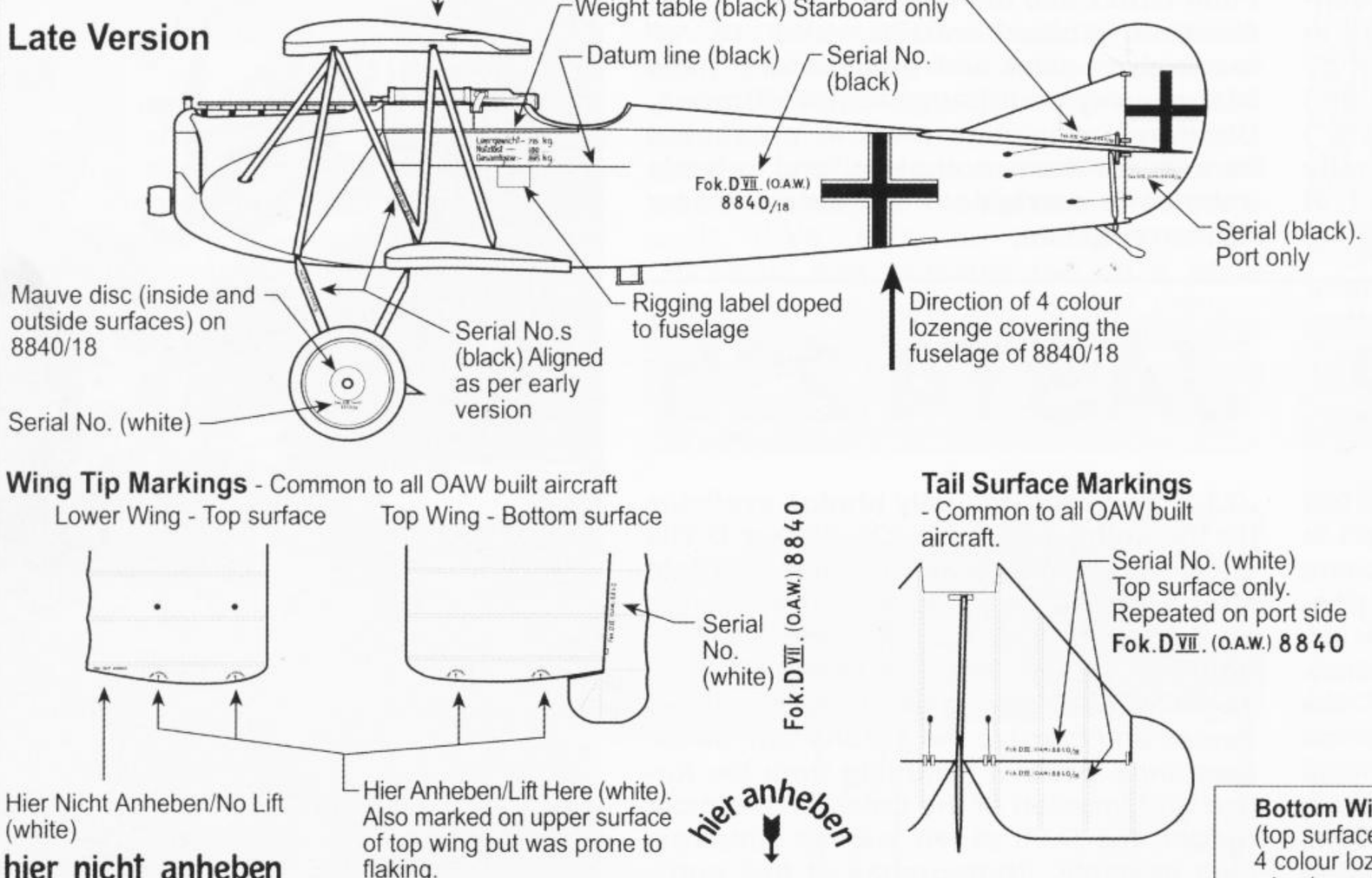


Note: Serial numbers are intended to show position and style only and do not necessarily represent a particular aircraft

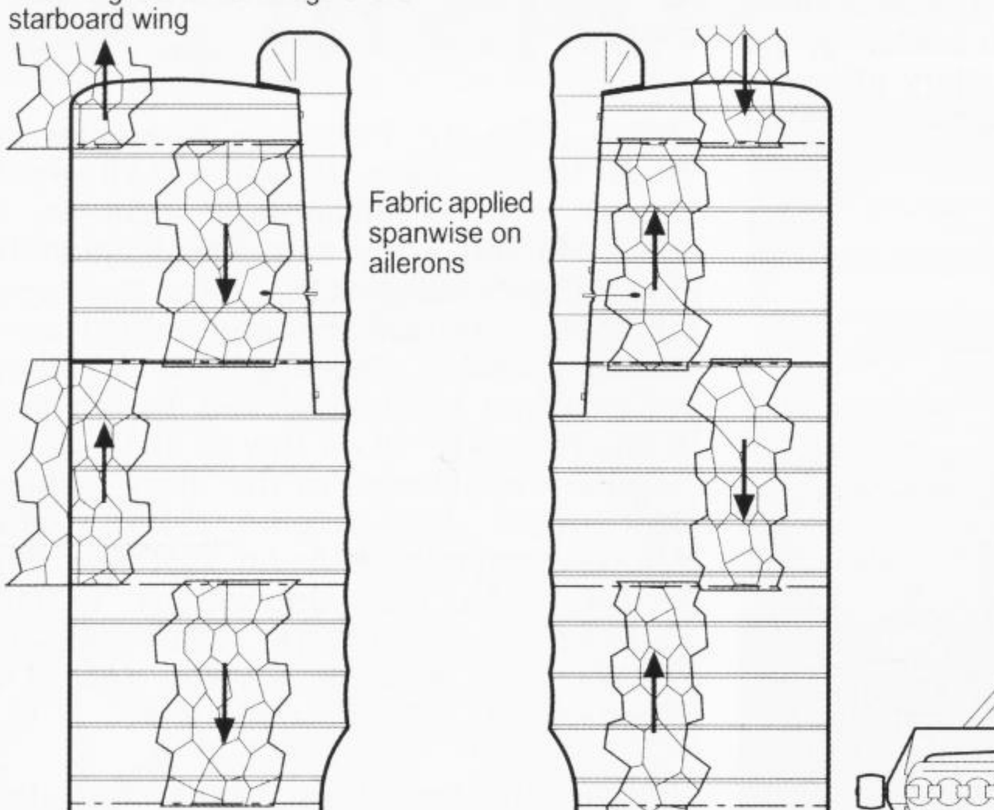
Inboard Strut Markings - Common to both early and late production aircraft (eg 2010/18, 2009/18, 4464/18). Read from rear. However on 8417/18 the serial No. has been stamped on a metal plate and riveted into position.

Serial No. number (black)

Late Version



Wing Tip Markings - Common to all OAW built aircraft



Tail Surface Markings - Common to all OAW built aircraft.

Serial Number Styles - Early Version

Fuselage: **Fok. D. 7. (O.A.W.) 2010/18**

Components (most positions): **Fok. D. 7. (O.A.W.) 2010/18**

Wheel Cover: **Fok. D. 7. (O.A.W.) 2010/18**

Serial Number Styles - Late Version

Fuselage : **Fok.DVII. (O.A.W.) 8840/18**

Components (most positions): **Fok.DVII. (O.A.W.) 8840/18**

Wheel cover: **Fok.DVII. (O.A.W.) 8540/18**

Note: There are examples where the serial numbers on components were not the same as that carried on the fuselage. For example 8840/18: the serial on the flying surfaces was 8840/18 but the starboard wheel cover was marked 8331/18

Weight Tables

Early version - Applicable to 2010/18

Leergewicht: 700 kg.
Nutzlast: 180 . .
Gesamtgew: 880 kg.

Late version - Based on 6810/18. Probably common to late built aircraft

Leergewicht– 715 kg.
Nutzlast — 180 . .
Gesamtgew:- 895 kg.

Fabric Orientation

Note: Some OAW built aircraft had all fabric running the same way on the wings, however following diagrams illustrate the more common application.

Early Production Aircraft

Example of 4 colour fabric orientation on the top wing (top surface) of an early production aircraft (2009/18). Port wing is a mirror image of the starboard wing

Fabric applied spanwise on ailerons

Port wing is a mirror image of the starboard wing

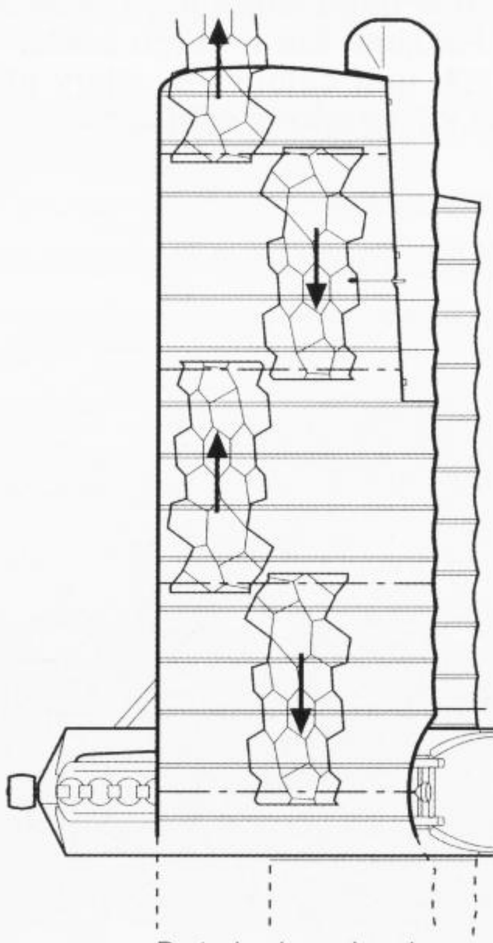
Late Production Aircraft

Example of the fabric orientation of a late production aircraft (8840/18)

Top Wings (underside - 8840/18) 5 colour lozenge fabric.

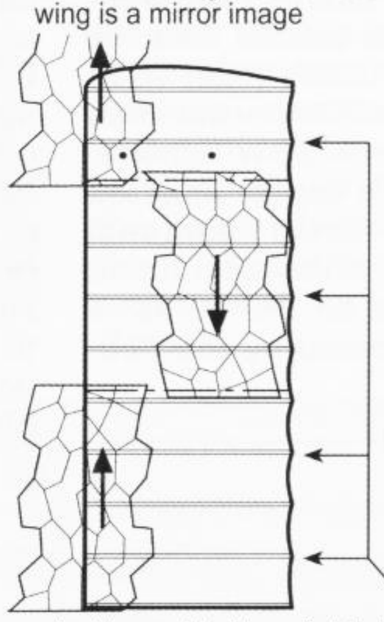
Port wing is a mirror image of the starboard wing

Top Wings (top surface) 5 colour lozenge fabric.

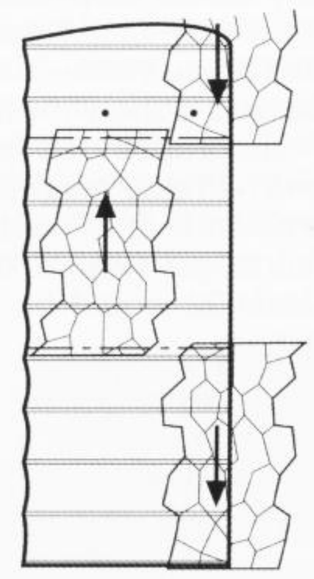


Port wing is a mirror image of the starboard wing

Bottom Wings (top surface - 8840/18) 4 colour lozenge fabric. Port wing is a mirror image



Bottom Wings (underside - 8840/18) 4 colour lozenge fabric. Port wing is a mirror image



Incidence Markings (white) Placed near the trailing edge, either inboard or outboard of the ribs indicated. Varied from one wing (and one rib) to another. Usually 1.5° to 1.6° displayed as: 1/6 or 1/5

THE FOKKER D.VII IN *JAGDSTAFFEL* SERVICE BY *GREG VANWYNGARDEN*

Part 2- Jastas 22 to 46

In this continuation of a segment that began in *D.VII Anthology 1,* Greg Van Wyngarden attempts to record the colours and markings of *Jagdstaffeln* 22 through 46. The author wishes to belatedly pay tribute to the priceless work in the field of *Jasta* heraldry carried out by Alex Imrie. Much of the information and photographic coverage in both Parts I and 2 of this section was originally unearthed by Mr. Imrie; any student of WWI German aviation is well aware of his contributions in this field. The author and publishers are indebted to Alex for his permission to use some photos which originated with him, but which are now part of the HAC/UTD or Grosz collections. Naturally, we are also indebted to Peter Grosz and the staff at the History of Aviation Collection/UTD, and to *all* researchers past and present who have in some way contributed to the following. Obviously the information presented here is far from complete, and reliable updates or corrections are welcomed for further volumes.

JASTA 22

This *Staffel* apparently had at least a few Mercedes-engined Fokkers on strength in late 1918 but the author and publishers have been unable to unearth any photographs or information about such aircraft. *Ltn.* Alfred Lenz, the *Jasta* commander and a strong proponent of the Siemens-Schuckert D.IV, reported on October 13 that, at heights above 4000 metres, *'it was impossible to fly formation with the Mercedes-engined Fokker D.VII.... The action of the double ailerons is generally stiffer than that experienced with the Fokker D.VII'..* Thus the *Jasta* must have had some Fokkers on hand to permit such comparisons with their new SSW fighters. Photographs of this unit's earlier Albatros and Pfalz machines reveal personal emblems only, with no evidence of unit markings; further details on the D.VIIs of *Jasta* 22 would be welcomed by the publishers.

JASTA 23b

J23-1: Ironically, the only photos available (to the author) of *Jasta* 23b Fokker D.VIIs show the wreckage left at Epinoy airfield after a British bombing and strafing raid on August 1 1918; Rudolf Stark of neighbouring *Jasta* 35b wrote, *'One of* Jagdstaffel *23's hangars went up in flames and burnt to the ground with seven machines inside it'.* Judging from the format and location of the cross on its intact rudder, the D.VII at left was an Albatros-built example. Photographs of this unit's contemporary Pfalz D.XII and Roland D.VIa machines indicate that the unit marking was a broad spanwise white band on the horizontal stabilizer, usually flanked by black bands – sometimes extending to several black/white bands (as on the D.XIIs). One would assume that similar markings might have been applied to the Fokkers, but a rough sketch of the *Jasta 23*b unit colours by Stark shows a black D.VII stabilizer with a broad central chordwise white band! Stark further recorded that the *Staffel* commander *Ltn.* Heinrich Seywald flew a machine with a white fuselage, while other pilots used such personal emblems as a swan, a sitting dog, and a radish; it is unclear, however, if these descriptions apply to the D.VIIs or to other types. As always, information to clear up this puzzle would be appreciated by the author and publishers. *(Stark album photo copied by A Imrie; HAC/UTD)*

▼ J23-1

▲ J24-1

JASTA 24s

J24-1: *Offz.stv.* Friedrich Altemeier of Royal Saxon *Jasta* 24 with a D.VII which seems to be a Fokker-built example. A black (?) and white emblem of unidentified form decorates the fuselage. Altemeier survived the war with 21 confirmed victories. The *Jasta* 24 war diary records that the unit picked up ten new D.VIIs from *AFP* 18 on May 28 1918. Serial numbers mentioned in the diary include 325/18 (*Ltn.* Fritz Thiede), 329/18 (*Vzfw.* Alfons Schymik, KIA on October 28), 361/18 (*Vzfw.* Kurt Ungewitter), 311/18, 350/18, 355/18, 752/18 (Alb), 4535/18 (OAW), and 4600/I8 (OAW), (*Ltn.d.R.* Fischer). *(via G H Williams)*

J24-2: The tenacious researcher Jon Guttman has identified this D.VII as probably the aircraft of *Flieger* Hermann Jander of *Jasta* 24, who was taken POW on August 23 1918 (he soon died of his wounds). The machine shown was shot

▲ J24-2

down and captured on that date by *Lt.* D'Aboville, *S/Lt.* Famin, and *Cpl.* Simonet of *Spa.*86. It is likely French colours have been applied to the fuselage. *(via Jon Guttman)*

J24-3 : A poor quality but intriguing view of a decorated D.VII, reportedly with Friedrich Altemeier again in pose. Little can confidently be stated concerning the machine's striking markings. Altemeier used a personal emblem of three intertwined circles on previous Albatros fighters and a later Fokker E.V, but this symbol is not seen in either of the Altemeier photos here. He *did* retain the light-coloured fuselage borders seen on this D.VII on his E.V. Note the thin black borders to the white outlines of the upper wing insignia, and the unusual rudder cross. *(HAC/UTD)*

J24-4: Oblt. Hasso von Wedel is seen with the D.VII he likely flew as commander of *Jasta* 24s from August 21 to the end of the war. This five-victory pilot used his family crest of a '*Richtrad*', or medieval torture wheel, on most of his fighters. This OAW-built D.VII was no exception; the '*Richtrad*' was probably red on a white background against the printed camouflage fabric, and was repeated on top of the fuselage. The entire serial number is not visible, but may have been in the 646-/18 range. *(via P M Grosz)*

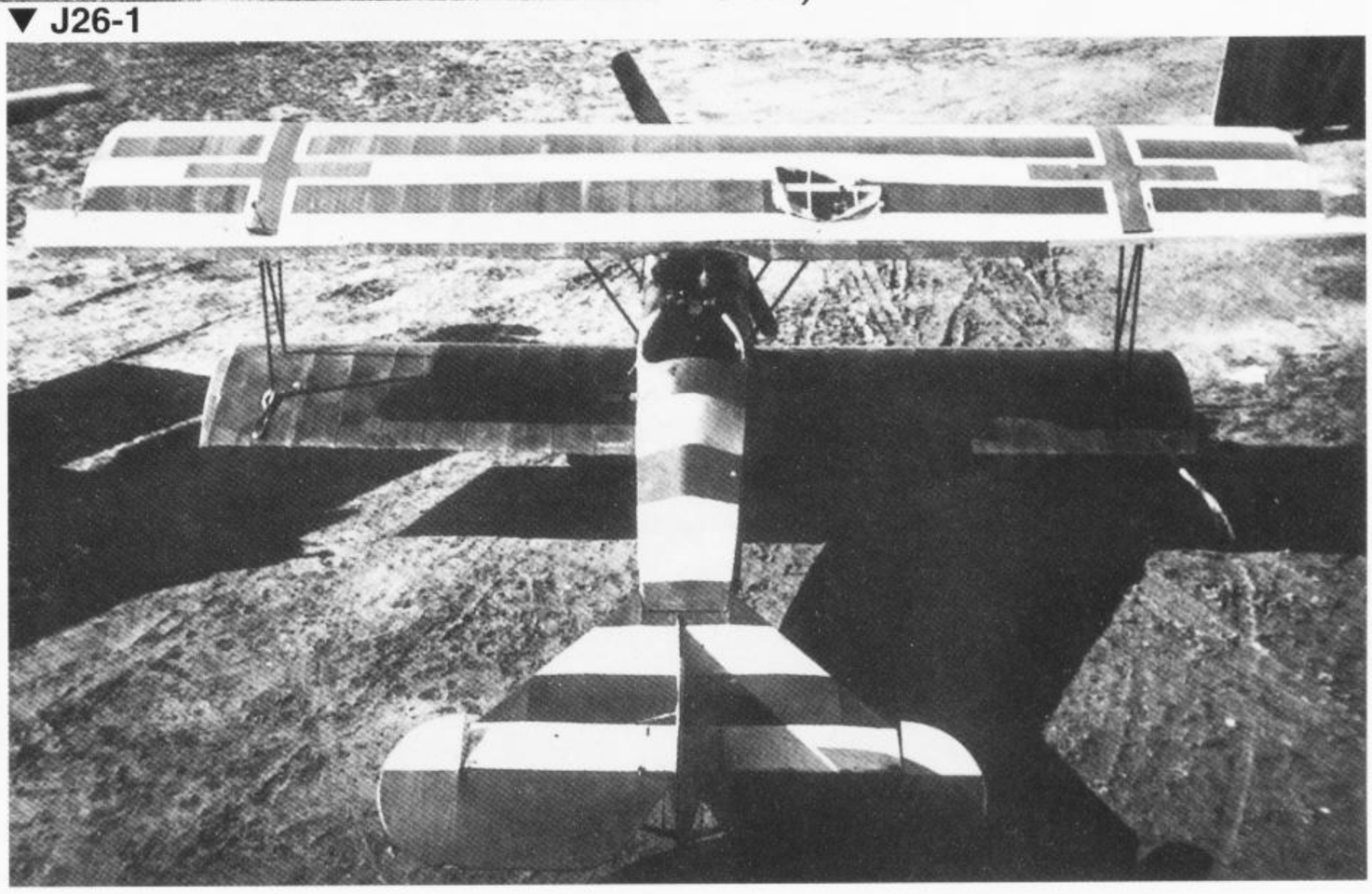
▲ J24-3 ▼ J24-4

JASTA 25

Jagdstaffel 25 served on the Macedonian Front throughout its existence. Its most successful pilot was the redoubtable Gerhard Fieseler, who later wrote in his autobiography *Meine Bahn am Himmel* (as here translated by the late Harry van Dorssen): '*Early in July two Fokker D.VIIs arrived. One of them went to* Ltn. *Thiede of* Jasta *38, I received the other ...I had my Fokker painted in a camouflage scheme which when seen from above, looked like the colour of the ground in that season. Thus I could hardly be noticed by a higher-flying enemy. The underside became as blue as the sky was then. Fighter pilots on the Western Front did not use camouflage. They had other problems; often being in fights of over 100 machines, they used vivid colours in order to make recognizing friend and foe easier'.* Fieseler also wrote that he eventually had a captured Lewis gun fitted to his D.VII as well. It was mounted on a steel fitting attached to the longeron tubes, positioned to fire upward at a 45° angle. Unfortunately, no photos of this interesting multi-gunned D.VII are known to the author.

JASTA 26

J26-1: As commander of *Jagdgeschwader* III, *Oblt.* Bruno Loerzer chose to mark his early Fokker-built D.VII in the distinctive black and white colours of his old command, *Jasta* 26. As the leading aircraft of large formations, obviously a *Geschwader Kommandeur*'s machine needed to be highly conspicuous – thus the black and white bands applied to both the upper surface of the top wing and the under surfaces of the bottom wing. Also, black/white leader's streamers are seen wrapped around the interplane struts. The unpainted portions of the wings retained their five-colour fabric finish; note the white *Anstellwinkel* 1^0 or 1^5 (angle of incidence) markings at the lower wing roots. *(via P M Grosz)*



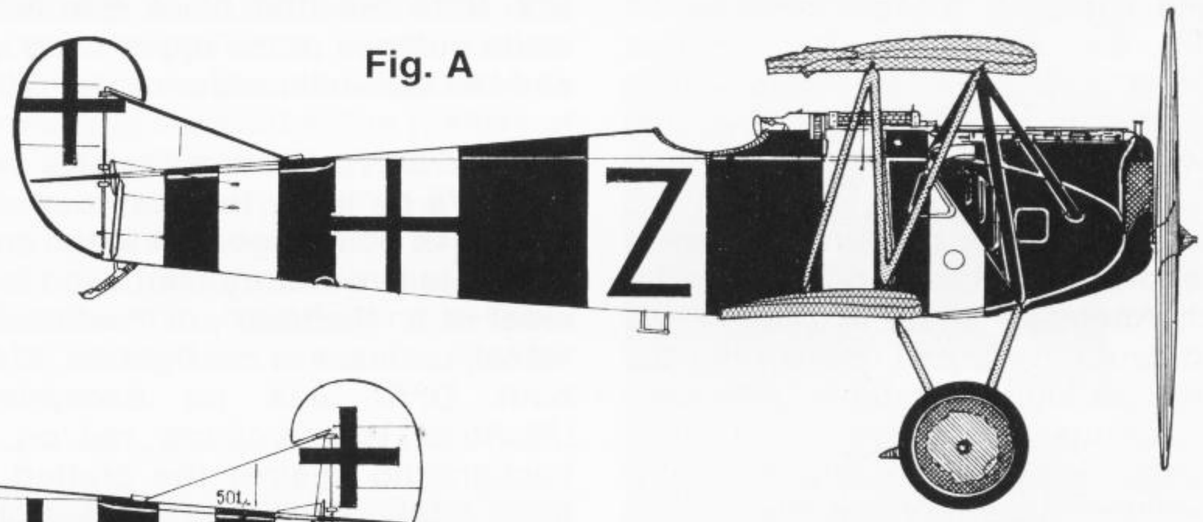
▼ J26-1

J26-2: German nurses get a close look at a *Jasta* 26 Fokker-built aircraft in this photo from the Goering albums. The pilot's personal marking was apparently the number '5' applied to the white, (a dirty or thinly-applied white, at best) band just aft of the cockpit. All *Jasta* 26 Fokkers bore identical broad black and white stripes on the tailplane and elevators and black noses, but the number and width of the black/white bands on the rest of the fuselage could vary. It was a common *JG* III practice to apply the pilot's individual emblem to the centre-section of the upper wing as well as the fuselage, as displayed here – a white '5' is visible on the top wing. *(via P M Grosz)*

▲ J26-2

Fig. A: Jasta 26 D.VII, apparently OAW-built, which was in Allied hands at Nivelles in 1919. The pilot's own marking was the 'Z' on the fuselage. A black border was applied to the fin/rudder, which may have been replacement components from a separate, Albatros-built aircraft.

Fig. A



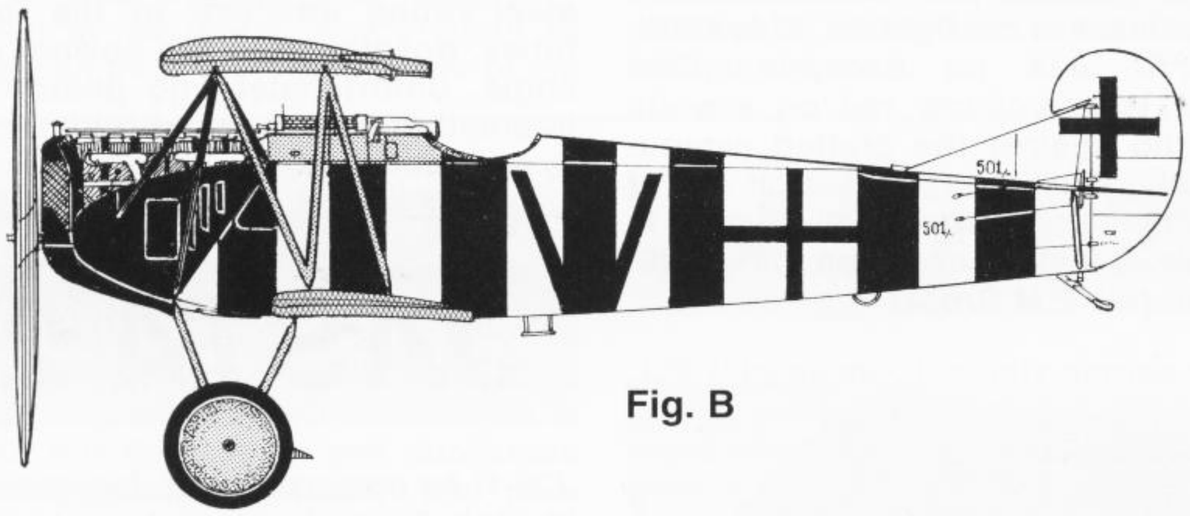
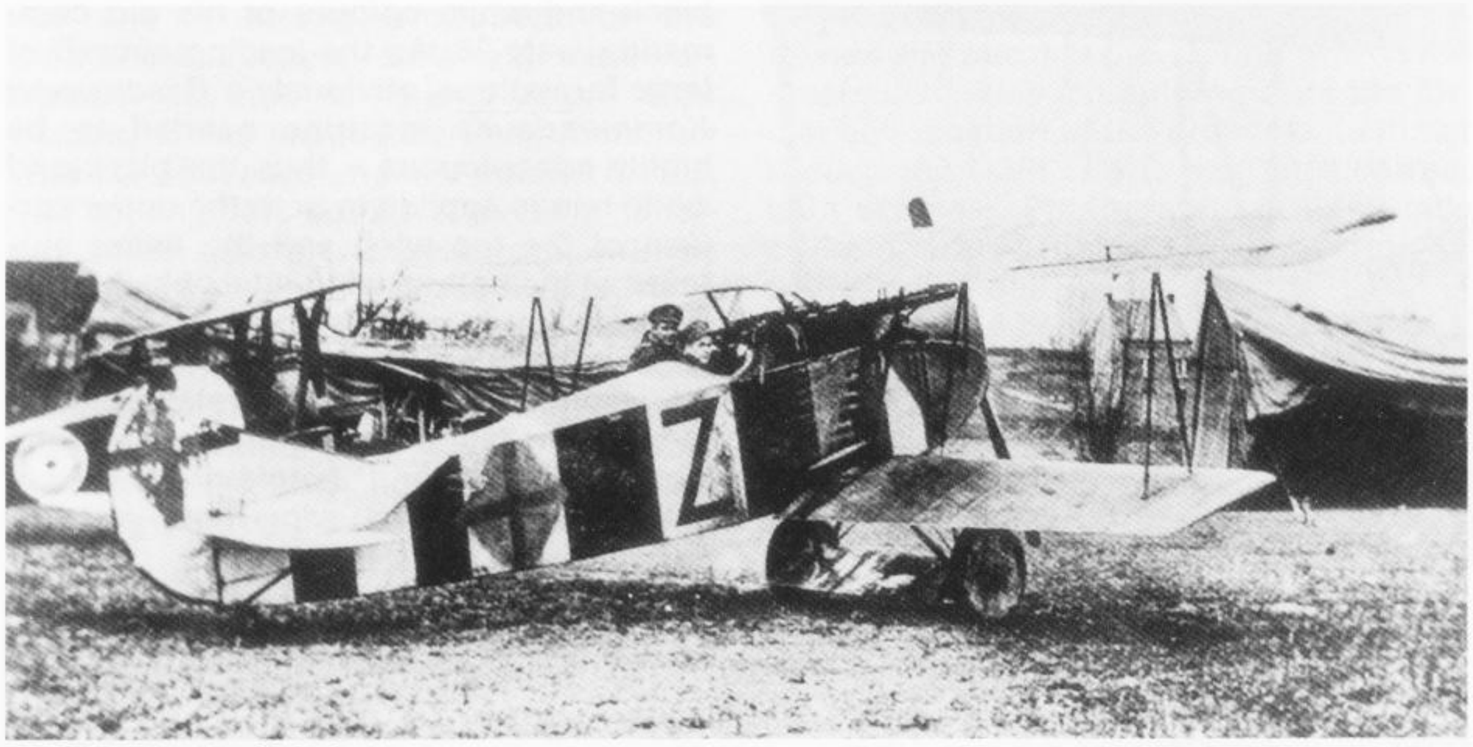


Fig. B

Fig. B: Fokker DVII 501/18, another *Jasta* 26 aircraft which turned up in Nivelles in December 1918. The personal marking is of unknown significance. The serial number was repainted on the aft fuselage and fin. As with the other *Jasta* 26 machines, the wings remained in printed camouflage fabric, probably four-colour in this case.



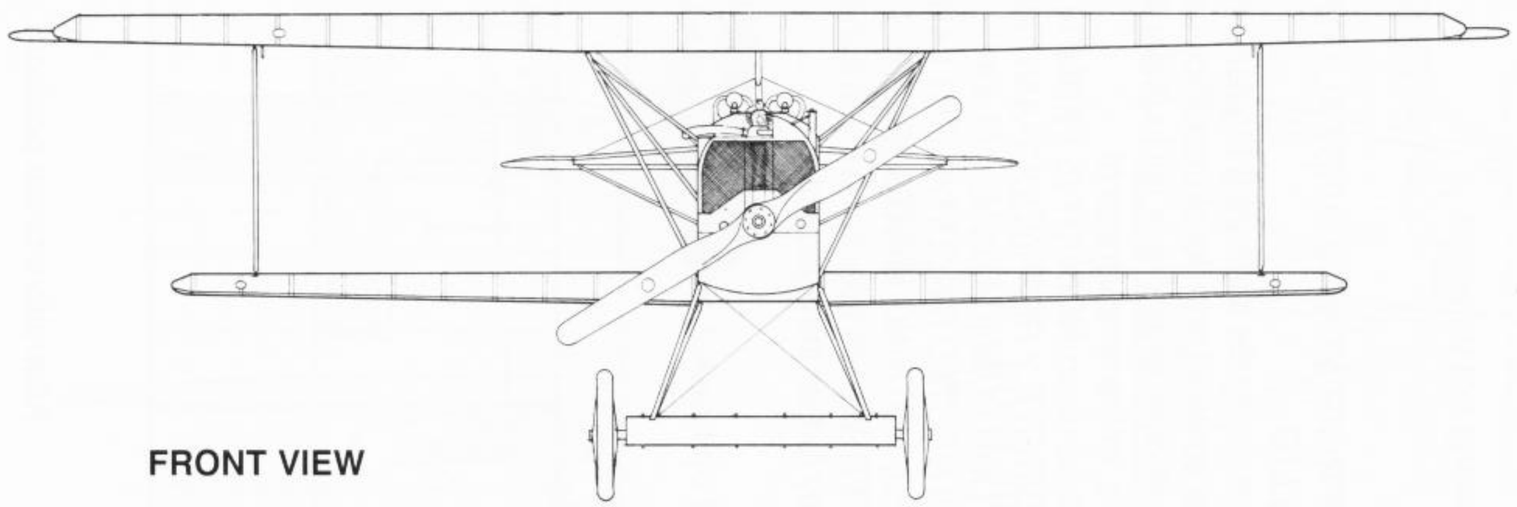
▲ J26-3 ▼ J26-4

J26-3: A *Jasta* 26 Fokker at Nivelles after the war which displays evidence of considerable wear and tear. Most of the aircraft appears to be of OAW origin, 'though the fin and rudder may have originated from a different machine. The 'Z' on the fuselage was a personal insignia, and the new British 'owners' of this D.VII have tried to remove or subdue the national insignia; note the black outline around the fin and rudder. Another photo of this machine at top of page 9 of *WINDSOCK DATAFILE* No.9 reveals that it was fitted with the conical quick-release airscrew hub usually seen on BMW-powered D.VIIs. *(G H Williams)*

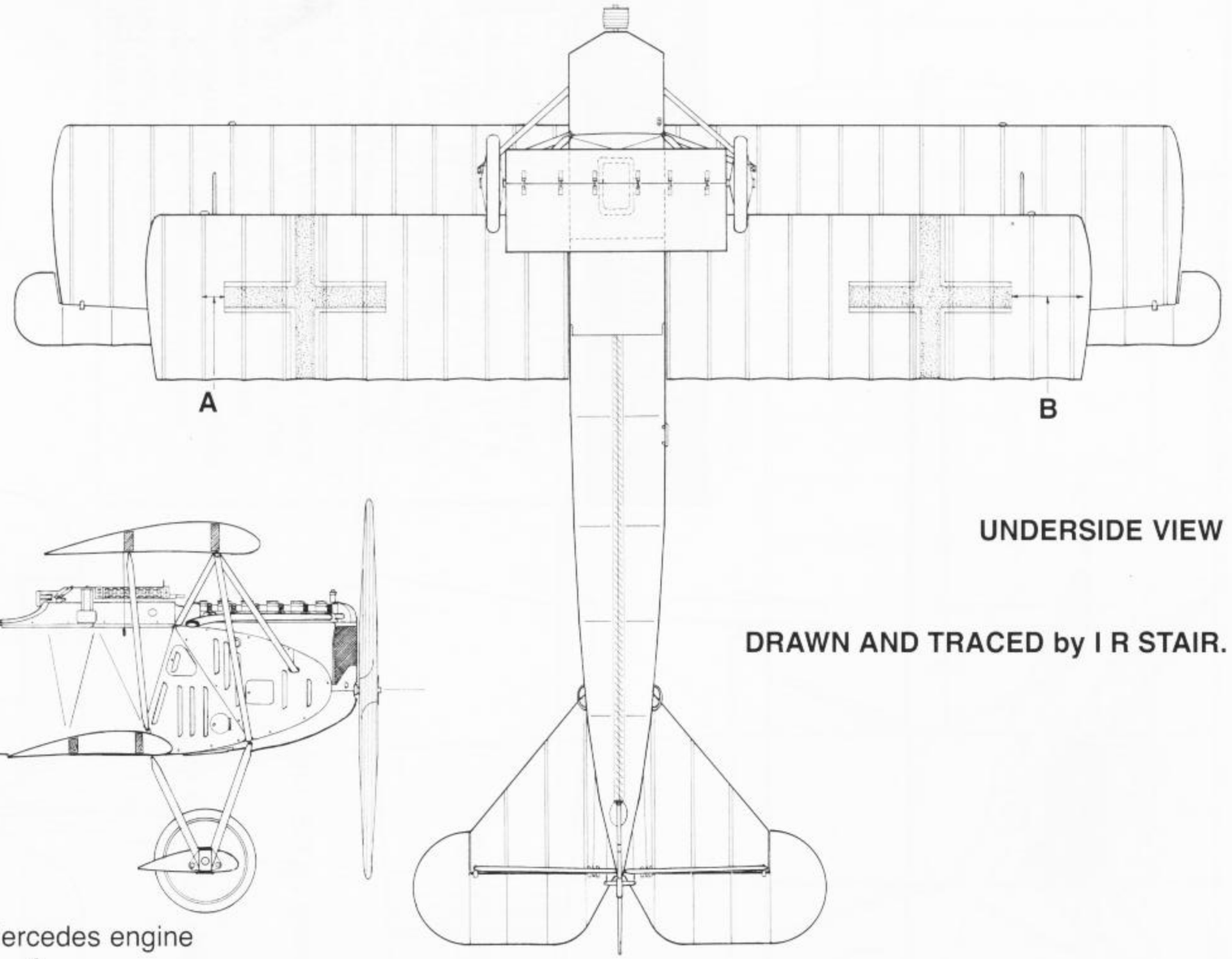
J26-4: Two more *Jasta* 26 Fokkers are seen at Nivelles. The aircraft in the foreground is a Fokker-built machine, with the serial number re-marked on the fin and beneath the tailplane; this is almost illegible but *may* read 4254/18. The unknown pilot's individual marking was the black zig-zag on the white band by the cockpit – this was possibly repeated on the top wing centre-section. Another *Jasta* 26 D.VII is just visible at extreme left. *(G H Williams)*

J26-5: Aircraft from *Jagdgeschwader* II and other units are seen in this line-up at Nivelles in December 1918 (for another view of the same group see photo *JB-13* on page 43 of *Anthology 1*). The third

Continued on page 36...



FRONT VIEW



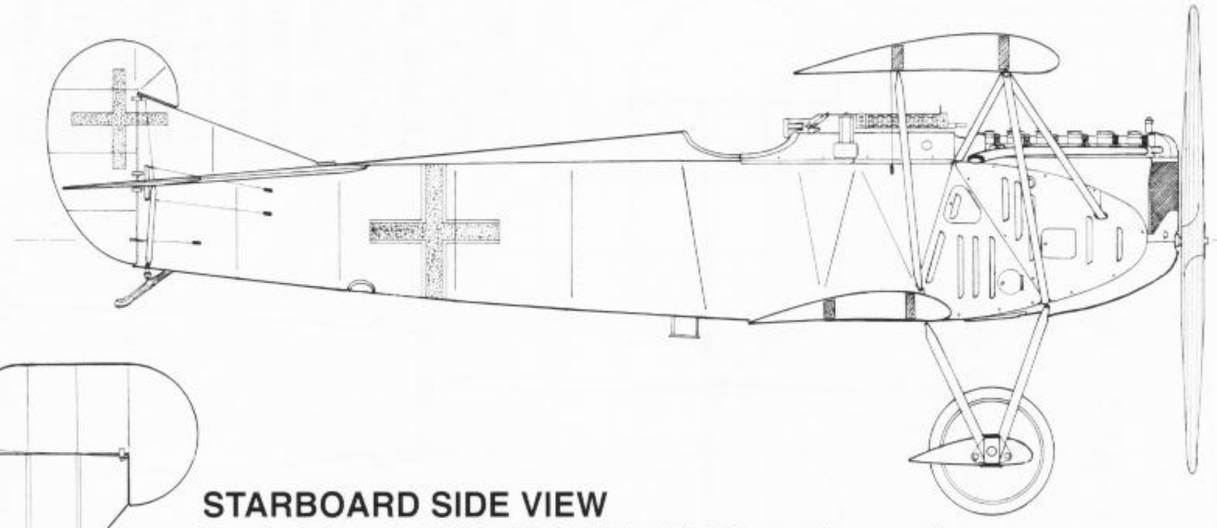
A

B

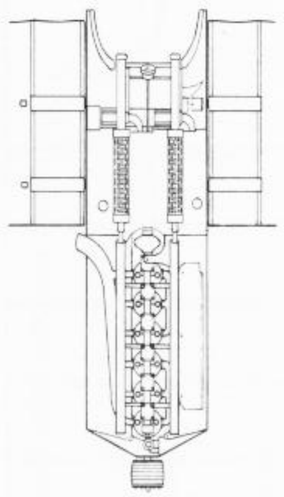
UNDERSIDE VIEW

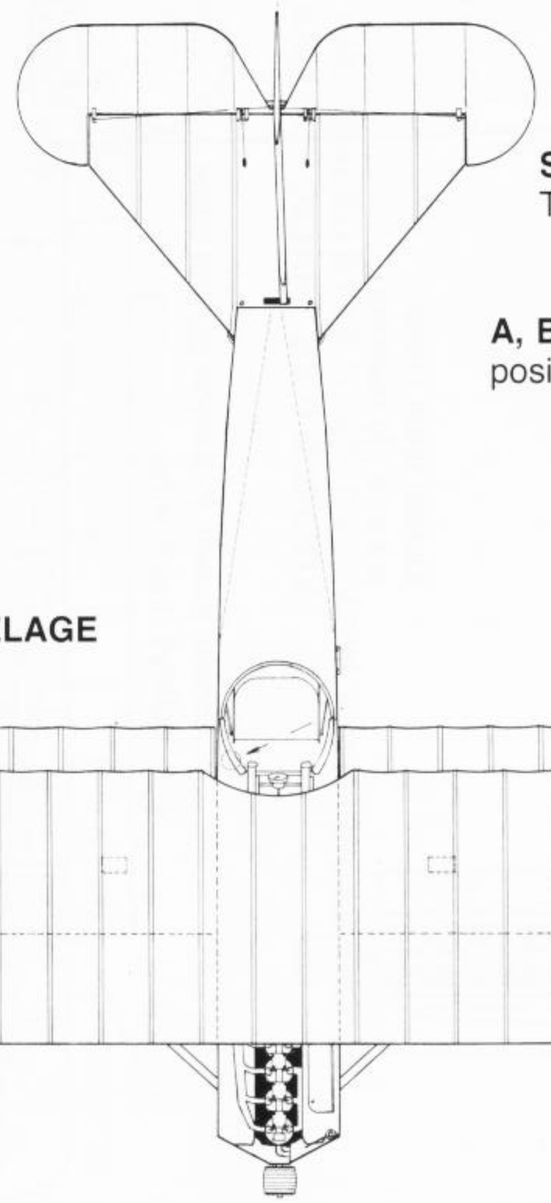
DRAWN AND TRACED by I R STAIR.

1:72 SCALE DRAWINGS



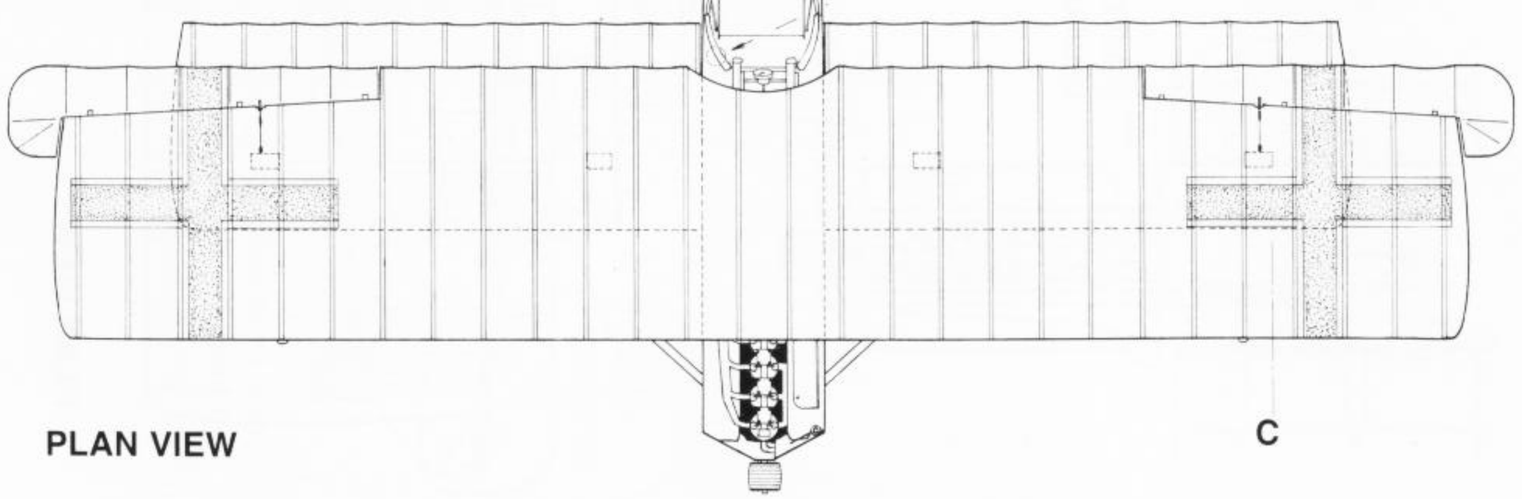
STARBOARD SIDE VIEW
Typical late OAW-built D.VII with Mercedes engine





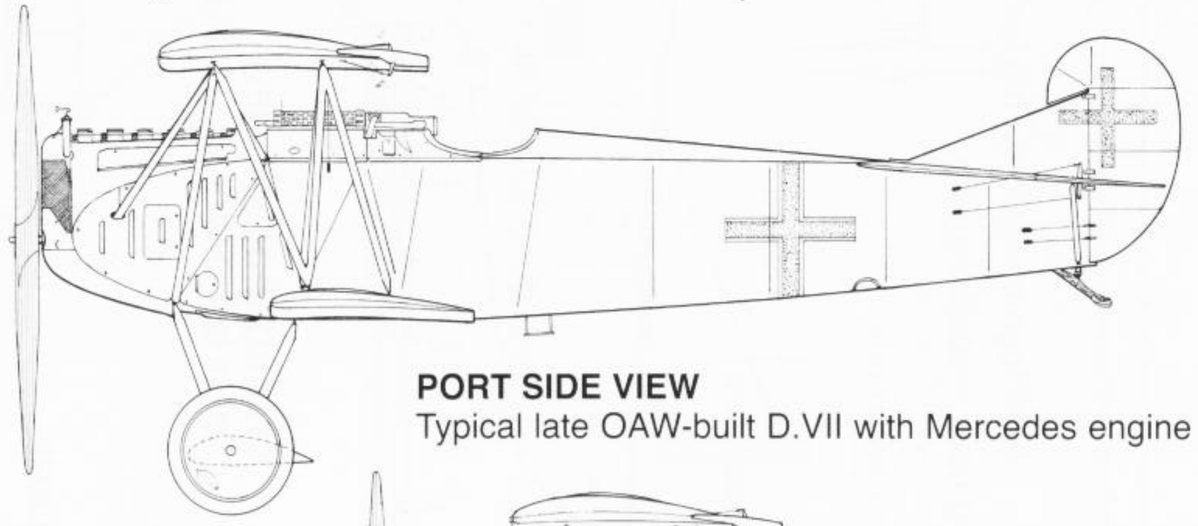
A, B, C: alternative cross positions - see page 65

PLAN OF FORWARD FUSELAGE
(Mercedes)



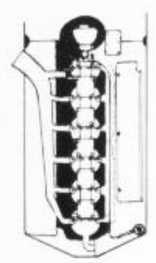
PLAN VIEW

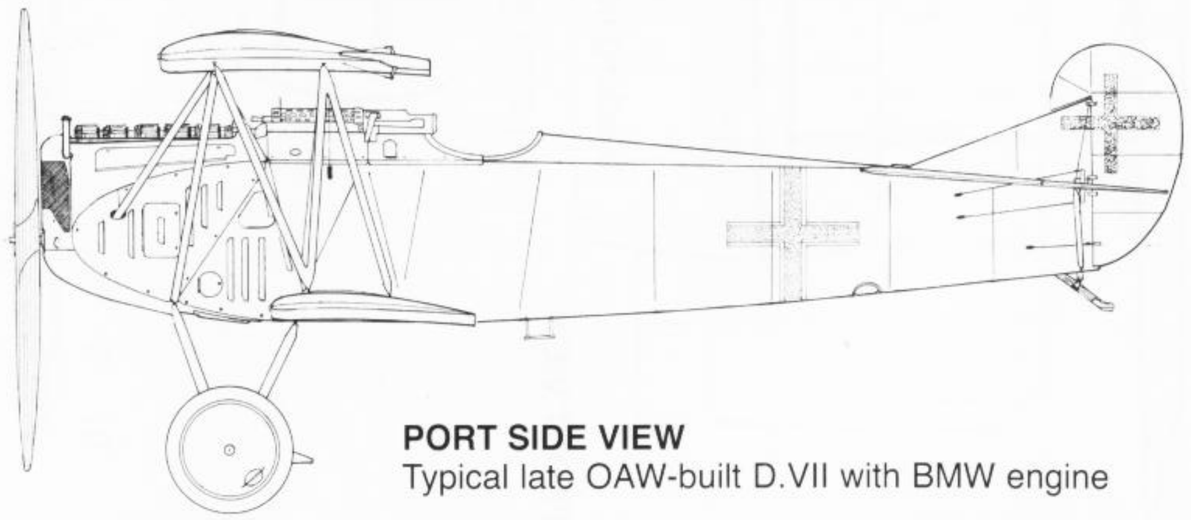
C



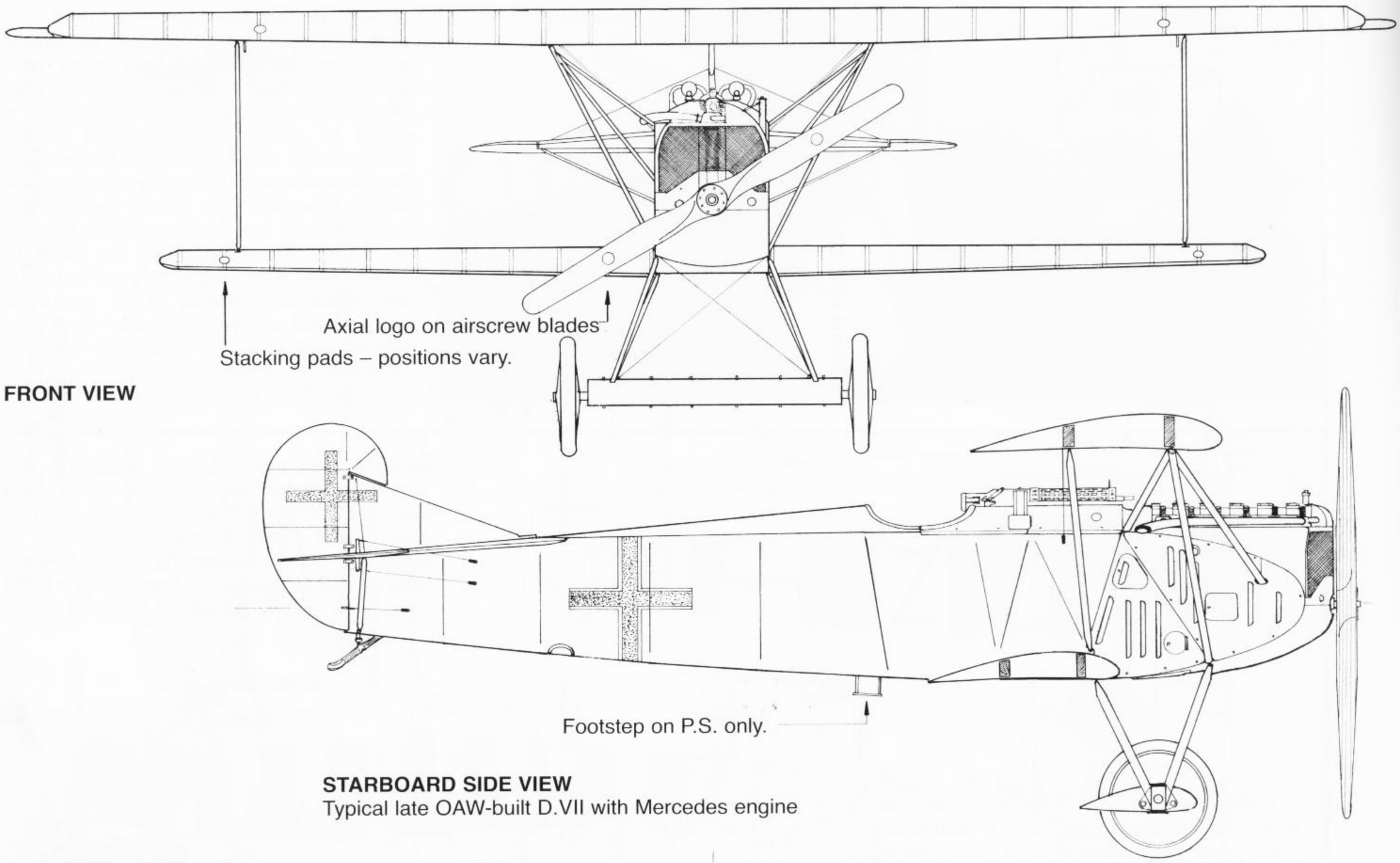
PORT SIDE VIEW
Typical late OAW-built D.VII with Mercedes engine

PLAN VIEW
BMW engine





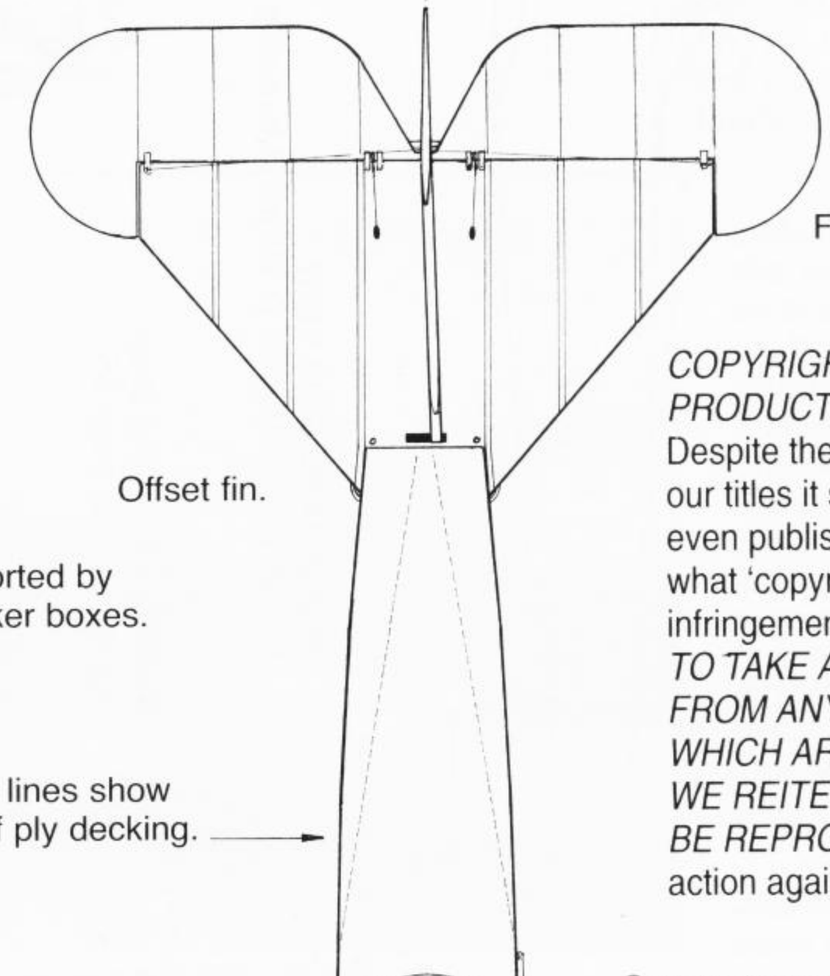
PORT SIDE VIEW
Typical late OAW-built D.VII with BMW engine

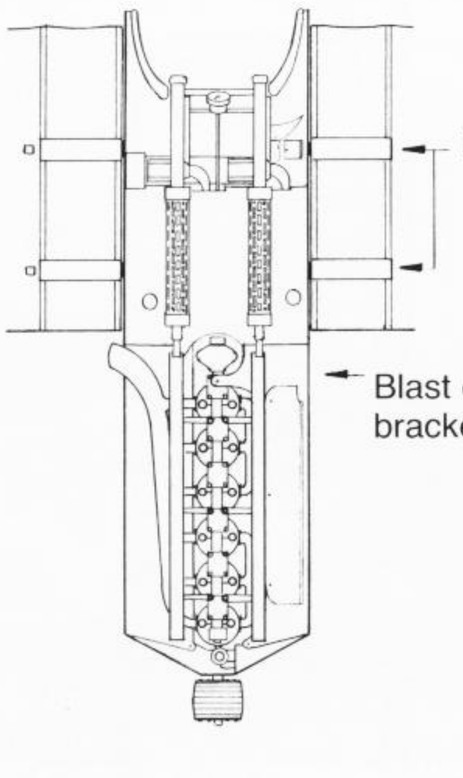


FRONT VIEW

STARBOARD SIDE VIEW
Typical late OAW-built D.VII with Mercedes engine

PLAN OF FORWARD FUSELAGE
(Mercedes)





Dotted lines show area of ply decking.

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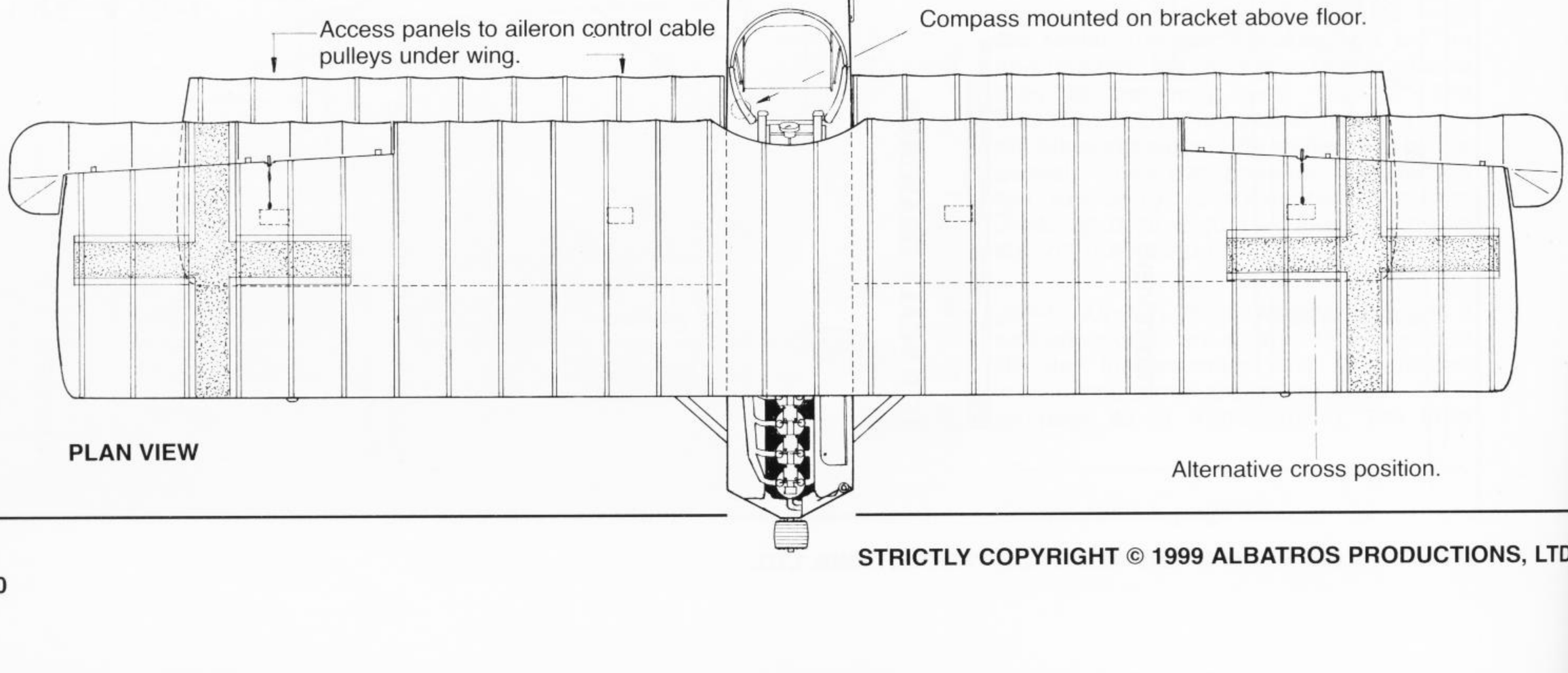
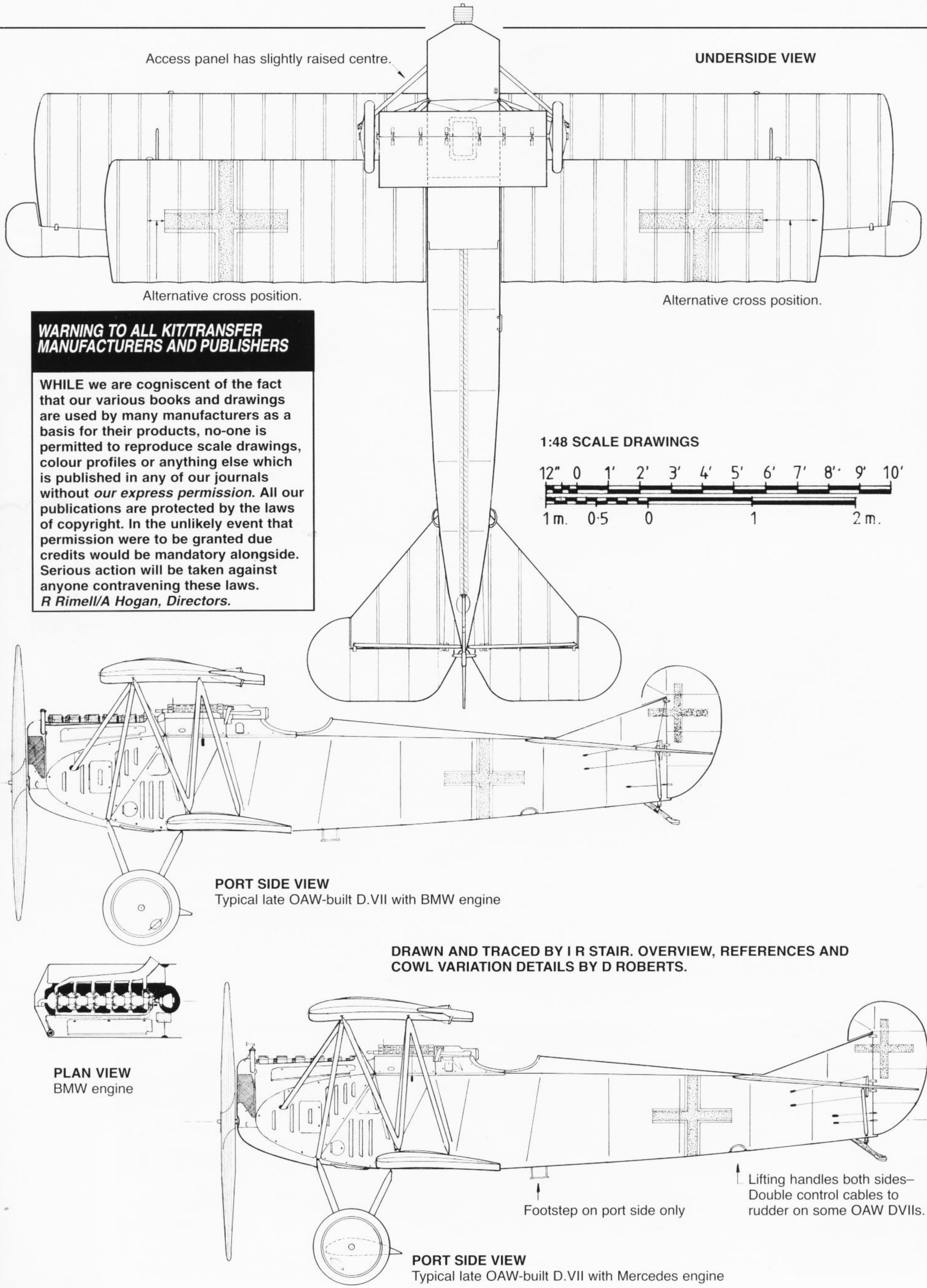


PLAN VIEW



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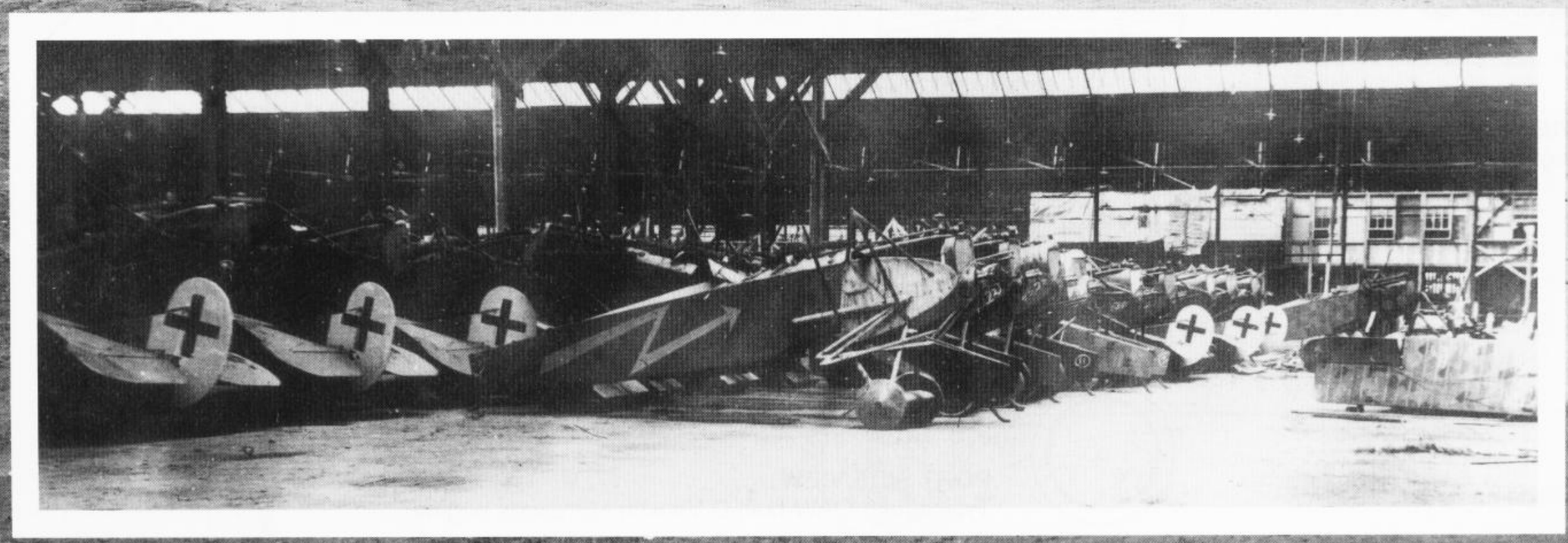
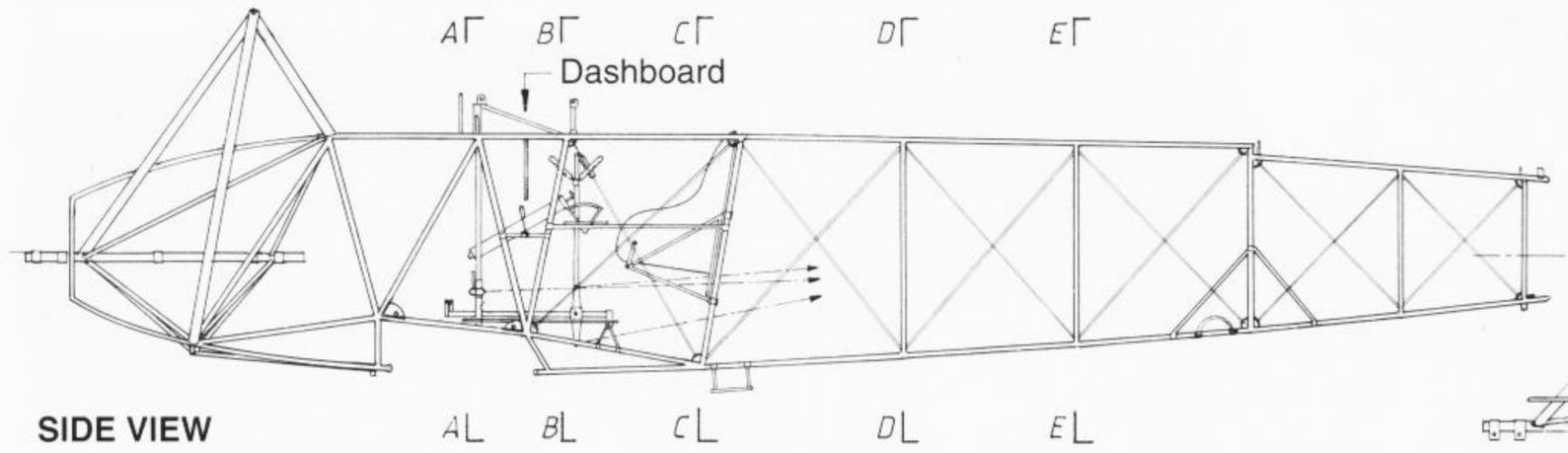
R Rimell/A Hogan, Directors.

DRAWN AND TRACED BY I R STAIR. OVERVIEW, REFERENCES AND COWL VARIATION DETAILS BY D ROBERTS.

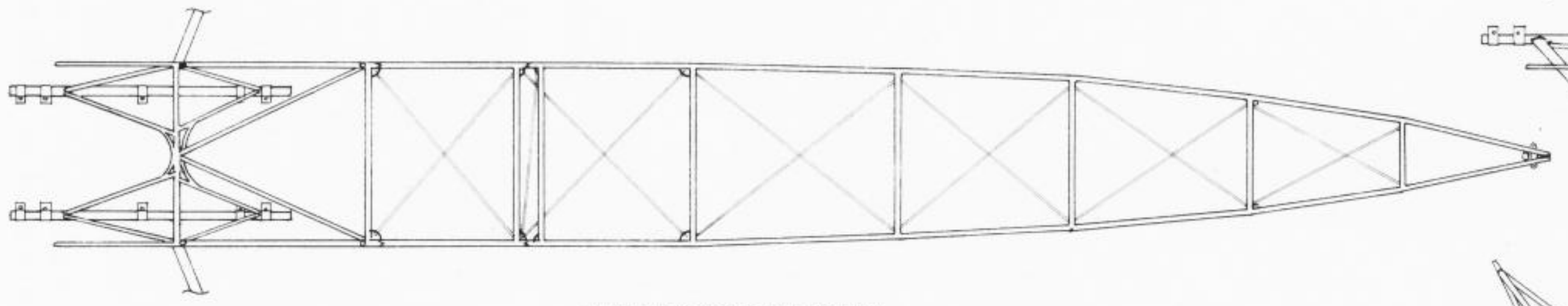


Main image:
They say every picture's worth a thousand words. Here is a real treasure trove - a whole *Staffel*'s worth of brand new OAW D.VIIs in American hands at Romorantin after the Armistice. Sadly, no full serial numbers are visible, but a wealth of structural and markings detail can be seen. The axle wings are painted in halves of lilac and green, and not all the same way round. Both four-and five-colour fabric has been used fairly consistently on the fuselages. The absence of tyres from all but one, and of wheel covers from most, is intriguing, and the wheels appear symmetrically coned. None of these aircraft has the exposed suspension found on very late (mainly Albatros) D.VII undercarriages. Late style radiators carry makers' plates, and the close two-layered cowling around the Mercedes crankshaft ends is noteworthy. Diorama builders may be interested in the padded wooden guards protecting wing and tailplane attachment points while in storage or transit. Other interesting features include varied sequence of cowling mauve/green camouflage segments plus both double and single rudder horns/cables. (*Steve Stratton*)

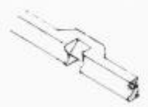
Inset:
Another angle of the same Romorantin store which reveals even more Fokker fighters. In the mid foreground is the lightning-marked Fokker built D.VII flown by Greven of *Jasta* 12 - it is powered by a BMW motor with a central filler cap. *(G Shroeder via G VanWyngarden)*



SIDE VIEW

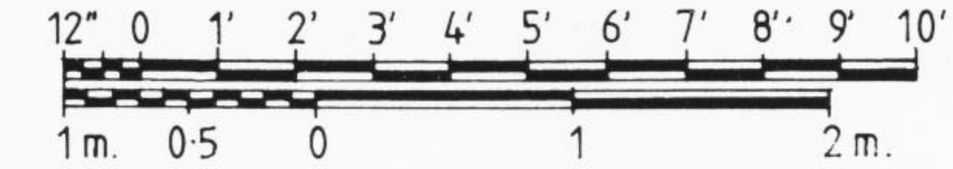


UNDERSIDE VIEW



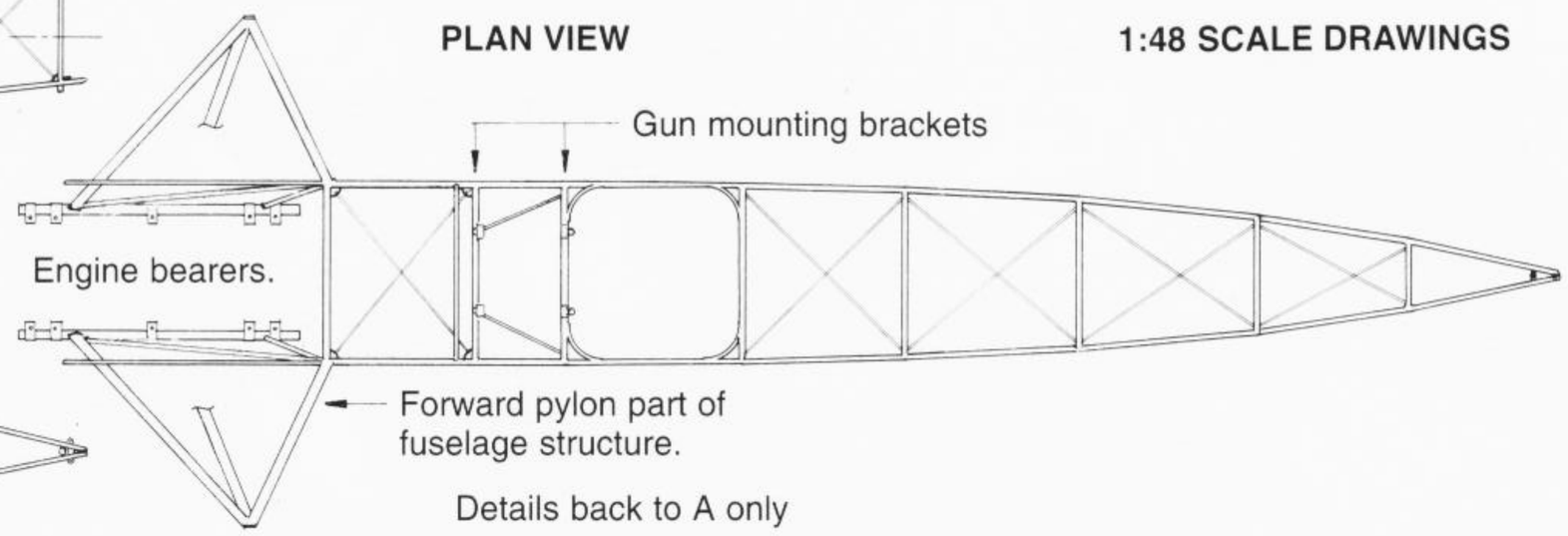
T/E of aileron subspar continues across notch which was chamfered to permit control horn movement

STRUCTURE – OAW BUILT D.VII

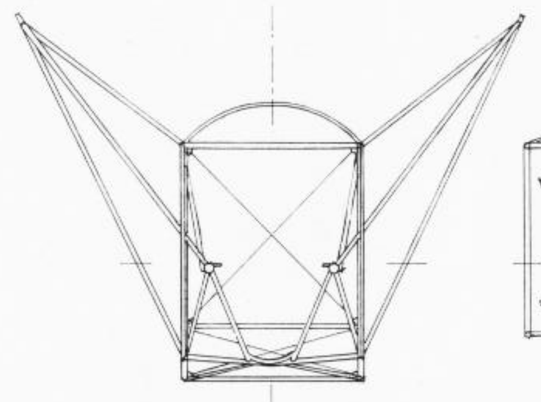


PLAN VIEW

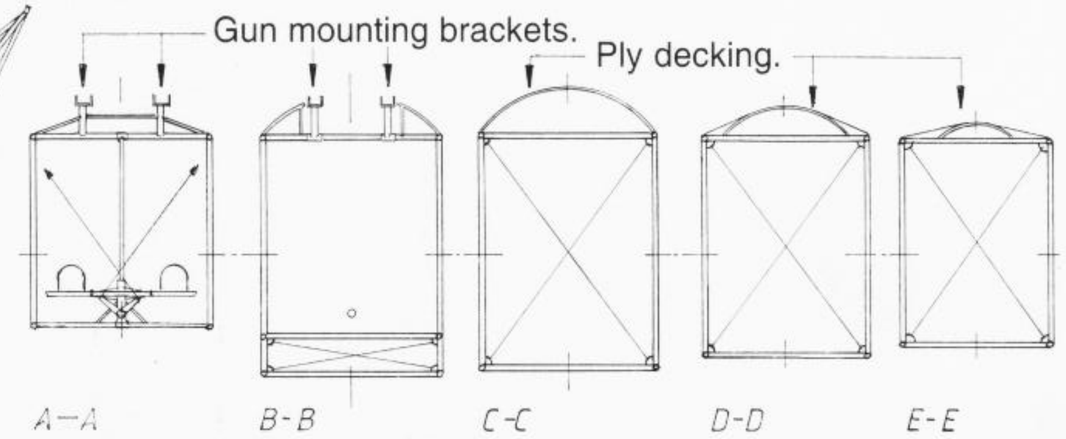
1:48 SCALE DRAWINGS



Details back to A only

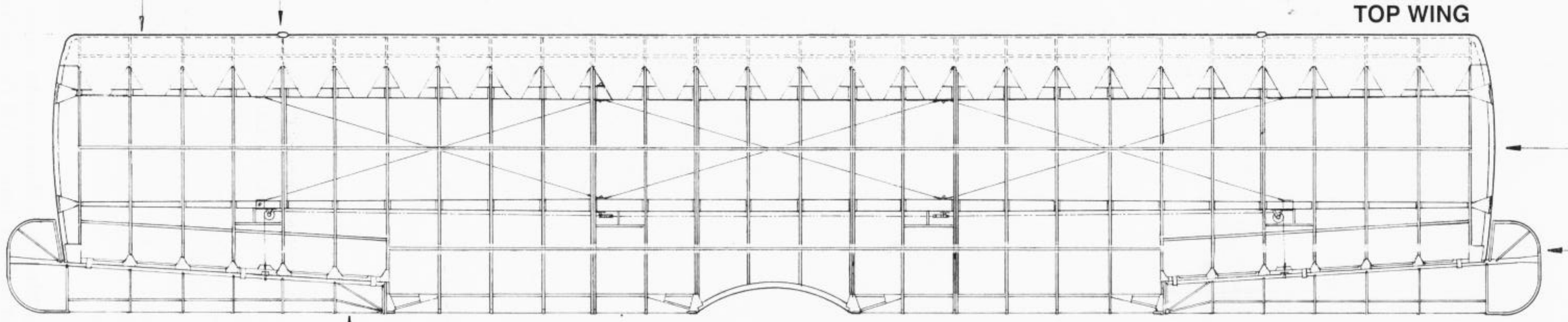


FRONT VIEW



SECTIONS

Ply sheathing – both surfaces (Note wide tips of serrations)

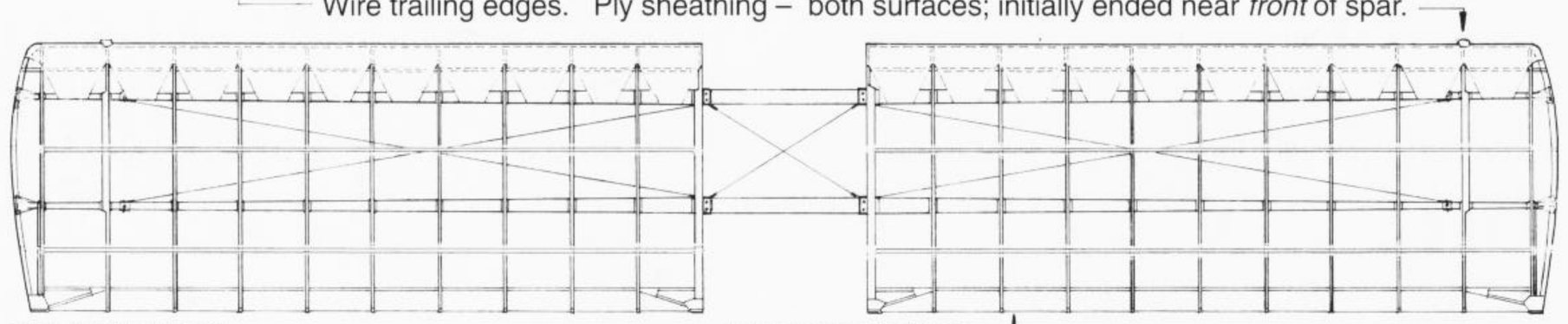


TOP WING

Wire trailing edges. Ply sheathing – both surfaces; initially ended near *front* of spar.

Extra wide tape bracing fwd. of ailerons on OAW D.VIIs

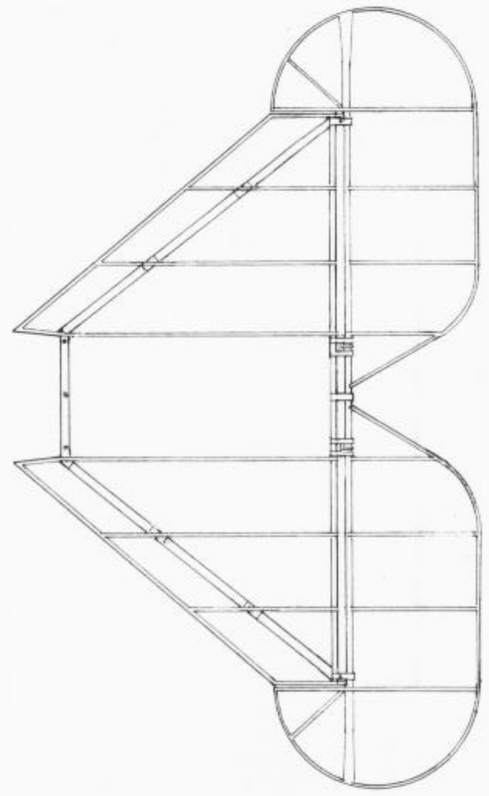
All rib spacing 300mm



BOTTOM WING

Wire trailing edges.

On OAW-built D.VIIs 10 x 10 mm stripwood was used at top and bottom of ribs.

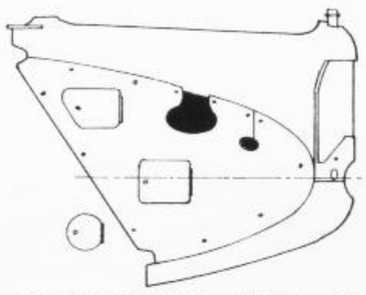


TAILPLANE AND ELEVATOR

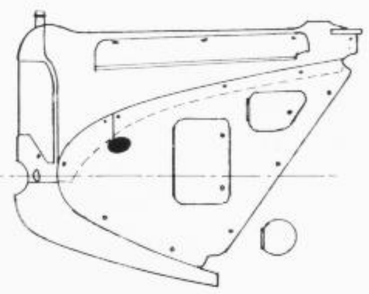
NOTED COWLING VARIATIONS – ALL OAW BUILT

1:48 SCALE DRAWINGS

Round door appeared late in first batch



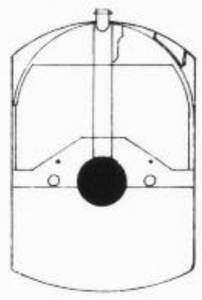
Stbd top cowl includes radiator fairing. Access doors further aft than on Fokker a/c



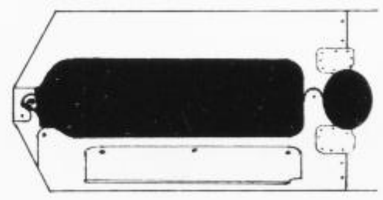
No triangular door on early OAW D.VIIs. Top cowls often fitted outside side panels – see dotted line

A) EARLY OAW D.7s (*sic*), 2000-2199/18, AND POSSIBLY BEYOND

'Pimples' are believed to cover bolts retaining an inner plate unique to OAW

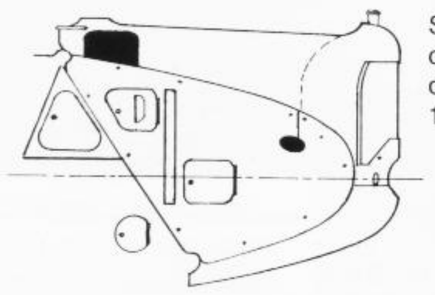


8mm AF radiator. Filler neck position less varied than on Fokker a/c. Central flat is 80mm wide

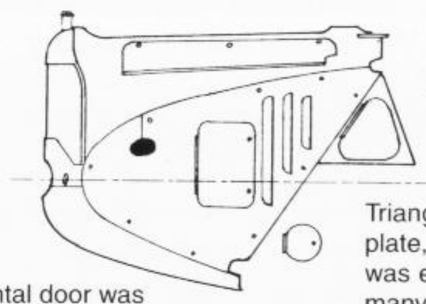


Top panels overlapped on a stud attached to No.6 cam box

Starboard cowling cut away aft of dotted line on *Jasta* 12 aircraft



OAW doors and louvres were often slightly off vertical



New louvres (both sides) on late a/c of this group

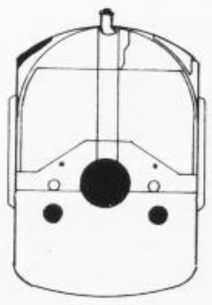
Triangular door plate, where fitted, was external on many of this batch

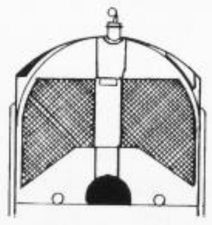
Middle door acquired a small louvre, later two, before being replaced by three taller louvres as seen on late a/c. Josef Mai's *Jasta* 5 D.VII had such louvres

B) FIRST LOUVRES THOUGHT TO BE EARLY 4000's?

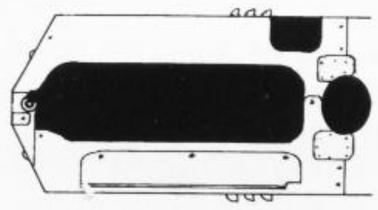
Horizontal door was rectangular, but distorted in perspective as it followed changing cowl curvature

Small holes on some a/c





NIW (Neue Industrie Werke) radiator on 2144/18. Thought to have been on early aircraft of next batch too. *Square* 8mm matrix

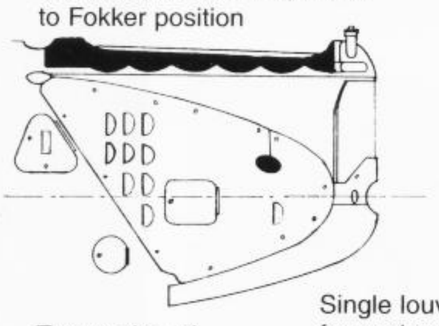


SAXOPHONE EXHAUST

1:48 SCALE DRAWINGS

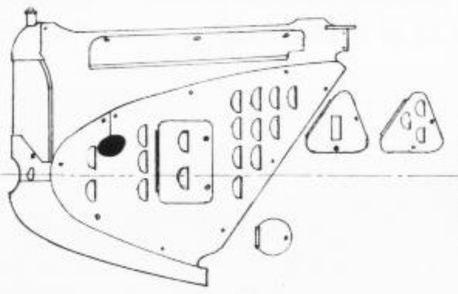
C) MID-PRODUCTION, FROM MID-4100s TO 4649/18

Doors moved forward, closer to Fokker position



Louvres proliferate with time. Cowl stud locations differ from Fokker and perhaps between a/c

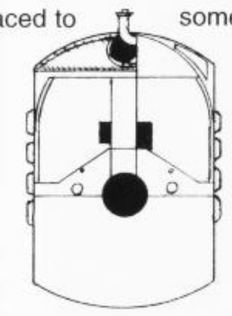
Single louvre was a late addition



Alternative. Patch painting of this door can give impression of an angled bottom

Single louvre forward on some a/c

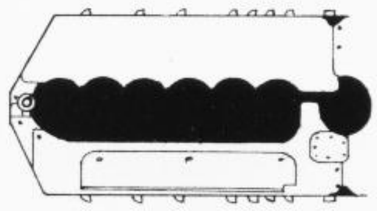
Top portion of firewall laced to frame



Front view with flat top stbd cowl on earlier a/c, as previous illustration except for wider radiator centre

Vented 7.5mm rad appears early in this group. Used for most of remaining production. Central flat is 90mm wide

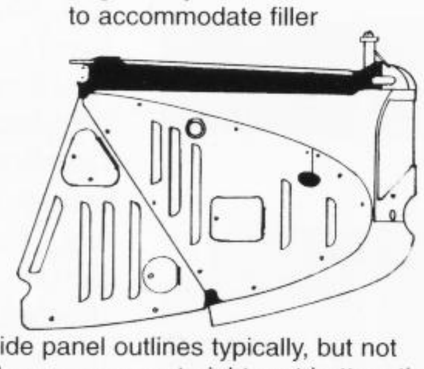
Short-lived starboard upper panel, *e.g.* 4635/18. Most of this group had the earlier type. Outer edge rounded aft of radiator.



1:48 SCALE DRAWINGS

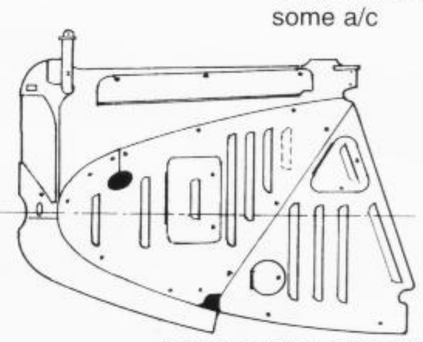
D) FINAL VERSION
6300-6649/18
8300-9649/18

Last few a/c had oil tank in engine bay: louvre shortened to accommodate filler



Now very similar to Fokker, but locations of details differ. All louvres appeared before change to offset-filler radiator

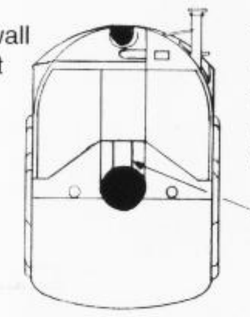
Extra louvre on some a/c



Side panel outlines typically, but not always, *appear* straighter at bottom than do Fokker's. The panels had a strong tendency to turn out at the edges

Louvre and door positions varied slightly at this stage – some look decidedly crooked!

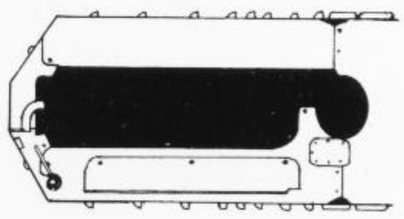
Hole in firewall for camshaft



7mm hex radiator, 150mm thick. 7.5mm rads also used right up to end of OAW production

Universal panel above prop boss accepts both radiator shapes; perhaps it was scored to fold as needed. Trace of original narrow central flat visible on a/c with thick rad

Pre-scored to fit either rad type



ACKNOWLEDGEMENTS:
Thanks are due to many researchers, particularly Wally Tripp for his excellent article 'That Fokker's an Albatros' in *W.W.I Aero. Dave Roberts.*

Continued from page 28...

D.VII from the left is *Jasta* 26 D.VII 501/18 from the first Fokker production batch. Since the black and white *Staffel* colours obliterated the serial number, this was repainted on both the white vertical fin and just under the tailplane. The sloping bands seen on the white bands aft of the cockpit were personal identification. They may have been part of a 'W' emblem (perhaps in red to contrast with the central black band?), or could be an overpainted 'W' with stripe newly applied. The first D.VII on the left is *Ltn.* Lindenberger's D.VII(OAW) 4453/18 of *Jasta Boelcke.* Next is OAW-built 4179/18 of an unidentified *Staffel* (*Jasta* 36?). To the right of 501/18 is another one of *Jasta Boelcke*'s Fokkers, then a D.VII which was probably from *Jasta* 46, possibly marked with the 'H' of *Vzfw.* Hennrich. *(via Chaz Bowyer)*

▲ J26-5

JASTA 27

J27-1: A mixed bag of *Jasta* 27 fighters is seen at Halluin-Ost airfield, May 1918.On the left is an early Fokker-built D.VII marked with some form of triangular device on the streaked camouflage fuselage. It is recorded that the unit markings for *Jasta* 27 during this period were yellow noses and tails. It is difficult to confirm the presence of such colours on this D.VII, but the wheel covers were plainly factory finish two-tone green. *(via G H Williams)*

J27-2: The D.VII in the extreme left in this photo of Goering with his *Jasta* 27 pilots is thought to be either Goering's own 278/18 or 324/18. Both of these are described in his combat reports as being marked with a white engine cowling and tail (to distinguish the *Jasta* commander's aircraft from others of his unit, which had those same components in yellow). This photo indicates that the struts and wheel covers were also white as further personal identification. The fuselage otherwise remained in streaked camouflage paint in the usual Fokker factory style fully described in *Anthology 1.*
(via P M Grosz)

▲ J27-1 ▼ J27-2

▲ J27-3

J27-3: Jasta 27 ace *Ltn.* Rudolf Klimke poses in front of his D.VII marked with distinctive black and white chevron bands on the upper wing. The nose and tail section were very likely yellow. While the fuselage markings are indistinct at best, it is tempting to 'see' a broad light-coloured (yellow?) vertical band aft of the cockpit, marked with Klimke's black anchor emblem familiar from his previous Dr.I. Confirmation of such a colour scheme is being sought by the author and publishers. Incidentally, *Jasta* 27 veteran *Vzfw.* Ernst de Ritter recalled in 1964 that *Jastaführer* Hermann Frommherz had the top wing of his D.VII painted in alternating red and black 'vee stripes' (chevrons) as a leader's distinction in addition to the yellow nose and tail, and that his own Fokker was marked with a white band just aft of the cockpit, emblazoned with a Prussian eagle. *(HAC/UTD)*

J27-4: Originating in the Goering albums, this D.VII is certainly one of Goering's own aircraft - either 278/18 or 324/18. Clearly evident are the white nose, tail, and struts

which identified the *Staffelführer*'s machine in *Jasta* 27, and the early form of national insignia. The wings were covered in printed camouflage fabric. *(via P M Grosz)*

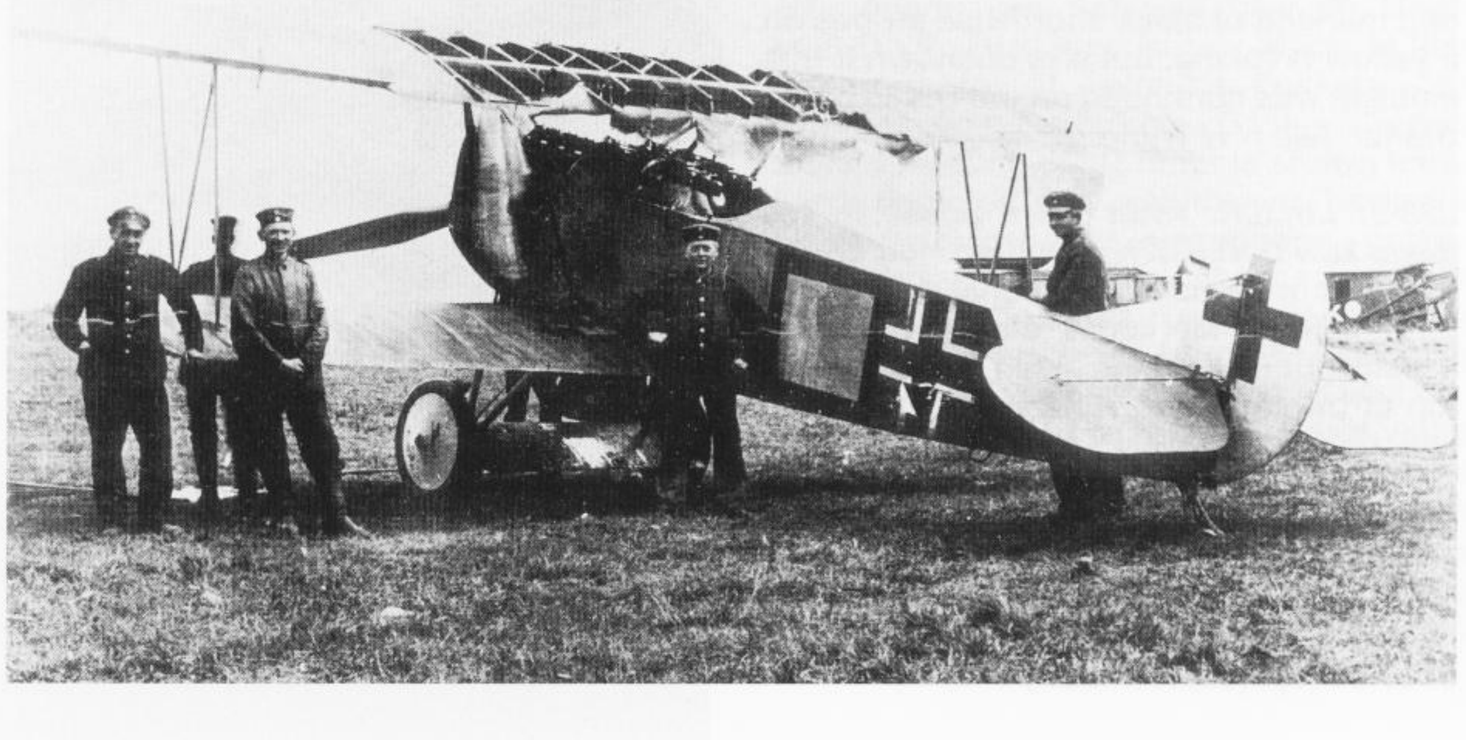
J27-5: This photo of the D.VII flown by the formidable *Ltn.d.R.* Friedrich Noltenius (with cane, next to his visiting brother Armin) presents some problems in interpretation. The personal markings on the fuselage and upper wing centre-section were stripes in red and white - colours emblematic of the pilot's home town of Bremen and the Hanseatic League. This aircraft has previously been identified as Fokker-built 5056/18 (or 2056?), but the white serial legend on the aft fuselage, the style of lifting handles and national insignia all point to OAW manufacture - particularly of the first two production batches. The fuselage has been described as 'grey', however, the untouched serial indicates it was more likely simply factory-finish four-colour fabric, dulled by over-varnishing. There is little sign of the yellow nose and tail markings which are recorded as *Jasta* 27 hallmarks, though admittedly the tailplane and elevators could well be yellow. The light-painted portion of the upper radiator shell is probably part of the OAW factory two-tone paint job. However, it is unwise to be too pedantic about the finish of this well-known machine. *(A E Ferko via H H Wynne)*

▲ J27-4 ▼ J27-5

J27-6: Whatever its actual colours, Noltenius's Fokker was considerably altered following a harrowing balloon attack on September 14 1918. When Noltenius was only 50 metres away from the British balloon, it exploded, and he was forced to fly directly through the flames and smoke. Noltenius' diary records, *'the machine was still in flying condition, but what a shambles she was! The cloth covering had become completely slack all over the machine and billowed. Large shreds of balloon cloth hung in the struts and in the empennage'.* It is a tribute to both Noltenius's skill and the sturdy D.VII construction that he was able to fly home and land safely. Following this, Noltenius took over the Fokker of *Fw.* Willy Kahle. *(A E Ferko via H H Wynne)*

J27-7: Noltenius survived a series of structural problems with his *Jasta* 27 D.VIIs. On August 27, the fabric of the fuselage tore loose in a fast dive, and the wing covering was also damaged. On September 1, during a dogfight with a Sopwith formation, a section of the top wing aft of the second main spar *'broke off'* and he had to disengage. After the balloon incident described above, he had another misadventure in a duel with Sopwiths on September 22 when *'the cloth covering of the top wing had torn off and several ribs were broken in the hectic dogfight'.* This photo of a damaged *JG* III Fokker may illustrate the last of these incidents, when Noltenius was probably flying Kahle's former machine; the 'K'-marked Bristol F.2B of No.22 Squadron in the right background was captured by Frommherz on 27 August. Beyond the two-tone square marking ahead of the fuselage cross and the light wheel covers, it is difficult to determine the colours of this Fokker-built machine with any certainty. *(HAC/UTD)*

▲ J27-6 ▼ J27-7



▼ J28-1 ▲ J28-2

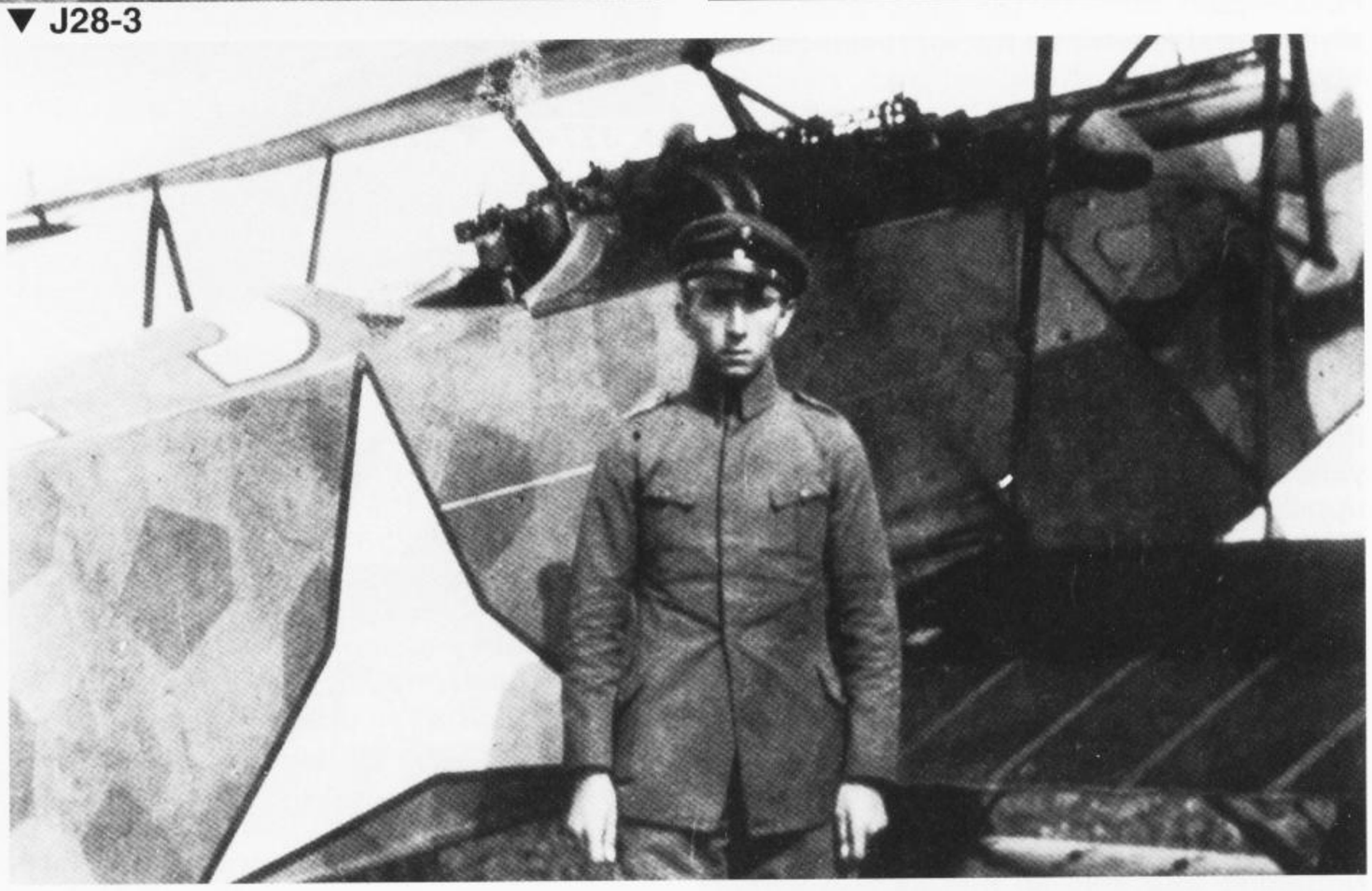
JASTA 28

J28-1: Commander of the Württemberg *Jasta* 28 in the summer of 1918 was *Ltn.d.R.* Emil Thuy, with his early production D.VII 262/18 in streaked camouflage finish. The fuselage cross was altered from a thicker style, and Thuy's personal emblem of a white band obscures a portion of the serial. A crude patch indicates the installation of a flare pistol tube, while the cartridge rack is fitted on the upper decking. Earlier, *Jasta* 28w had utilized a unit marking of black chordwise stripes on a yellow tailplane, but it is unknown if this emblem was continued on the D.VIIs of the *Staffel. (via H H Wynne)*

J28-2: Ltn.d.R. Artur Merz poses in his *Jasta* 28w D.VII(OAW). Emblazoned on the four-colour fabric is a personal design of a three-pointed 'Mercedes' star in white with a black outline; a 'C' is similarly marked on top of the fuselage. Note the white datum line. (*via P Kilduff)*

J28-3: The patchwork painting of the engine cowling panels identifies Merz's D.VII as an OAW product. Light-coloured rib tapes and the white datum line are also in evidence. *(via P Kilduff)*

▼ J28-3



ANTHOLOGY 3 - Your assistance is requested.....

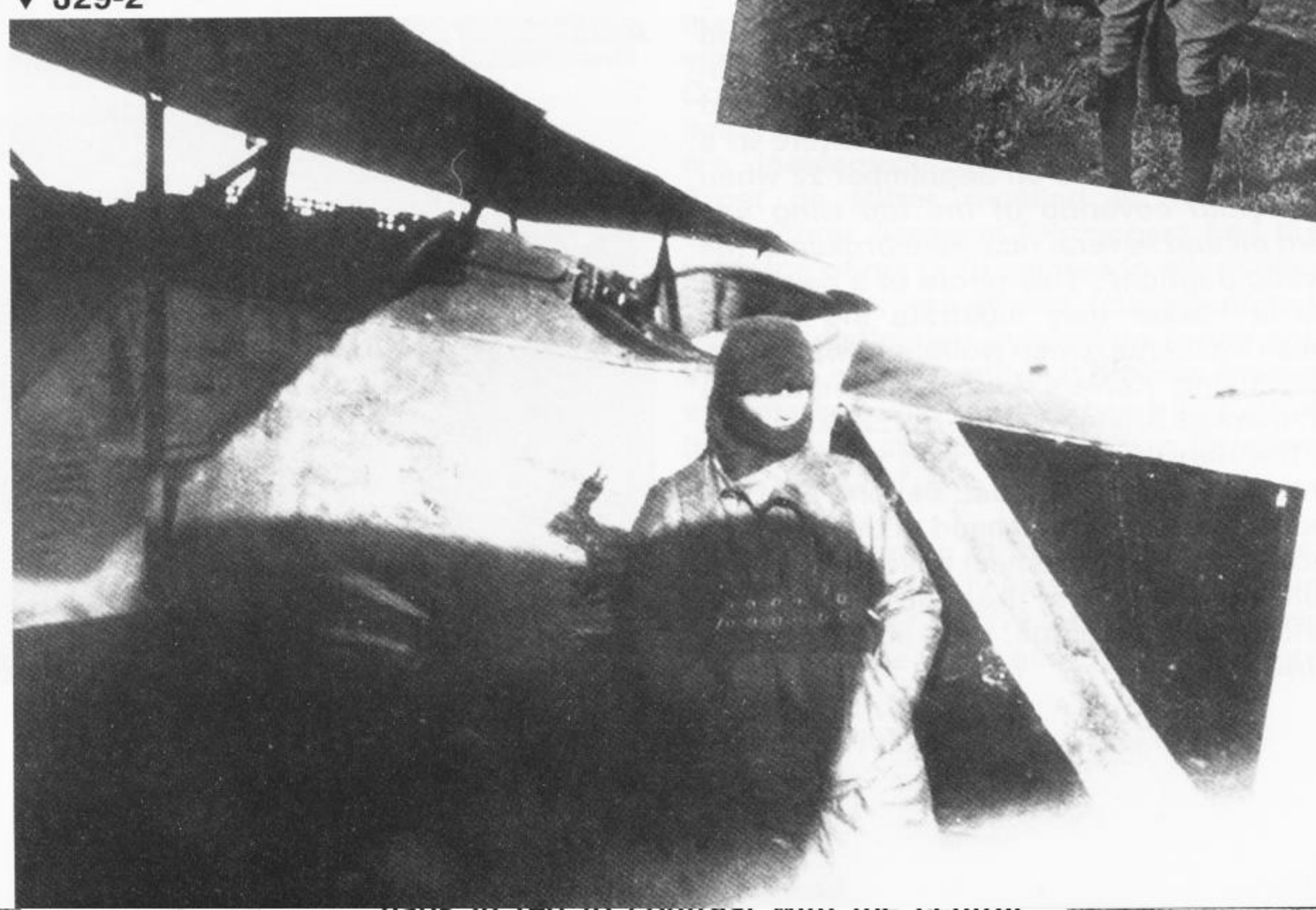
In our next volume, which majors on Albatros-built D.VIIs, Greg VanWyngarden concludes his survey of unit markings by covering *Jastas* 50 through to 84 and the three *Marine Feld Jastas*. As ever both author and publishers would welcome any relevant photos and informed data from our worldwide readership to assist this endeavour. Photos used will be duly accredited and returned along with a complimentary copy of *Anthology* 3. Please submit material to usual Albatros editorial address. Thank you.

JASTA 29

▼ J29-1

J29-1: As leader of both *Jasta* 29, and later, *Jagdgruppe* 3, *Oblt.* Harald Auffahrt flew this aircraft emblazoned with the ever-popular comet motif. It is believed this was Fokker-built D.VII 387/18, for which combat reports fortunately exist. Reports for October 5 and 30 describe the markings as a yellow nose, green fuselage (these were presumably the colours of *Jasta* 29) and white comet. The reports also mention black and white markings on the underside of the fuselage, but the photo does not permit precise delineation of these. Note the Axial airscrew and cooling holes

▼ J29-2



cut into the cowling. Unfortunately it is difficult to determine the demarcation between the yellow and green sections, nor is it possible to confirm the precise shades of these colours. With at least 26 victories, Auffahrt was proposed for the *Pour le Mérite* but never received it due to the Armistice.

J29-2: Glare from the bright sunlight obscures details in this photo from the Ferko archives at HAC/UTD, where it was tentatively identified as a *Jasta* 29 aircraft. If it did serve in this unit, then the fuselage was most likely green with a yellow nose. The unknown pilot's individual emblem was the two-tone band aft of the cockpit, as well as a small hare just visible to the left of the airman. *(HAC/UTD)*

JASTA 31

J31-1: This poor, but interesting, photograph shows Fokker D.VIIs at Port Faverger; the fighters are believed to be from *Jasta* 31 but only individual markings are visible. The earlier Albatros and Roland fighters of this *Staffel* bore only personal insignia with no unit marking, a custom which may have continued through to 1918.

Additional photos of D.VIIs serving with *Jasta* 31 would be welcomed by the author and publishers for future Anthology editions.

▼ J31-1

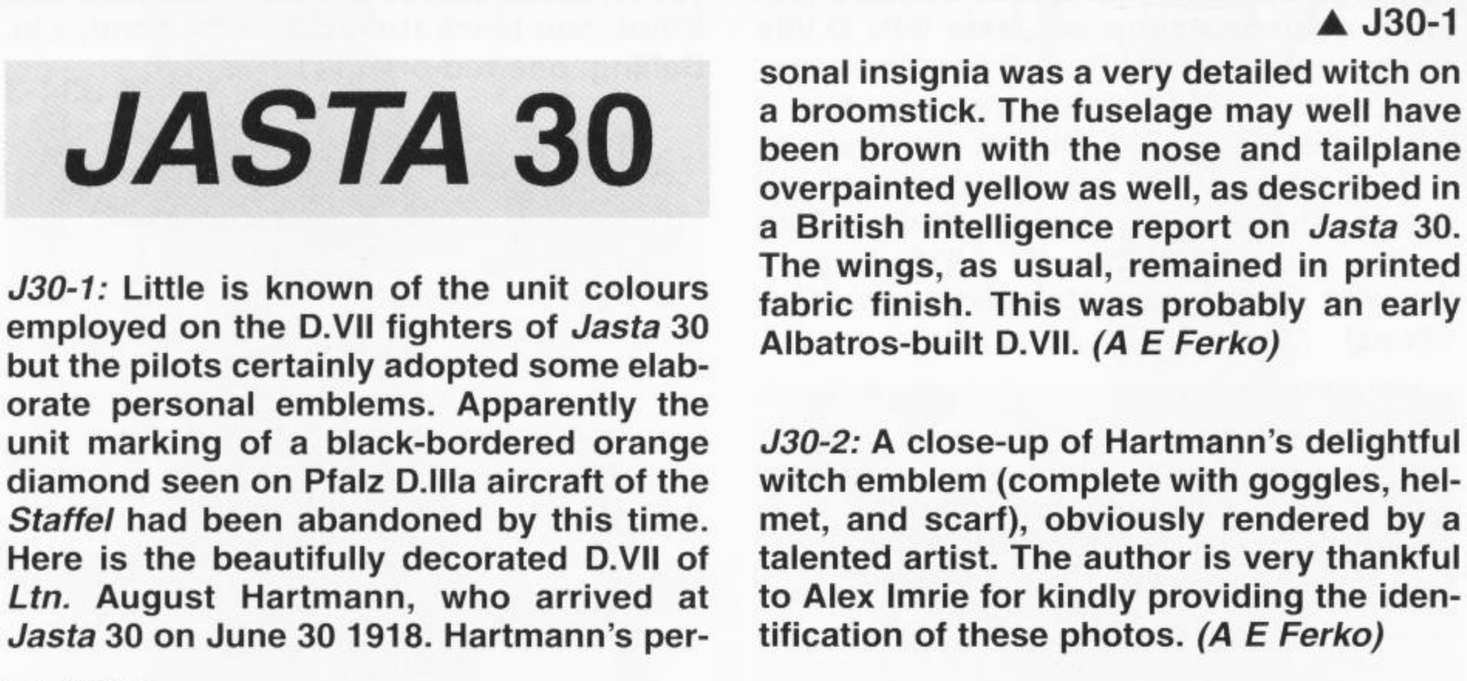
▲ J30-1

JASTA 30

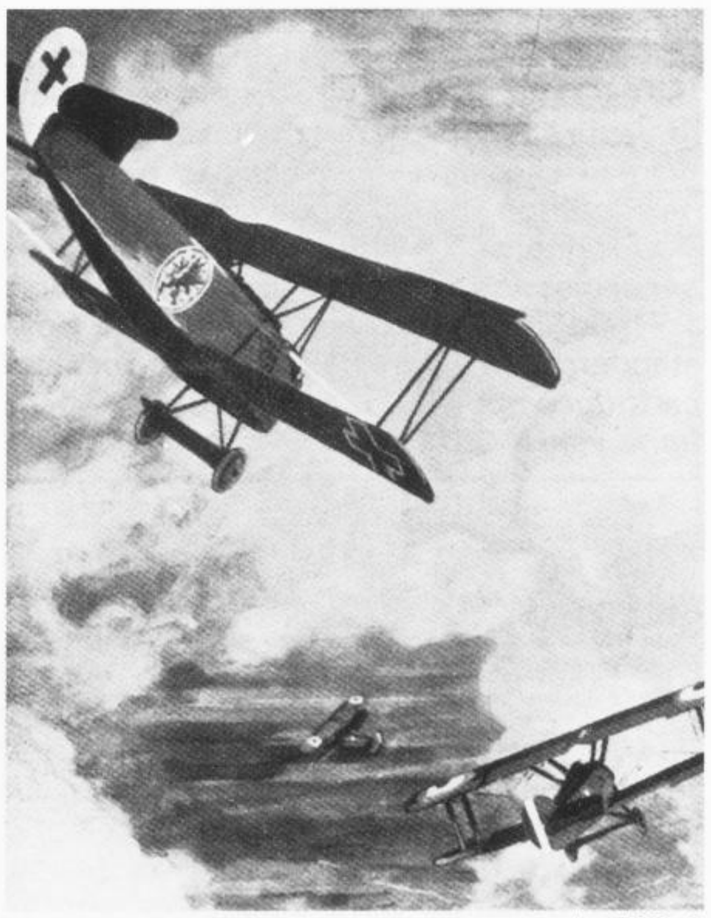
J30-1: Little is known of the unit colours employed on the D.VII fighters of *Jasta* 30 but the pilots certainly adopted some elaborate personal emblems. Apparently the unit marking of a black-bordered orange diamond seen on Pfalz D.IIIa aircraft of the *Staffel* had been abandoned by this time. Here is the beautifully decorated D.VII of *Ltn.* August Hartmann, who arrived at *Jasta* 30 on June 30 1918. Hartmann's personal insignia was a very detailed witch on a broomstick. The fuselage may well have been brown with the nose and tailplane overpainted yellow as well, as described in a British intelligence report on *Jasta* 30. The wings, as usual, remained in printed fabric finish. This was probably an early Albatros-built D.VII. *(A E Ferko)*

J30-2: A close-up of Hartmann's delightful witch emblem (complete with goggles, helmet, and scarf), obviously rendered by a talented artist. The author is very thankful to Alex Imrie for kindly providing the identification of these photos. *(A E Ferko)*

▼ J30-2



JASTA 32b



▲ J32-1

J32-1: It is recorded that this Bavarian unit was equipped with the D. VII and the Pfalz D.XII in the last months of 1918 but photos of such aircraft have proven very elusive.Under the command of *Oblt.* Schleich (the 'Black Knight') it is believed this *Staffel* had made use of black tails and white spinners as unit markings on their Albatros D.V and Pfalz D.III fighters. This custom may have been continued on their D.VIIs. What is certain is that after he took command of *Jagdgruppe* 8b and eventually the Bavarian *Jagdgeschwader IV, Hauptmann* von Schleich flew an OAW-built D.VII which was largely black. In lieu of any photos of *Jasta* 32b Fokkers – or even of von Schleich's D.VII – Rudolf Stark's painting of the latter is shown here. Stark depicted this machine as having a black fuselage (and empennage, probably), with von Schleich's familiar emblem of a Bavarian lion on a circular field of blue and white diamonds (from the Bavarian crest) on the fuselage. The aircraft was further distinguished by two blue and white streamers fitted to the trailing edge of the bottom wings. The undercarriage and struts were probably black as well; this may even apply to the wings, but they more likely retained their 'lozenge' fabric finish.

JASTA 33

▲ J33-1 ▼ J33-2

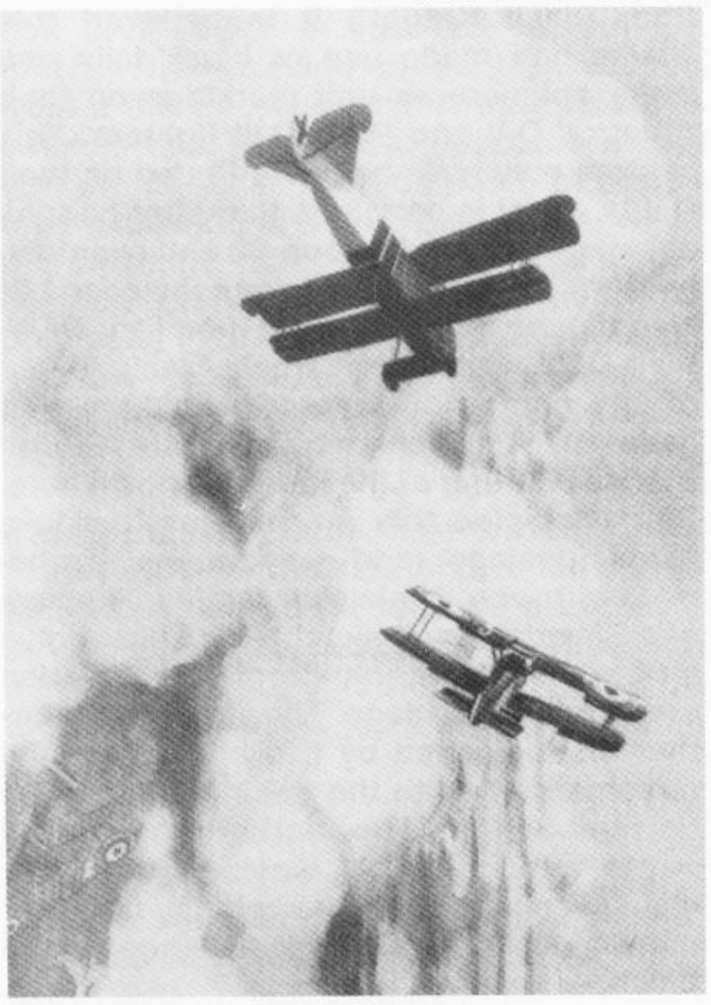
J33-1: Ltn. Carl-August von Schoenebeck, a former *Jasta* 11 pilot, transferred from *Jasta* 59 to take command of *Jasta* 33 in July 1918. He is seen in the cockpit of his Fokker D.VII (Alb) 6880/18. In his later years (he survived until 1989) he described the markings of his unit for several historians. He recalled that *Jasta* 33 Fokkers had yellow noses, with individual pilot identification achieved by white numbers painted on the metal cowling panels. The remainder of the aircraft retained their factory finish, though in at least one interview, von Schoenebeck stated that the tailplanes and elevators were yellow as well. He was not consistent on this point, however, and it seems unlikely. His own personal number on 6880/18 was reportedly a white '7' on the nose, and the rest of the machine was clearly covered with four-colour fabric. *(HAC/UTD)*

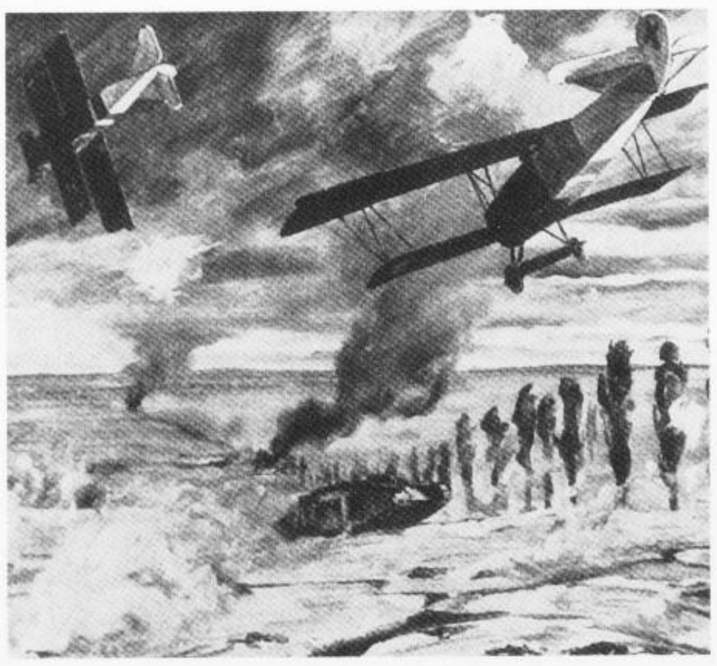
J33-2: This fine photo of *Ltn.* Karl Kühn in D.VII (OAW) 6305/18 provides a clear view of *Jasta* 33 marking practices. The nose is painted chrome yellow back to a vertical demarcation line at the leading edge of the lower wing, and a white '5' serves as a personal distinction. Otherwise, this D.VII was finished in four-colour fabric and bore standard OAW stencilling. A rack for flare cartridges appears beneath the cockpit. *(A Imrie via HAC/UTD)*

JASTA 34b

J34-1: This famous Bavarian *Staffel* received its first few D.VIIs as replacements for its worn-out Albatros D.Va and Pfalz D.IIIa machines on June 15 (a few Fokker triplanes were also on strength). The next day, a patrol with three D.VIIs and three triplanes was first carried out; between June 16 and 18 the *Jasta* achieved four confirmed victories and the war diary recorded, *'There is total joy with the Fokker D.VIIs!'* The traditional unit marking of a 'whitish-silver' tail and fuselage aft of the cockpit was applied to the D.VIIs, with pilots identified by vertical coloured bands. Most of the available pictorial documentation of *Jasta* 34b D.VIIs exists in the form of Rudolf Stark's evocative paintings. Here is Stark's rendering of the *Staffel* leader *Oblt.* Robert von Greim in a D.VII marked with his personal two red bands. The painting depicts Greim's 25th victory on September 27 1918, over a Sopwith Camel near Masnières. *(via P M Grosz)*

▼ J34-1 ▶ J34-2



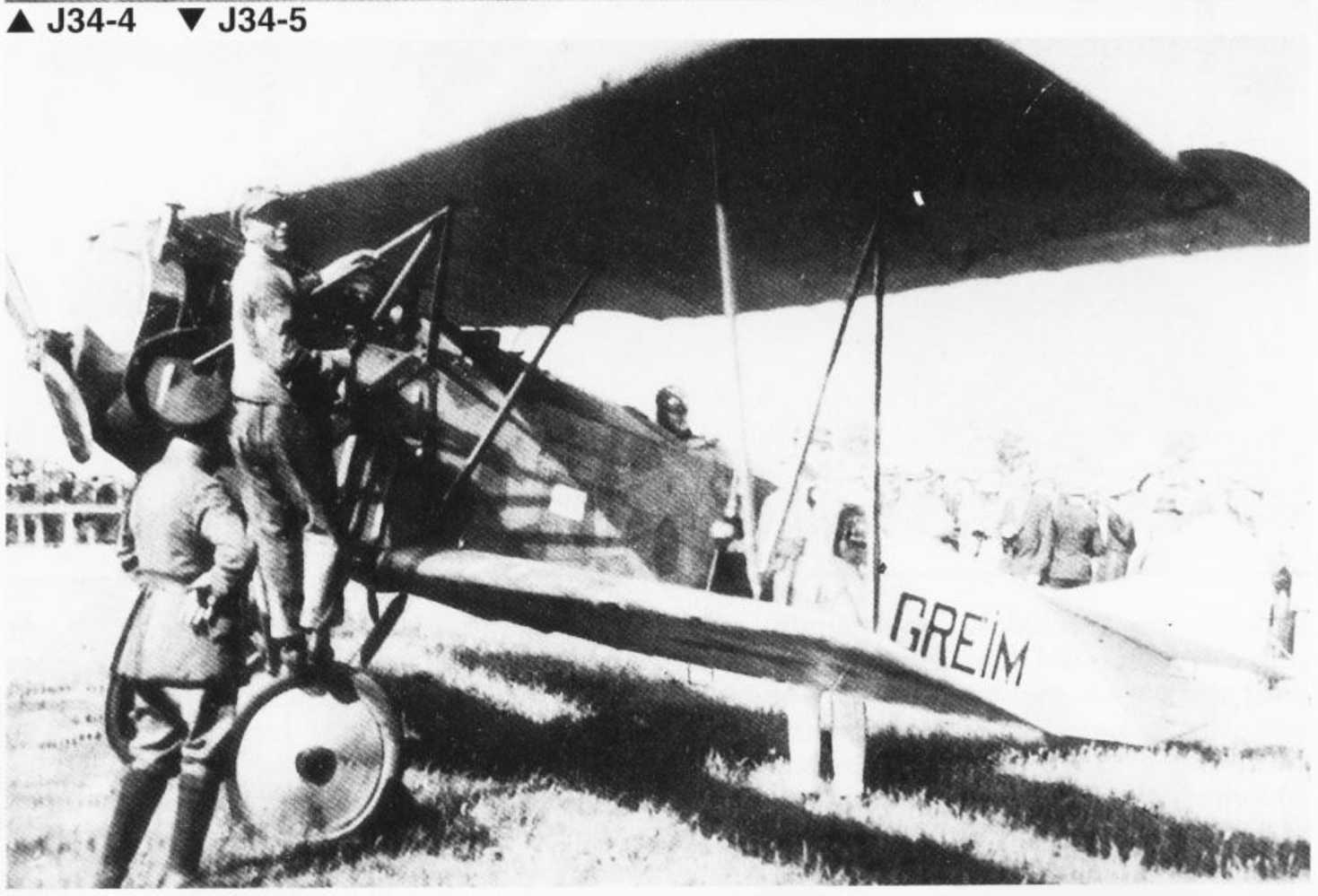


J34-2: Another Stark painting, illustrating the Fokkers of von Greim (left, with two red bands) and *Vzfw.* Johann Pütz (right, marked with two green bands) as they attacked a British tank near Foucucourt on August 23 1918. Stark illustrated both D.VIIs with the correct whitish-silver fuselages from the cockpit aft, and omitted the fuselage crosses; however, the following photos indicate that the fuselage insignia was retained on at least some aircraft. Among the other *Jasta* 34b pilots who *may* have flown D.VIIs, the war diary gives their personal colours as: *Vzfw.* Kahlow, one yellow band; *Ltn.* Kröhl, one red band; *Ltn.* Kithil, one black-trimmed white band; *Ltn.* Delling, one red-orange band.

▼ J34-3

J34-3: Jastaführer Robert von Greim strikes a classic pose with his *Jasta* 34b D.VII; on this machine the fuselage cross was obviously not overpainted. The style and position of the cross on the fin and rudder may indicate that this was an Albatros-built D.VII.

▲ J34-4 ▼ J34-5



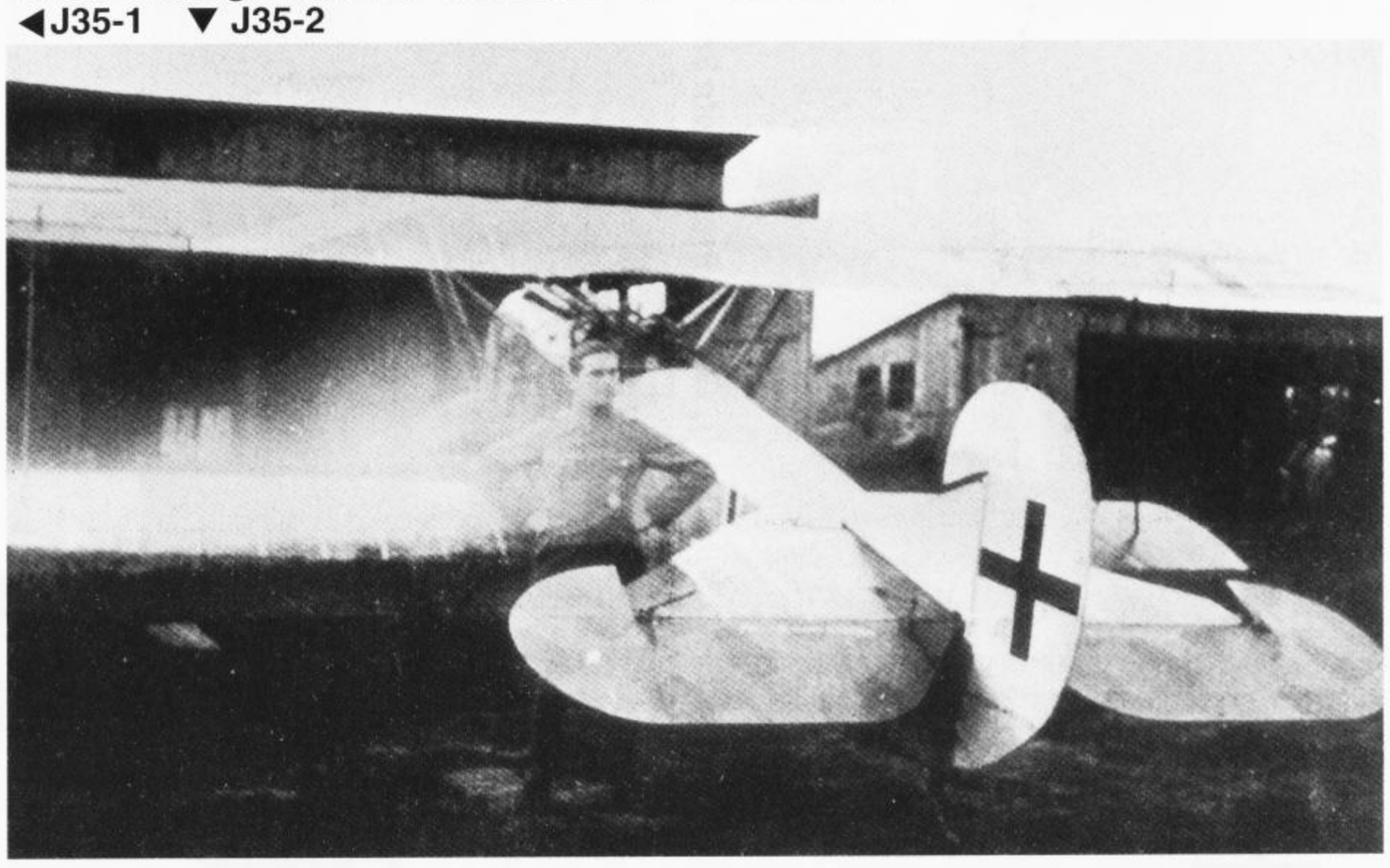
J34-4: This rare photo from Robert von Greim's album (provided through the courtesy of Peter Kilduff) shows *Oblt.* Greim's Fokker D. VII (Alb) in full livery. The *Jasta* commander's usual two red bands were somewhat crudely painted aft of the cockpit, and the rear fuselage, tailplane and elevators were in the squadron's silvery-white colour. The rest of the aircraft retained its finish of printed camouflage fabric, with a white (or silver?) fin and rudder. While Greim's earlier Albatros D.V had a red spinner and his Dr.I a red cowling, it is likely the cowling of this D.VII remained in factory finish greenish-grey. Beyond the tail of Greim's D.VII is another Fokker, probably the machine of *Vzfw.* Pütz with two green bands. *(via P Kilduff)*

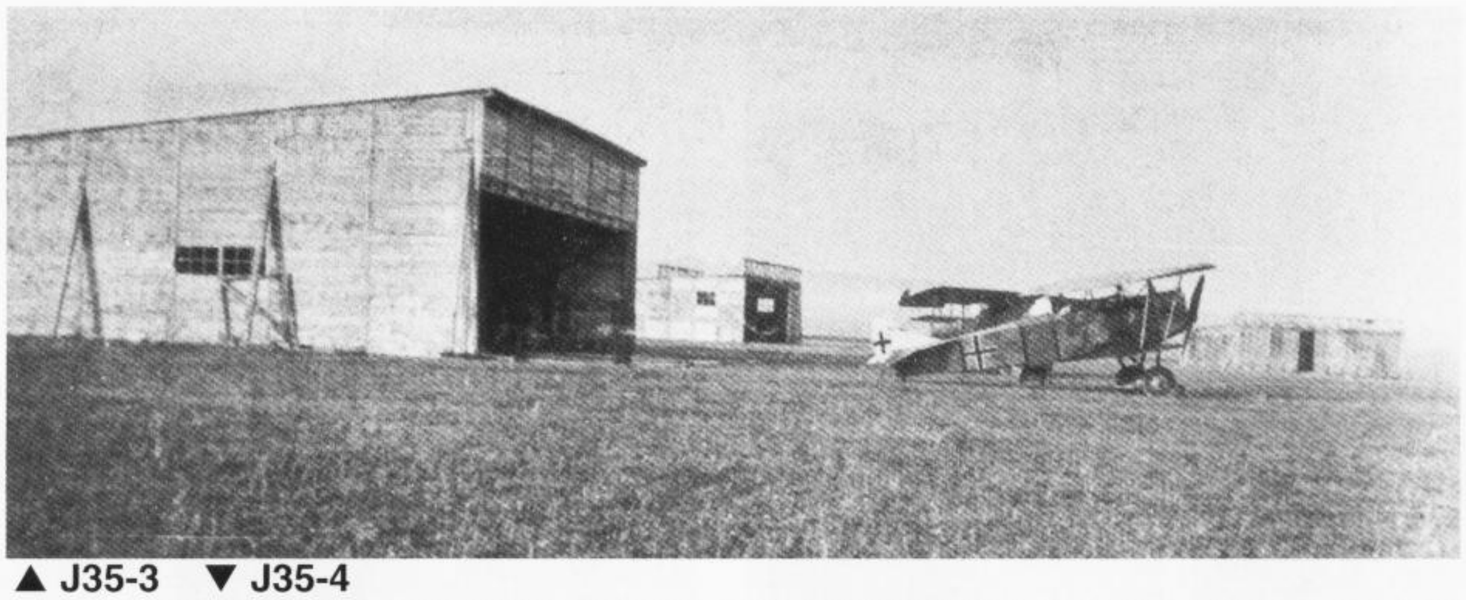
J34-5: While technically this is not a *Jasta* 34b aircraft this post-war D.VII (OAW) does provide insight into the unit's markings. In 1919 Bavaria, Robert von Greim and Ernst Udet gave aerobatic exhibitions, performing mock dogfights between Greim's D.VII and Udet's Fokker E.V/D.VIII. In this Munich photo, Udet is seen on the wheel of the D.VII, which is painted in an approximation of Greim's wartime colours. All national markings were obliterated, but the fuselage aft of the pilot was presumably 'silvery-white' with the ace's two red bands partially obscured by the onlooker. Greim has also assured his fame with the airshow crowds by applying his name in large black letters. Greim also flew a Rumpler D.I marked in similar colours at this time, but that aircraft bore the word 'RUMPLER' superimposed on the red stripes. *(via H J Nowarra)*

JASTA 35b

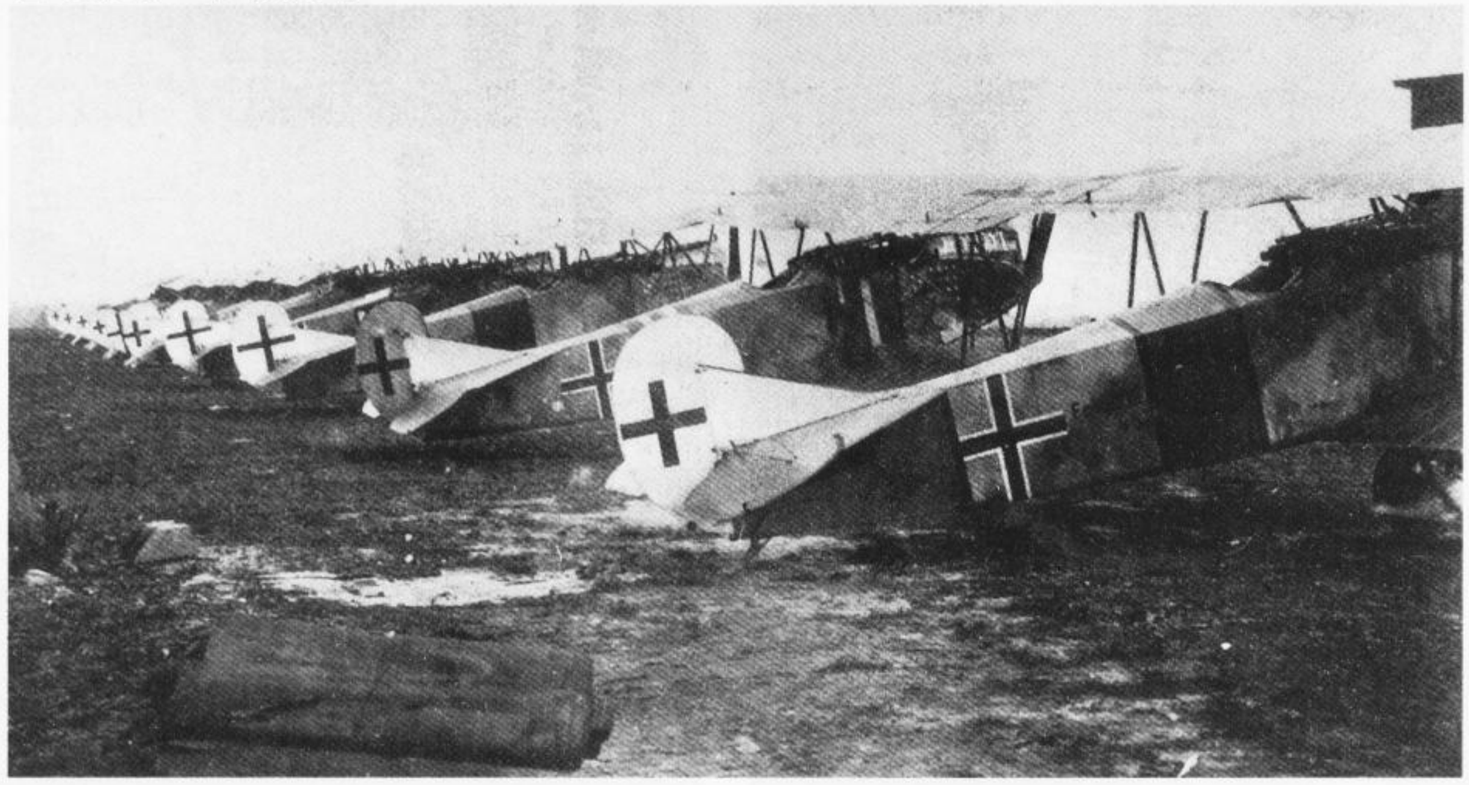
J35-1: Ltn.d.R. Rudolf Stark, commander of *Jasta* 35b, poses with his Fokker D.VII (OAW) 4523/18. This machine and five others were acquired by the unit on August 24 1918. This photo was probably taken soon after, as the nose is still in its OAW-style 'patch' camouflage finish. Stark flew this aircraft for the remainder of the war, and it would undergo several transitions in markings. The inverted chevron which was the *Staffel* marking can just be seen on the top of the upper wing; note the white serial number stencilling on the factory finish wheel cover. *(All of the* Jasta *35b photos which follow were copied from the Stark album by Alex Imrie; copies of these were obtained from HAC/UTD and the Grosz Collection)*

◀J35-1 ▼ J35-2

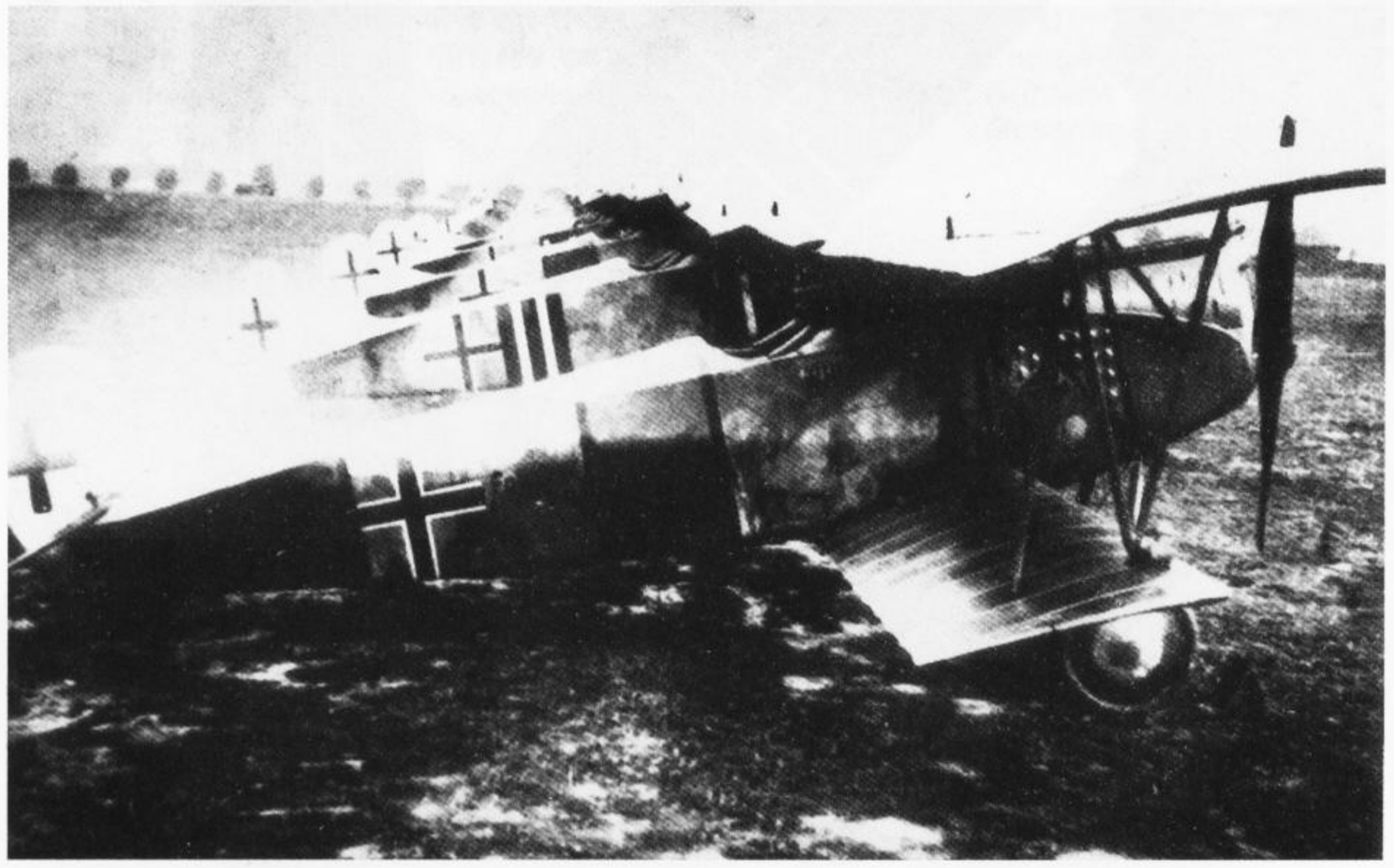




▲ J35-3 ▼ J35-4



▲ J35-6 ▼ J35-7



J35-2: Rudolf Stark again poses with 4523/18. At this time the only special markings were the chevron on the wings and a vertical lilac band bordered in black behind the cockpit. In his classic book *Wings of War*, Stark described the painting of his unit's Fokkers: *'The painter marks them with the* Staffel*'s badge, the arrowhead on the wings; then he paints the fuselages with the coloured bands that are the badges of the individual pilots. He takes particular pains with my machine, embellishing my lilac stripe with narrow black edges.'* It seems the 'arrowhead' (an inverted chevron) was usually white on the top wing and black on the underside of the lower wing. Stark, however, apparently used a lilac version on his upper wing to further distinguish the *Jasta* commander's machine.

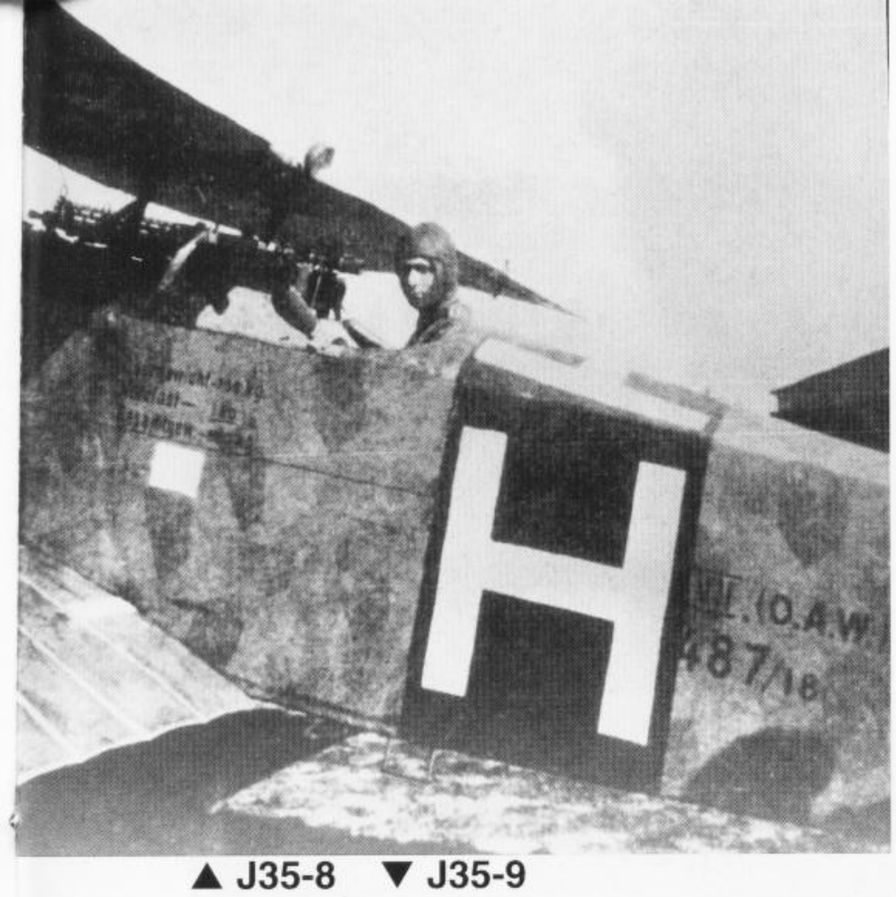
J35-3: At some point, the tail of 4523/18 was also painted lilac with a black edging, and the nose was painted lilac as well.

▲ J35-5

J35-5: Just discernible in this view of Stark and 4523/18 are the top wing chevron, the lilac fuselage band and tail. A black-white-red leader's streamer is seen affixed to the rudder post and draped over the bracing wire.

J35-4 and J35-6: Two views of the colourful line-up of six D.VIIs and four Pfalz D.XIIs assembled at Lieu St. Amand aerodrome on the occasion of the inspection of *Jagdgruppe* 8b by General von Bruck, September 14 1918. Stark himself identified the respective pilots and colours of the first four Fokkers in notes compiled late in life, copies of which are on file at HAC/UTD. The first aircraft is Stark's 4523/18 with lilac *decór*. The second machine is identified as the aircraft of *Gefr.* Xaver Prey, which bore black and white fuselage bands - and apparently a black nose as well; additional paint or fabric repair is seen on the forward fuselage. The third OAW-built D.VII was apparently flown by *Gefr.* Caspar Schmidt, which Stark reported was marked with a dark red band (this was bordered in black, and the machine probably sported a red nose as well). The fourth Fokker is 4487/18, flown by *Ltn.d.R.* Stoer; his emblem was a white 'H' on a green band, along with a green nose. All these D.VIIs came from the second OAW batch, most from the 4480-4530/18 sequence - note the differences in cross formats on the tails. Stark noted that the universal 45° angle of the airscrews was a decision arrived at after much discussion...

J35-7: A blemished view of the September 14 line-up.



▲ J35-8 ▼ J35-9

J35-8: Ltn.d.R. Friedrich Stoer in his D.VII (OAW) 4487/18. Like all of the unit's Fokkers, this aircraft was covered in four-colour fabric and had light rib tapes. The colour of the band is recorded as green; the significance of the 'H' is unconfirmed, but it may refer to a lady friend.

J35-9: A *Jasta* 35b pilot identified as *Ltn.* Ach poses with riding crop and D.VII (OAW) 4530/18. Stark's notes record that the two-colour borders along the fuselage edges were Bavarian blue and white, and that this machine was flown by *Ltn.d.R.* Karl Beyschlag. Ach probably flew it as well.

J35-10: Jasta 35b mechanics hard at work on D.VII (OAW) 4530/18 with its blue and white edging. The *Jasta* chevron, apparently white, can just be seen on the top wing. Note the extensive louvres on the upper cowling panels, characteristic of this group of OAW machines.

▲ J35-10 ▼ J35-11

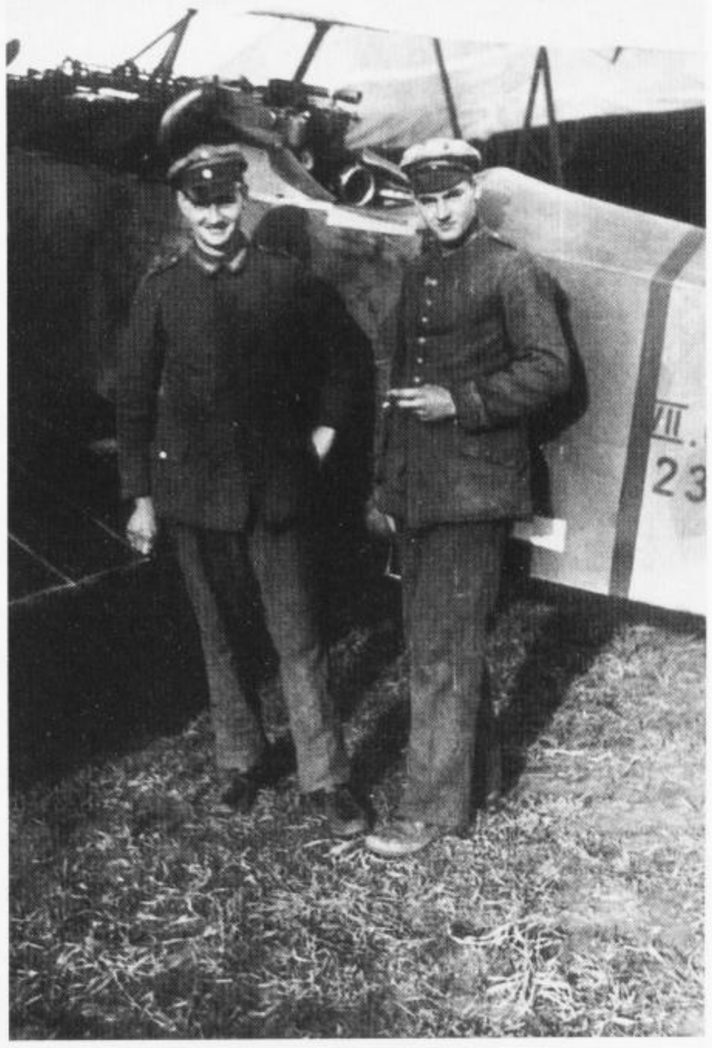
▼ J35-13

J35-11: Ultimately Stark added the white letters 'Li' to his lilac band as a final touch; another reference to a lady friend, most likely.

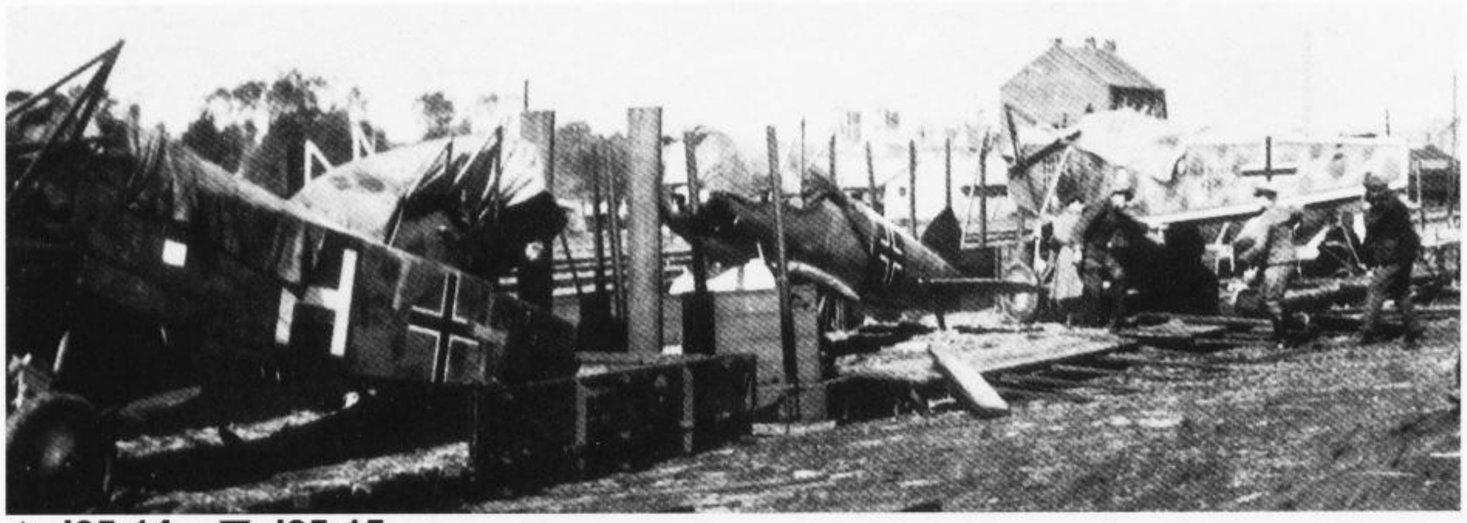
J35-12: Another perspective of 4523/18 in its final livery. Note the tubular gun sight and the weights table:

Leergewicht - 700 kg.
Nutzlast - 180 kg.
Gesamtgew - 880 kg.

▼ J35-12



J35-13: Two unidentified *Jasta* 35b members with 4523/18. (*Imrie via Grosz*)

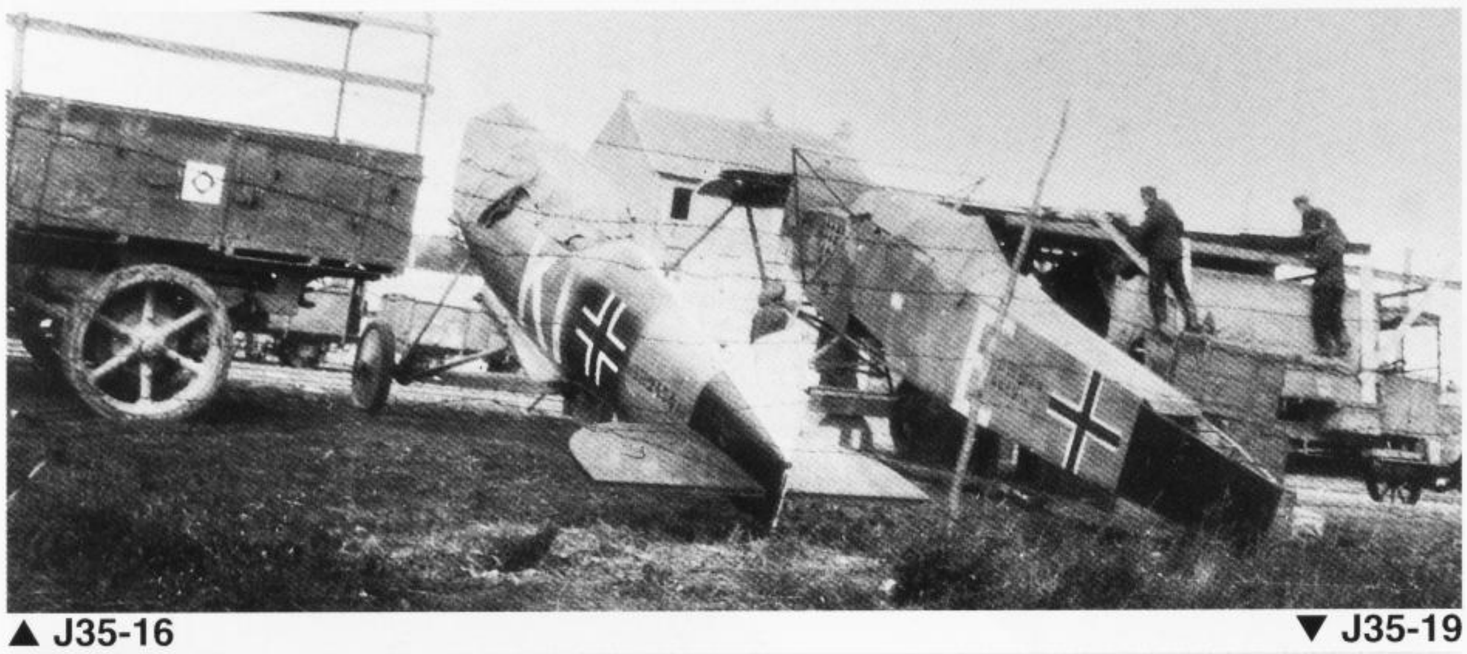


▲ J35-14 ▼ J35-15

J35-14: Fokkers and Pfalz D.XIIs of *Jasta* 35b loaded on railway cars at Bouchain, near Valenciennes, for transport to Bühl on September 25 1918. At left is D.VII (OAW) 4487/18 with the green band and at far right 4530/18 is being loaded. Both bear typical OAW-factory finish wheel covers in mauve and green.

J35-15: Another view of 4530/18 with its blue and white edging as it is prepared for rail transport at Bouchain.

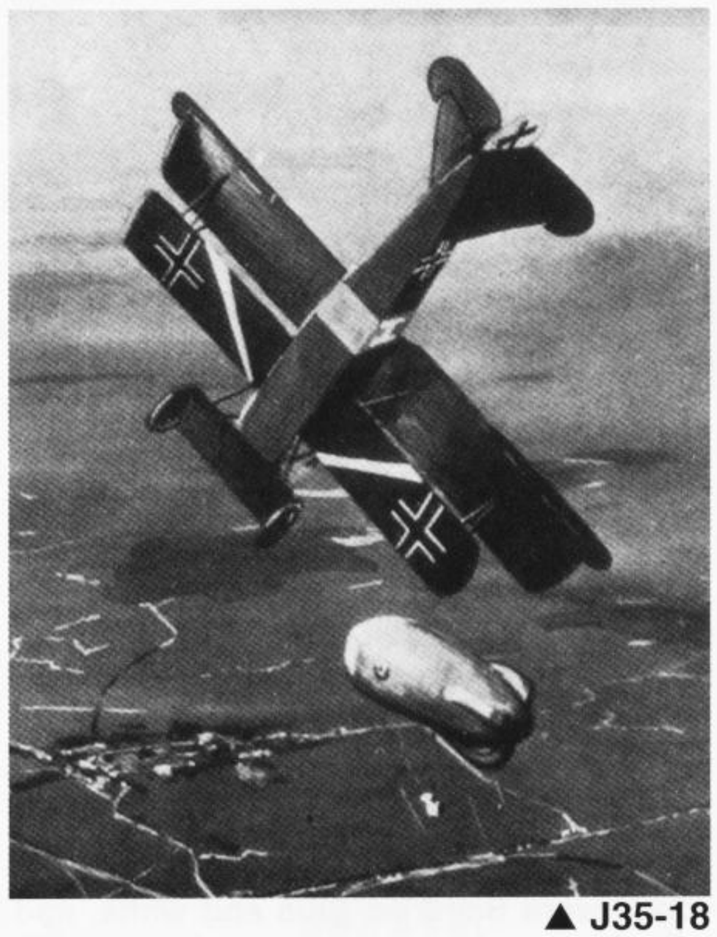
J35-I6: Transport of Pfalz DXII 2454/18 and DVII (OAW) 4489/18 at Bouchain, September 25. The Fokker bore a dark coloured tail and the white letter 'E'.



▲ J35-16 ▼ J35-19

▲ J35-17

J35-17: A Rudolf Stark painting of Fokkers (and a Pfalz D.XII?) of *Jasta* 35b under attack by British fighters. Note the white chevrons on the upper wings and the various personal markings. *(via P M Grosz)*



▲ J35-18

J35-18: Ltn.d.R. Stoer attacks a British balloon. Stark depicted the lower wing chevron as white, but this may be artistic licence. His own notes describe the marking in this location as black.

J35-19: A fine view of D.VII (OAW) 4487/18, with the green band and white 'H'. While identified as Stoer's usual machine, the pilot in this photo does not resemble Stoer; in fact he looks like *Ltn.d.R.* Rudolf Hess (yes, *the* Rudolf Hess, later of Spandau prison!). Hess is recorded as having used a dark red band as a personal emblem, so perhaps this was, again, a convenient pose. Stark's notes also state that *Ltn.d.R.* Boemer of the unit flew a machine marked with three intertwined yellow rings; unfortunately no photos of such an aircraft have surfaced.

J35-20: NCO pilots of the *Staffel* strike jaunty poses with D.VII (OAW) 4529/18. From left to right: *Uffz.* Meyer, *Uffz.* Werneburg, *Uffz.* Prey, unknown, unknown, *Uffz.* Gassl, and two more unidentified airmen. This D.VII may have been *Uffz.* Schmidt's machine, its black-bordered red band now additionally marked with a partially obscured name.

▲ J35-20

JASTA 36

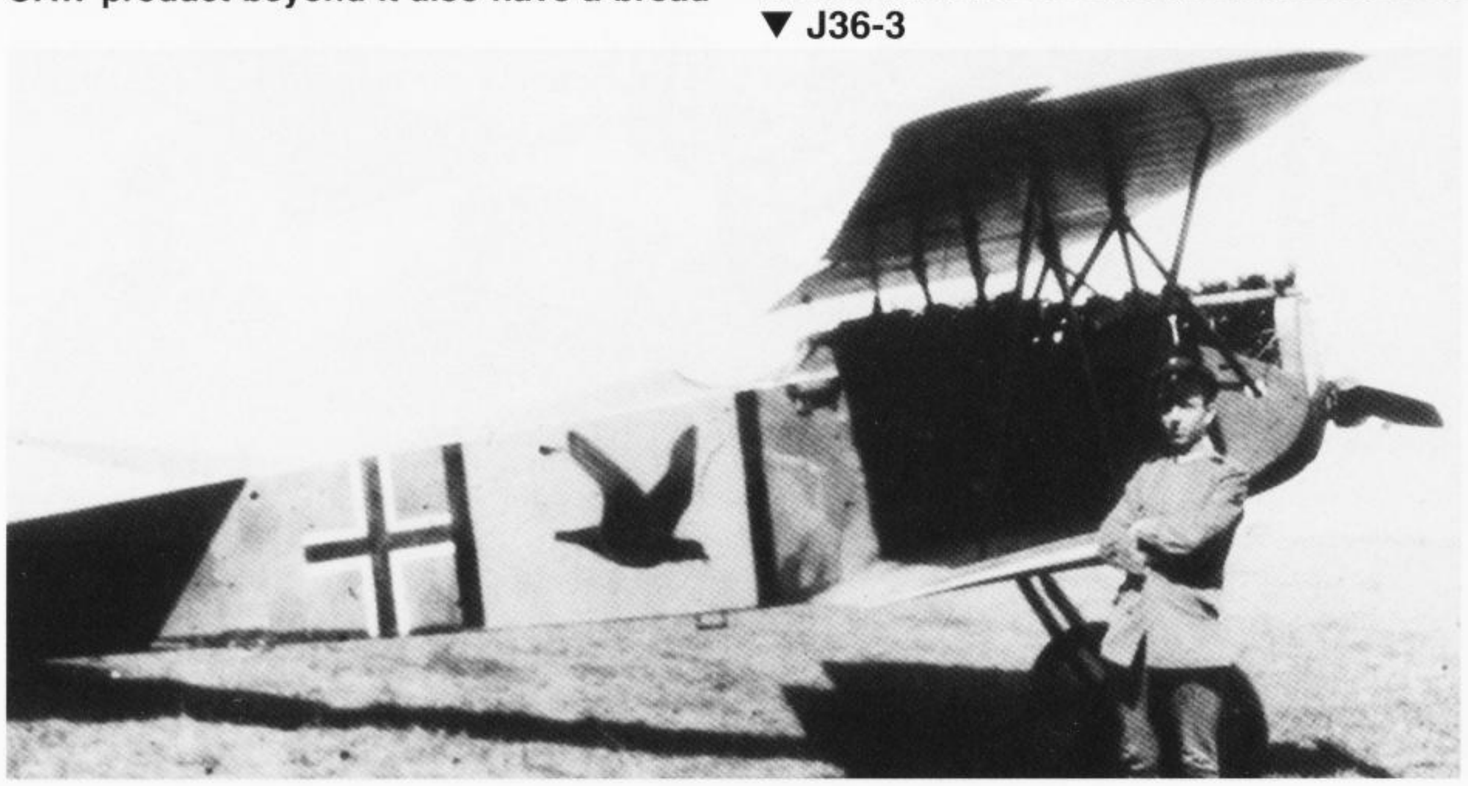
J36-1: Information and photographs pertaining to any D.VII fighters allocated to *Jasta* 36 have proven very elusive. This *Staffel* kept its Fokker triplanes longer than the other units of *JG* III (*Jagdstaffeln Boelcke,* 26 and 27), and was still equipped largely with the Dr.I as late as mid-July. In August the unit received examples of the Fokker E.V in exchange for some of their triplanes, and perhaps a few D.VIIs were on strength by this time as well. However on September 17 a British raid on the *Jasta* aerodrome at Aniche virtually put the unit out of action, destroying a Dr.I, a D.VII, and an E.V. Only one functional aircraft remained. It took a week for replacement D.VIIs to arrive. The following photos were found in the Ferko archive at HAC/UTD, and they had been *tentatively* identified as *Jasta* 36 D.VIIs by the late W R Puglisi; confirmation is unfortunately lacking. Each of these aircraft bears a colour of medium tonality painted on the forward section of the cowling and it is well-substantiated that the *Jasta* 36 unit marking was a blue nose. Both the Fokker-built machine in the foreground and the OAW product beyond it also have a broad fuselage band (of the same blue colour perhaps ?) aft of the cockpit. *(HAC/UTD)*

J36-2: A different perspective of the same two Fokkers reveals that the D.VII (OAW) in the background was marked with the Bavarian crest pattern of blue and white diamonds on the rear fuselage and horizontal tail surfaces as a personal emblem. The extent of the blue (?) colouration on the noses of these aircraft is very consistent with the display of the white colour on the sister unit of *Jasta* 36, *Jasta Boelcke.* In fact, each of the four *Jadgstaffeln* of *JG* III was marked with a specific colour on the nose to permit identification within large-scale (*Geschwader)* formations: *Jasta* B - white, 26 - black, 27 - yellow; though the application of that colour could vary considerably. Readers are cautioned that the labelling of these D.VIIs as *Jasta* 36 aircraft remains provisional. *(HAC/UTD)*

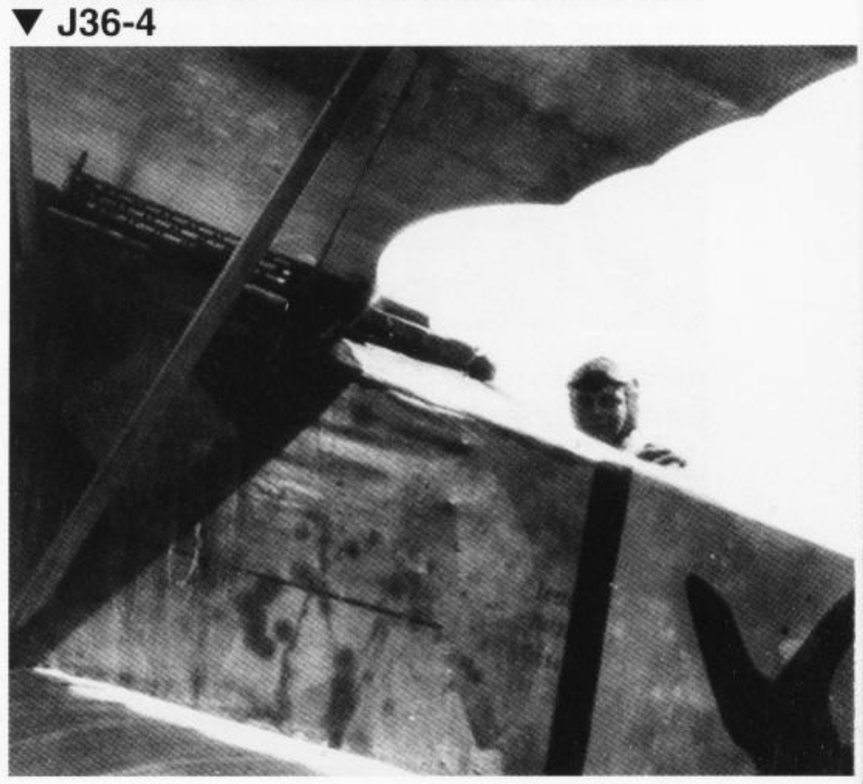
J36-3 and J36-4: This D.VII (Alb) was also cautiously labelled as a *Jadgstaffel* 36 machine in the Ferko files. If that attribution is accurate, the nose panels would probably have been blue, while a bird on a fuselage band of unknown colour served as a personal marking for the unidentified pilot. As with the other Fokkers pictured above, the rest of this aircraft retained its factory finish of printed camouflage fabric. *(HAC/UTD)*

▲ J36-1 ▼ J36-2

▼ J36-3



▼ J36-4



JASTA 37

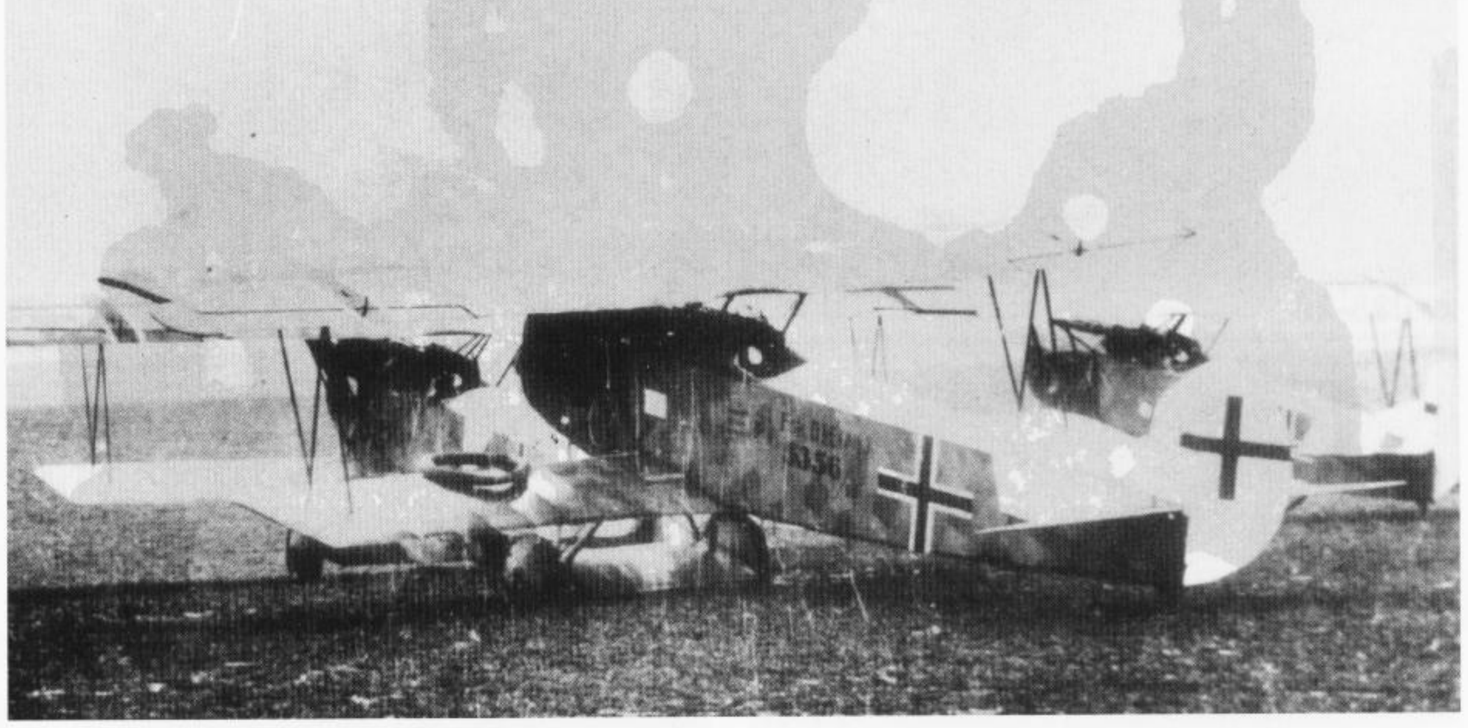
J37-1: Several Fokkers from *Jasta 37* were handed over to the Allies at Nivelles after the Armistice, and show up in photos taken of the large assembly of aircraft there. This D.VII (OAW) displays the unit marking of diagonal black and white stripes on the horizontal tail surfaces, the traditional emblem of *Jasta* 37. Though somewhat the worse for wear, the aeroplane also shows an individual 'R' painted on the fuselage and upper wing centre section. The colour of the 'R' and the vertical band just aft of it is unconfirmed. The interplane struts and wheel covers were also given a black and white treatment (which may have also been applied to the u/c struts). *(via G H Williams)*

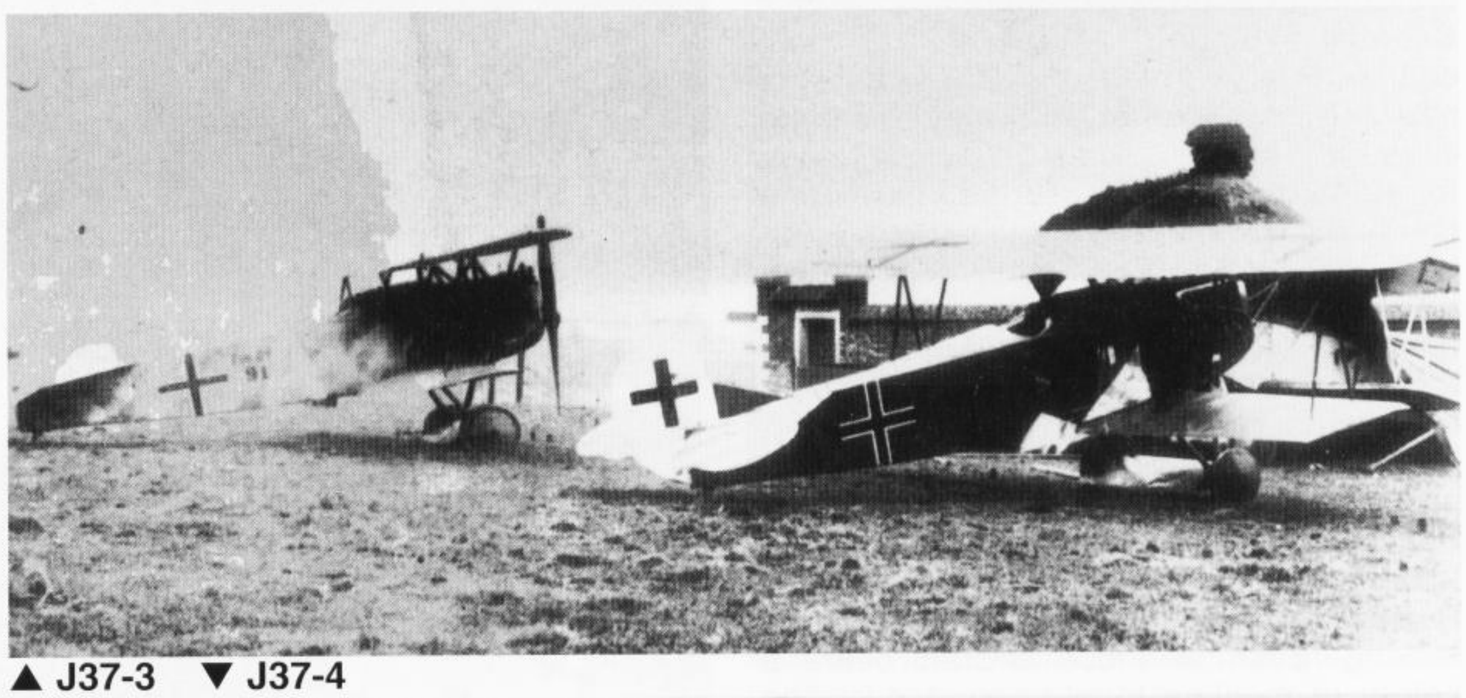
J37-2: At least one of these Fokkers seen at Nivelles - on the far right - was marked with *Jasta* 37 stripes on the tail. In the foreground is D.VII (Alb) 5356/18. *(via G H Williams)*

J37-3: The tattered Fokker-built D.VII at right was another *Jasta* 37 machine at Nivelles. The D.VII (Alb) 91??/18 at left may also have served in the *Staffel. (via P M Grosz)*

J37-4: The last leader of *Jasta* 37, *Ltn.d.R.* Georg Meyer, and his mechanics inevitably obscure the serial number and other details of his D.VII (Alb) in this photo from Hans Waldhausen's rare book *Sieg und Sturz.* Meyer's personal emblem was the black (?) bordered white sash on the printed-fabric fuselage. This aircraft would certainly have borne the *Staffel* marking of diagonal black/white tail stripes, and it seems the nose panels were possibly also painted in a personal colour (perhaps black). Notes in the Ferko files indicate that other D.VII pilots of this unit had individual nose colours. *Ltn.d.R.* Fritz Blume was known as *'gelbe Fritz'* (yellow Fritz) and had his D.VII painted yellow back to the cockpit. Similarly, *Ltn.* Heinrich Henkel was called '*Heinrich der Hesse*' and had the nose of his Fokker painted red in a like manner. *(HAC/UTD)*

▲ J37-1 ▼ J37-2





▲ J37-3 ▼ J37-4

JASTA 38

As explained in the *Jasta* 25 entry above, Gerhard Fieseler reported in his autobiography that one of the two Fokkers dispatched to the Macedonian theatre in July went to *Ltn.* Fritz Thiede who commanded what remained of *Jasta* 38. Nothing is known of the markings of this D.VII, but it is perhaps worth noting that all of the unit's victories after July were achieved by Thiede (three confirmed claims made in September).

JASTA 39

Thus far the author and publishers have been unable to locate any significant documentation of the use of D.VIIs by this unit, let alone photographs. There is circumstantial evidence (obtained by matching victory claims with Allied combat reports and losses, etc.,) that *Jasta* 39 had at least a partial complement of D.VII fighters by September, but nothing is available in regard to their colours.

▲ J40-1

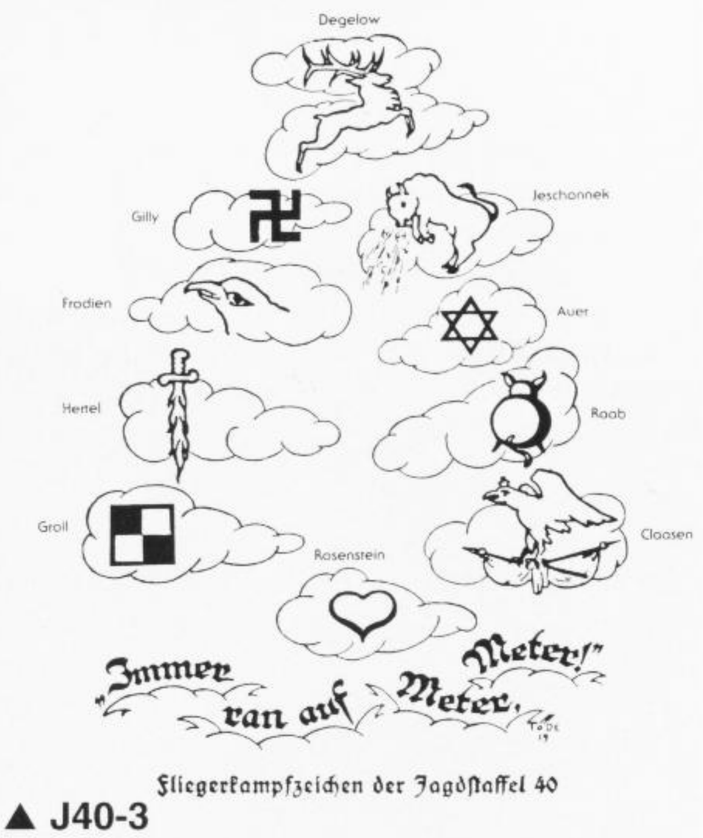
JASTA 40s

J40-1: Staffel commander *Ltn.d.R.* Carl Degelow's personal emblem of a white stag is beautifully displayed on the black fuselage of his Albatros-built D.VII. This symbol was closely based on the commercial trademark of the Dresden sanatorium *dem Weissen Hirsch* (see above), where Degelow had spent some time convalescing from a wound (the *Jasta* 66 ace Rudolf Windisch also occupied the sanatorium at some point, thus his choice of a similar insignia.) Degelow's stag was reportedly in silvery-white with black details and golden (yellow) antlers and hooves. Note the pale rib tapes on the printed fabric wing covering and the tubular sight. The aircraft was apparently undergoing maintenance as the upper fuselage panels ahead of the cockpit have been removed. The wrinkling of the fuselage fabric may be noted. *(Rosenstein album via R G Gill/G H Williams)*

▼ J40-2

J40-2: The unit heraldry of Royal Saxon *Jasta* 40 in July of 1918 consisted of black fuselages, wheel covers and possibly some wing uppersurfaces, with white tail assemblies as evidenced in this superb line-up. The *Staffel* pilots pose in front of six Fokkers, a Pfalz D.IIIa and Albatros D.Va resplendent in unit and personal markings. All of the Fokkers are Albatros-built and seem to have rudder crosses of 4:5 proportions. Degelow's machine is on the extreme right, marked with a white diagonal stripe on the upper wing, indicative of a *Jasta* commander's machine. Second from right is the D.VII of *Ltn.d.R.* Willy Rosenstein with his white heart emblem; Rosenstein was second-in-command, and the upper wing of his Fokker also bore a white marking, probably a single chordwise stripe on the centre-section. *Ltn.* Hans Jeschonnek flew the third aircraft, distinguished by a rampant bull in white and yellow. A white swastika identified the D.VII of the seven-victory ace *Ltn.d.R.* Hermann Gilly. Fifth from right is a D.VII marked with the white hawk's head of *Ltn.* Frodien. The last Fokker bore a crowned eagle grasping regimental standards, and is attributed to a little known NCO pilot named Glasen (or Claasen). Either the Albatros or the Pfalz may bear the flaming sword device associated with *Uffz.* Hertel. *(Rosenstein album via Gill/Williams)*

Above, the logo/trademark of Dr. Lahmann's Dresden sanatorium *dem Weissen Hirsch* was carried into battle by at least two of its former patients, Carl Degelow and Rudolf Windisch – see page 44 for colour paintings. *(GVW)*



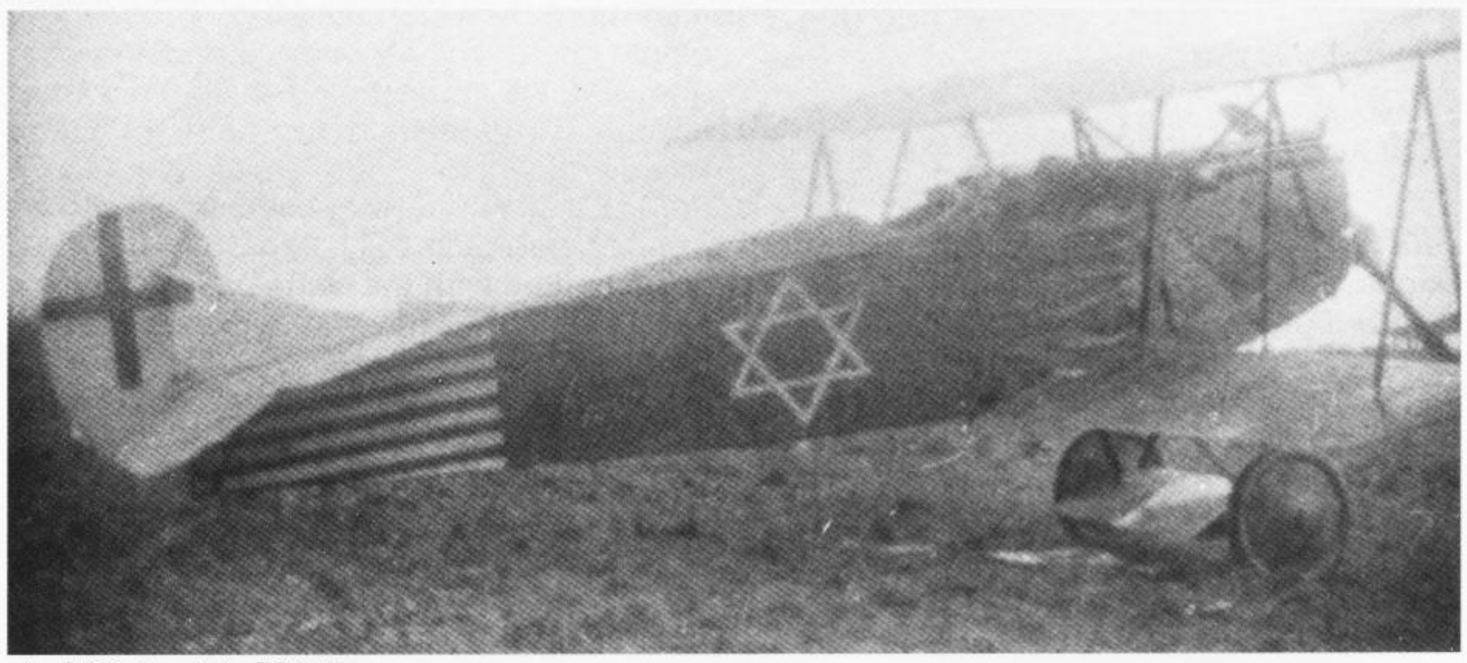
▲ J40-3

J40-3: A drawing originally published in Degelow's 1920 memoirs, *Mit dem weissen Hirsch durch dick und dünn,* showing stylized illustrations of the personal emblems of *Jasta* 40 pilots in the position they held in formation. The pilot identities were supplied to Peter Kilduff by Degelow and Adolf Auer, who reported that *Vzfw.* Paul Groll's quartered emblem was red and white. Kilduff also corresponded with former *Jasta* pilot Toni Raab. Like Rosenstein, Raab was Jewish. According to Kilduff's research, the emblem of a pig's hindquarters was forced upon Raab by anti-Semitic *Staffel* members. The author is indebted to Peter Kilduff for sharing information from his extensive studies.

J40-4: At some time following mid-August 1918, the markings of *Jasta* 40s were modified by the addition of narrow dark stripes to the formerly all-white tail sections of the Fokkers. When interviewed by Peter Kilduff in the 1970's, Adolf Auer recalled that these stripes were blue; if so it must have been a very dark, almost Prussian, blue. While attacking a British balloon on October 28, *Ltn.* Auer was wounded, forced down and captured by Capt. F O Soden and others of No.41 Squadron RAF. Standing by the cockpit are 2/Lt.D V McLeod and Lt.M S O'Rorke, both of whom participated in the fight. (*G T Collinson album via A Roesler*)

▲ J40-4 ▼ J40-5

J40-5: Major G H Bowman, CO of No.41 Squadron, on the wheel of *Ltn.* Auer's D.VII. This aircraft was fitted with a flare cartridge on the starboard side of the cockpit, and wooden shelf racks for *Wurfgranaten.* 15 bombs were affixed to both fuselage sides. The white Star of David was a personal identification, but it had no personal significance for Auer, who later recalled that it was assigned to him. He stated that he inherited one of Rosenstein's old aircraft, and the heart emblem was over-painted and the six-pointed star, which Auer *'took to be a runic symbol'*, was added in its place. Auer survived the war as a POW and later rose to high rank in the *Luftwaffe. (via F W Bailey)*



▲ J40-6 ▼ J40-7

J40-6: Another view of Auer's Fokker in British hands. Reportedly, this machine was given the British captured aircraft number G/2/27, with its serial number recorded as 4043/18. The latter, at least, must be incorrect as 4043/18 was a machine from the second OAW batch, and this aircraft was certainly Albatros-built. *(via F W Bailey)*

J40-7: Another perspective of Auer's Fokker in the hands of No.41 Squadron, showing how the tail stripes were painted on the underside of the tailplane as well as the top. (*via H Hugh Wynne*)

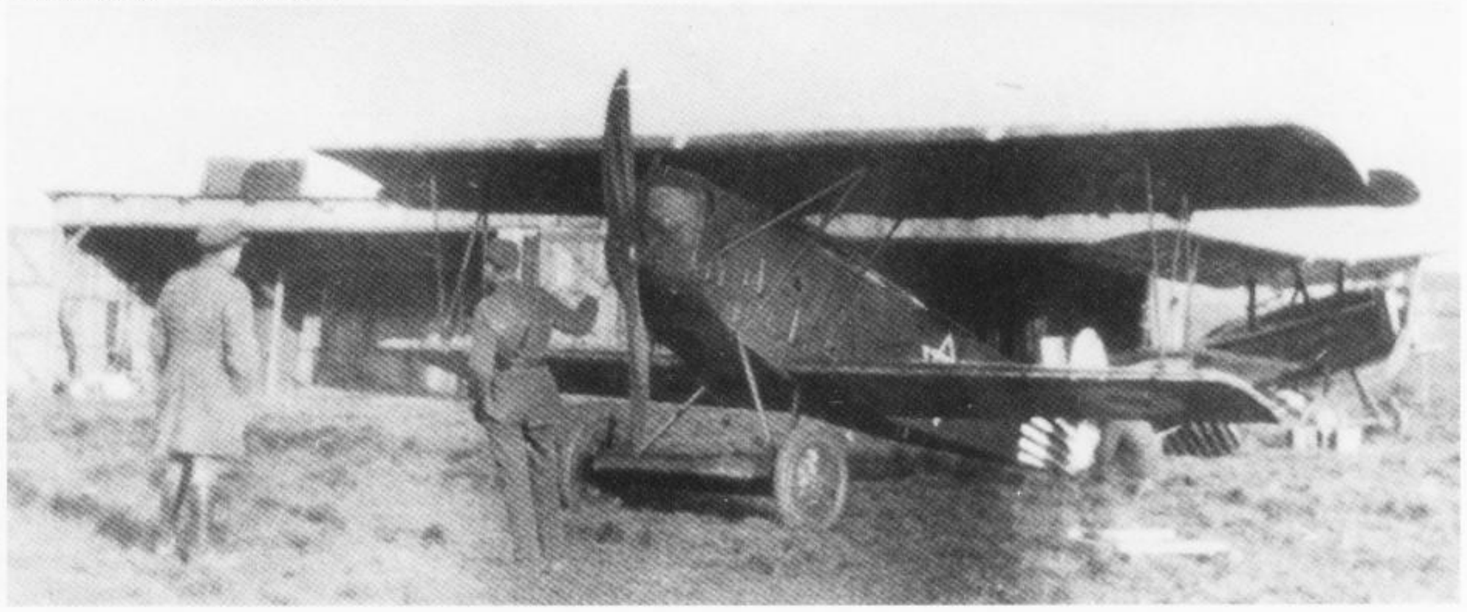


Fig. C: Ltn. Frodien's Fokker D.VII (Alb) from *Jasta* 40, serial unknown. Colours similar to Degelow's and Rosenstein's aircraft. Hawk's head was white with black details, probably.

Fig. D: Ltn.d.R. Willi Rosenstein's Fokker D.VII (Alb), Serial unknown, *Jasta* 40. Colours the same as Degelow's with a white chordwise (?) stripe in the centre of the upper wing. Personal emblem of a white heart. This machine, like Degelow's, was fitted with a tubular sight and an anemometer-type ASI on the port interplane strut.

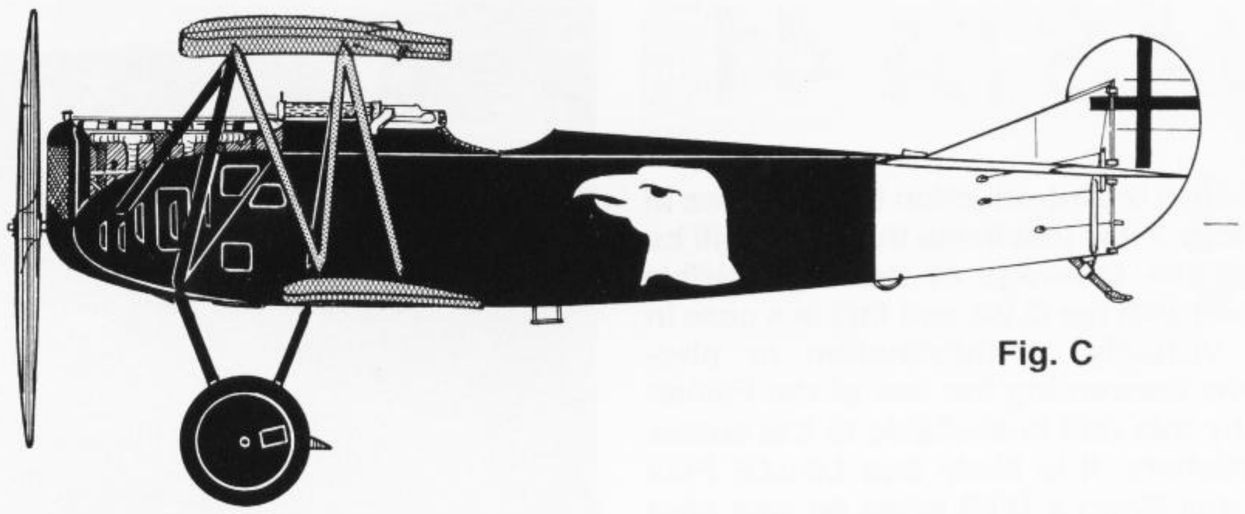


Fig. C

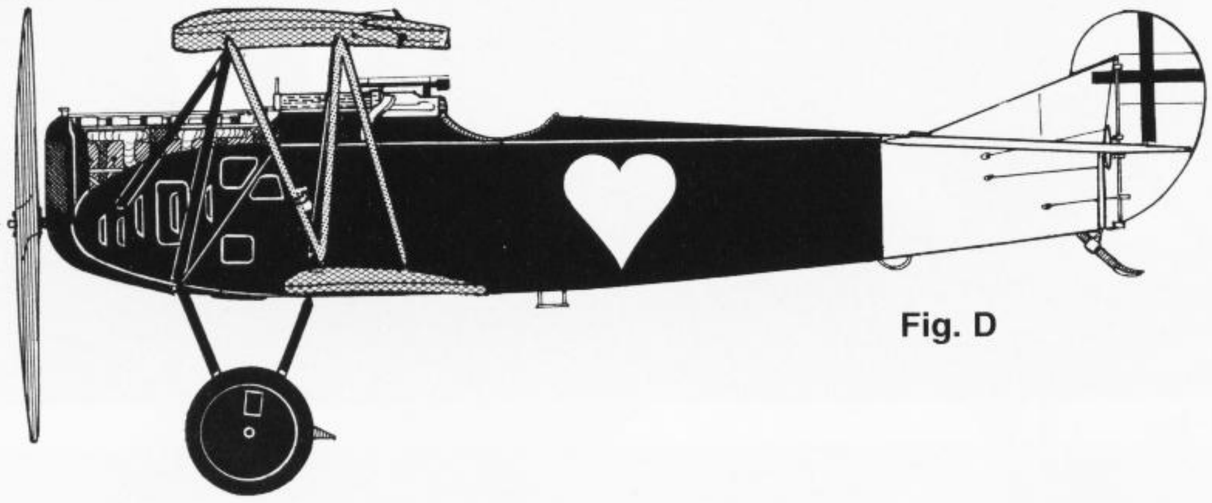
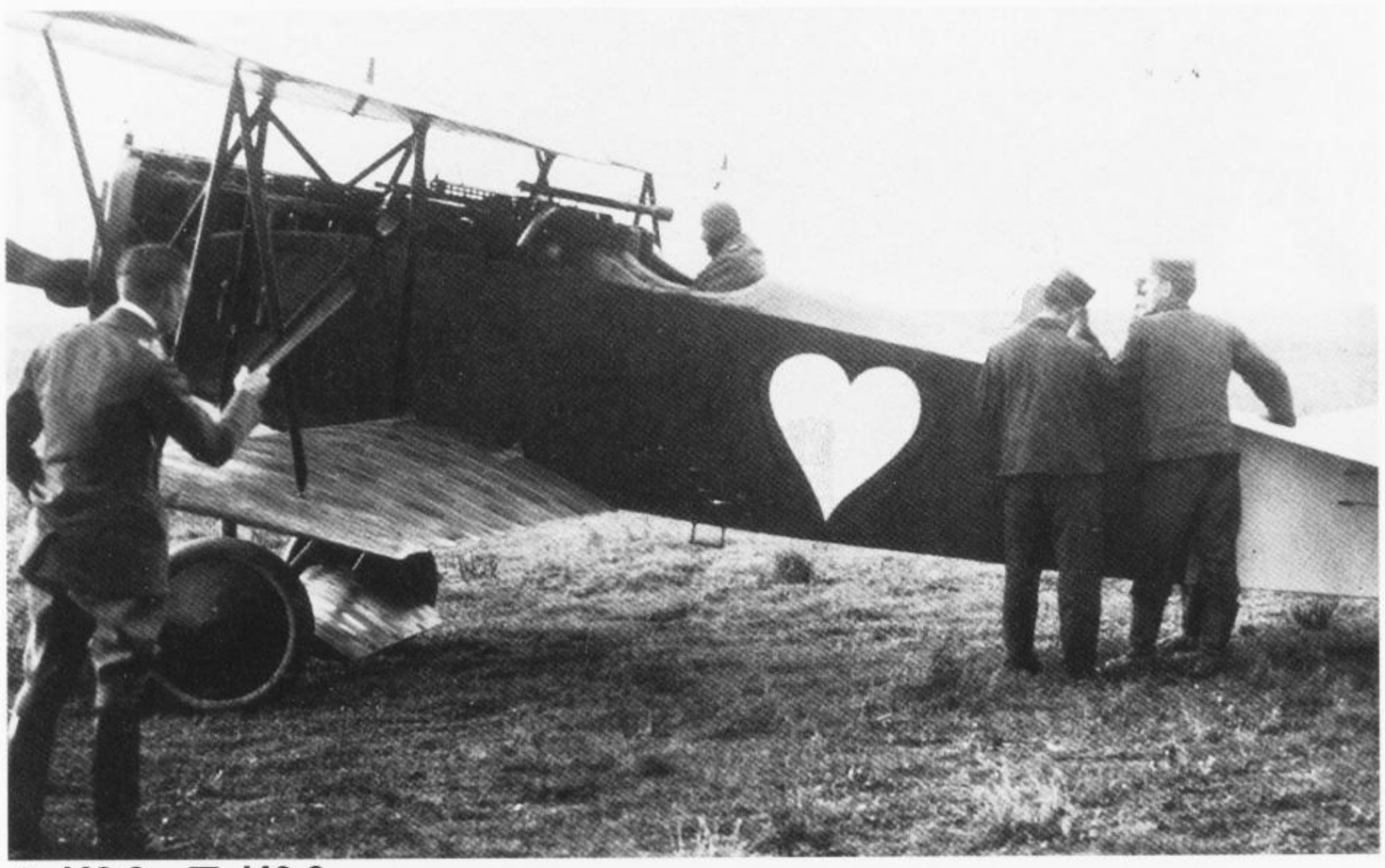


Fig. D



▲ J40-8 ▼ J40-9

J40-8: A fine view of *Ltn.d.R* Rosenstein preparing for a flight in his D.VII (Alb). Like Degelow's machine this Fokker is equipped with a tubular gunsight and has had the upper cowlings removed. The wheel covers and most of the struts are the same black as the fuselage. Degelow later wrote that the heart emblem *'clearly indicated a good relationship with the eternal woman'.* Adolf Auer of this unit wrote to historian Peter Kilduff that the heart badge and the other personal symbols were painted in silver; a few of these emblems may have had a measure of silver added, but white was clearly the dominant pigment. A Jewish pre-war pilot, Rosenstein survived the war with nine victories. *(Rosenstein album via Gill/Williams)*

J40-9: Ltn. d. R. Willy Rosenstein of *Jasta* 40 poses in front of the Albatros-built D.VII bearing the markings of *Ltn.* Hans Jeschonnek. It was not uncommon for pilots on both sides to pose in front of machines generally flown by someone else, much to the consternation of the researchers. Jeschonnek's personal emblem was, as described by Carl Degelow, a 'raging bull'. This insignia was painted in white with black details, and this photo reveals that the hooves and horns were a third colour, perhaps golden yellow like the antlers of Degelow's stag. Hans Jeschonnek would score two confirmed victories in WWI, and rise to the lofty rank of *Generaloberst* and *Luftwaffe* Chief of Staff in WWII – only to commit suicide in 1943.

JASTA 41

As stated in the introduction to this series in *Anthology 1* it is inevitable that there will be gaps in the coverage of the *Jagdstaffeln* equipped with the D.VII, and this is a case in point. Virtually no information or photographs concerning the use of the Fokker D. VII by this unit is available to the author or publishers. It is likely that *Ltn.d.R* Fritz Höhn was flying a D.VII when he was shot down and killed on October 3 1918, only two days after taking command of the *Jasta.*

JASTA 42

As in the case of the preceding *Staffel,* the possibility of the use of D.VII aircraft by this unit remains a mystery.

JASTA 43

J43-1: Ltn.d.R. Raesch of *Jasta* 43 in his D.VII (Alb), along with his mechanics. The Fokkers of this unit were all marked with white tail units. The forward fuselages were generally a dark colour (most often black), supplemented by various personal emblems on the fuselage. In 1961 Raesch wrote, *'..we had received eight Fokker D.VIIs from* Jasta *63* (sic) *on which, at that time, a raven was painted as a squadron insignia. These machines did not have the high compression Mercedes engines but we were, however, very happy to obtain these Fokkers...most of the pilots had their own insignia. My insignia was the head of a three prong fork'.* It seems likely that Raesch's statement concerning the *Jasta* 63 origin of his unit's aircraft was understandably mistaken after 43 years (*Jagdstaffeln* 43 and 63 did serve together in *Jagdgruppe* Nr. 3, in the Sixth Army). The distinct reference to raven insignia implies that those eight D.VIIs were handed down from *Jasta* 18 – perhaps when that elite unit transferred from the Sixth to the 19th Army in June 1918, or when it obtained Fokkers with high-compression engines? Some of the *Jasta* 43 D.VIIs seen in the following photos do seem to bear traces of *Jasta* 18 markings. *(via H H Wynne)*

J43-2: Another view of Raesch in his Albatros-built machine. Note the stencilling on the wheel cover. Raesch also stated in correspondence with WR Puglisi *circa* 1960 that the Fokkers of his unit were painted black; while this was largely true of *Uffz.* Rüggeberg's and *Ltn.d.R.* Jakobs's aircraft, photographs indicate that other colours may also have been used on the forward fuselages. Perhaps some ex-*Jasta* 18 machines retained a portion of their red markings? (*via H H Wynne*)

J43-3: Vzfw. Karl Büberg in his D.VII (Alb). The fixture below and ahead of the cockpit is an aperture for a flare pistol. This was a common *Jasta* 43 modification, along with the extra cooling louvres cut into the cowling. (*via P M Grosz*)

▲ J43-1

▲ J43-2 ▼ J43-3

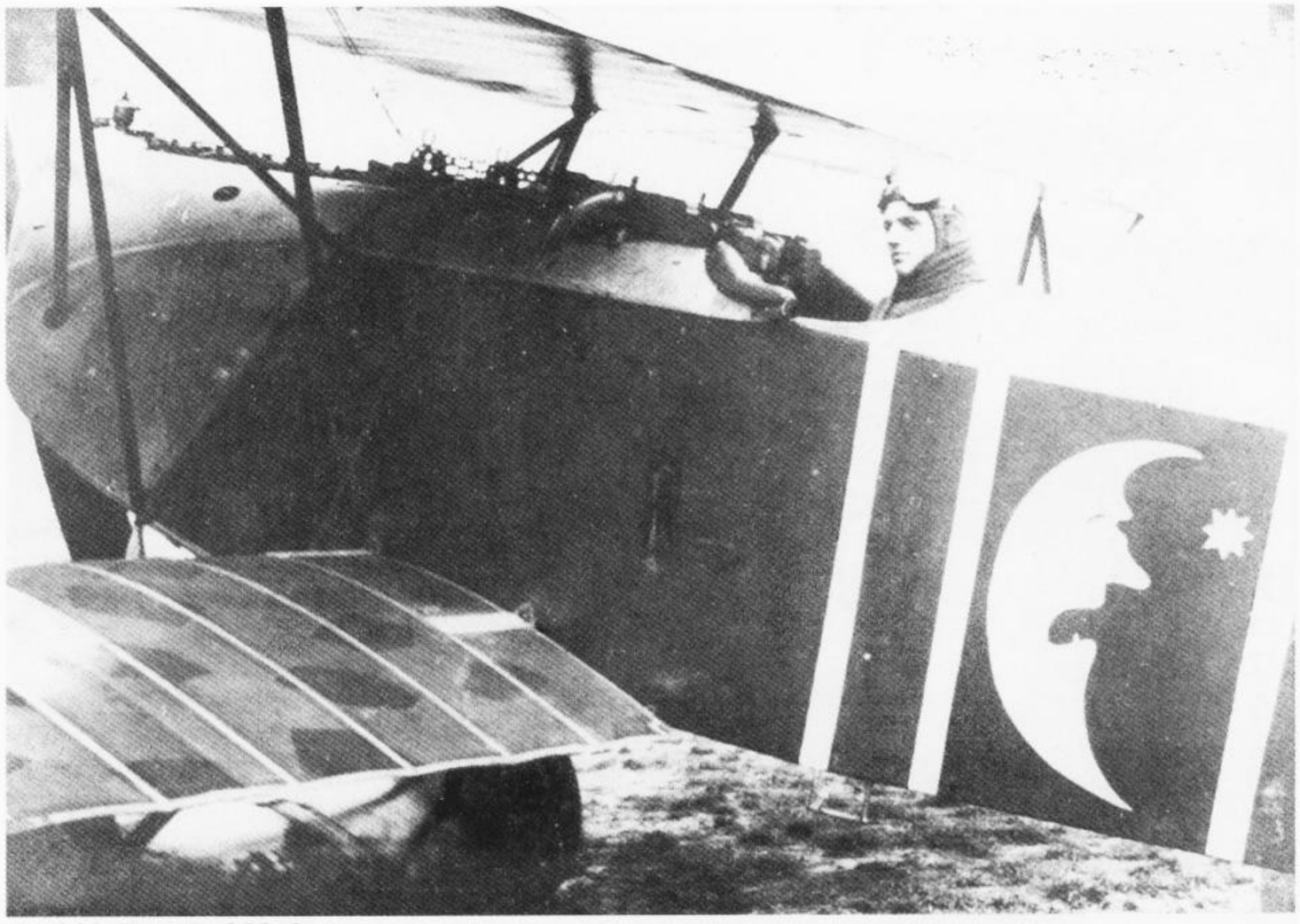
▲ J43-4

J43-4: Jasta 43 pilot *Vzfw.* Ernst Wiehle in his Albatros-built Fokker, again showing a tube for a signalling pistol and pale rib tapes on the wing's printed fabric. (*via P M Grosz*)

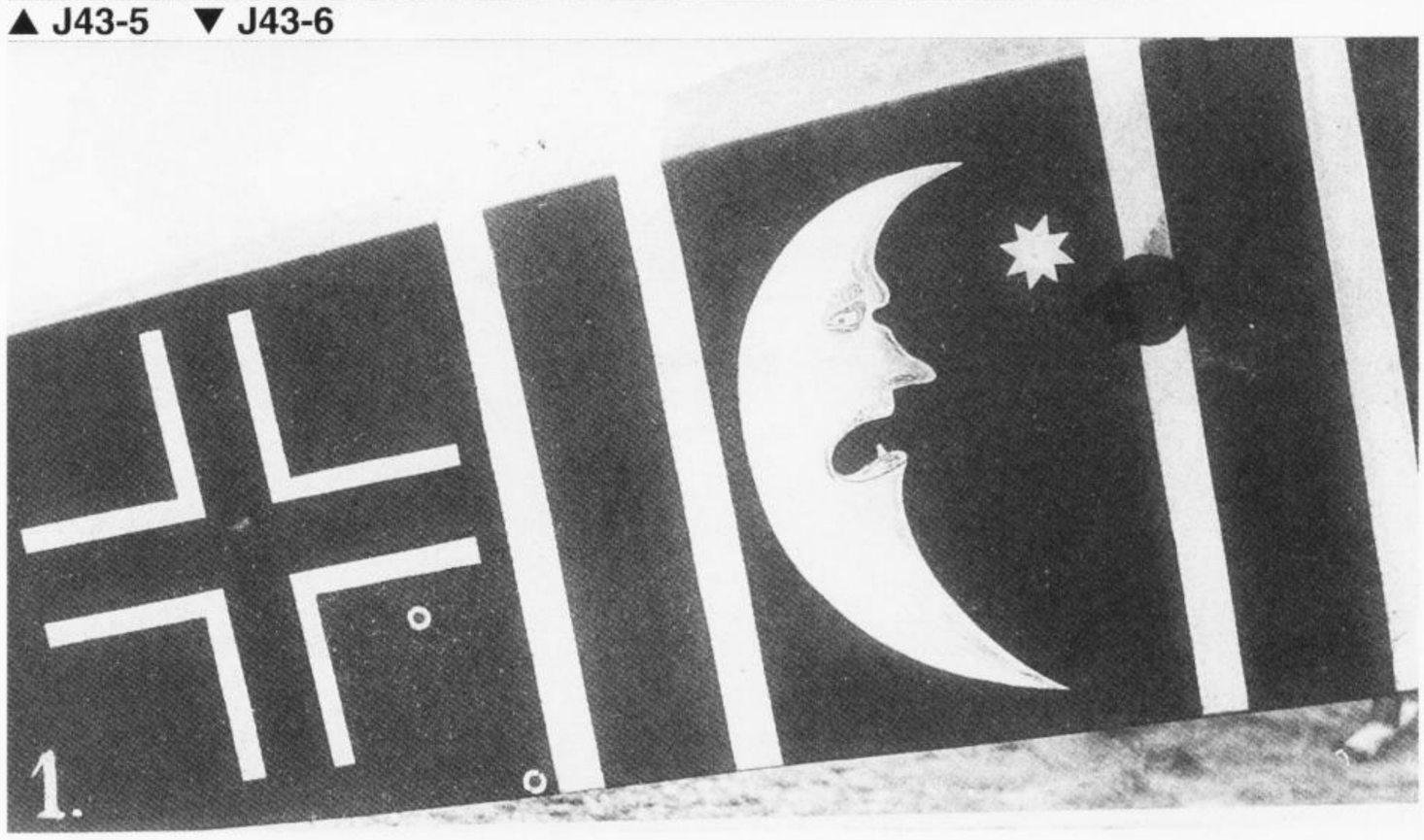
J43-5: A white star and crescent man-in-the-moon flanked by double white bands on a black fuselage identified the machine of *Ltn.d.R.* Friedrich Jakobs of *Jasta* 43. The metal cowling panel appears lighter in tone than the fabric fuselage covering. (*via H H Wynne*)

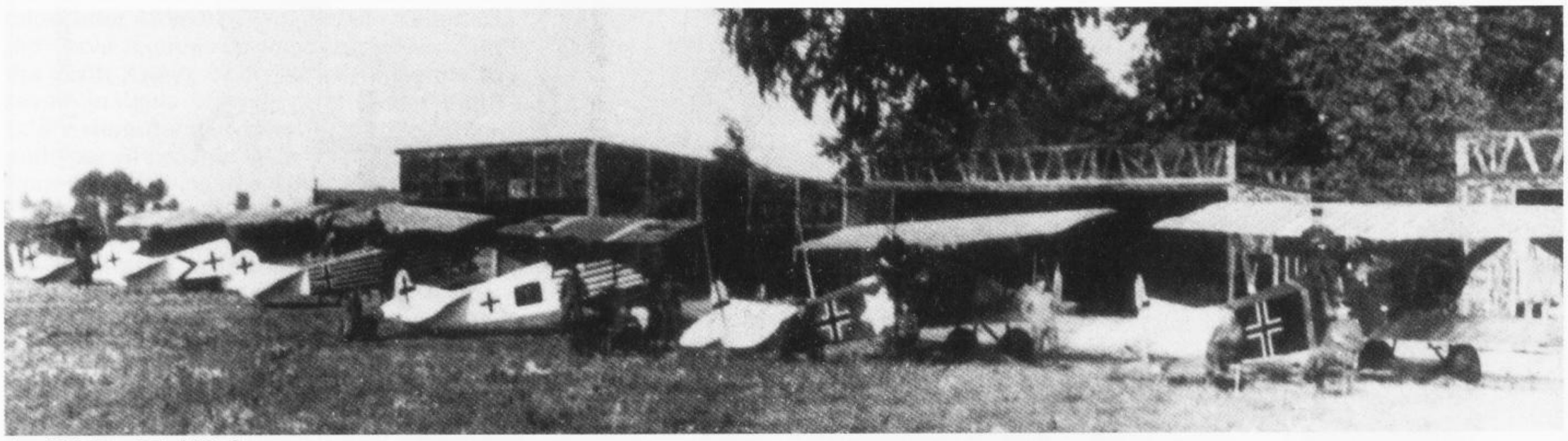
J43-6: A close-up of the side of *Ltn.d.R.* Jakobs's *Jasta* 40 Fokker D.VII. The basic colour was black with a white tail unit. Note what appear to be bullet hole patches beneath the cross. *(Albatros Archive)*

J43-7 and J43-8: The flamboyantly marked Fokkers of *Jasta* 43 on display – several are ex-*Jasta* 18 D.VIIs. The white tail markings of the unit are supplemented by an array of personal colours and symbols extending in some cases to the top of the upper wings. Other photos of aircraft of this *Staffel* reveal that each Fokker was also probably marked with a small black number on the white fin, but these numbers are not easily discernible in the views seen here. (*via H H Wynne*)

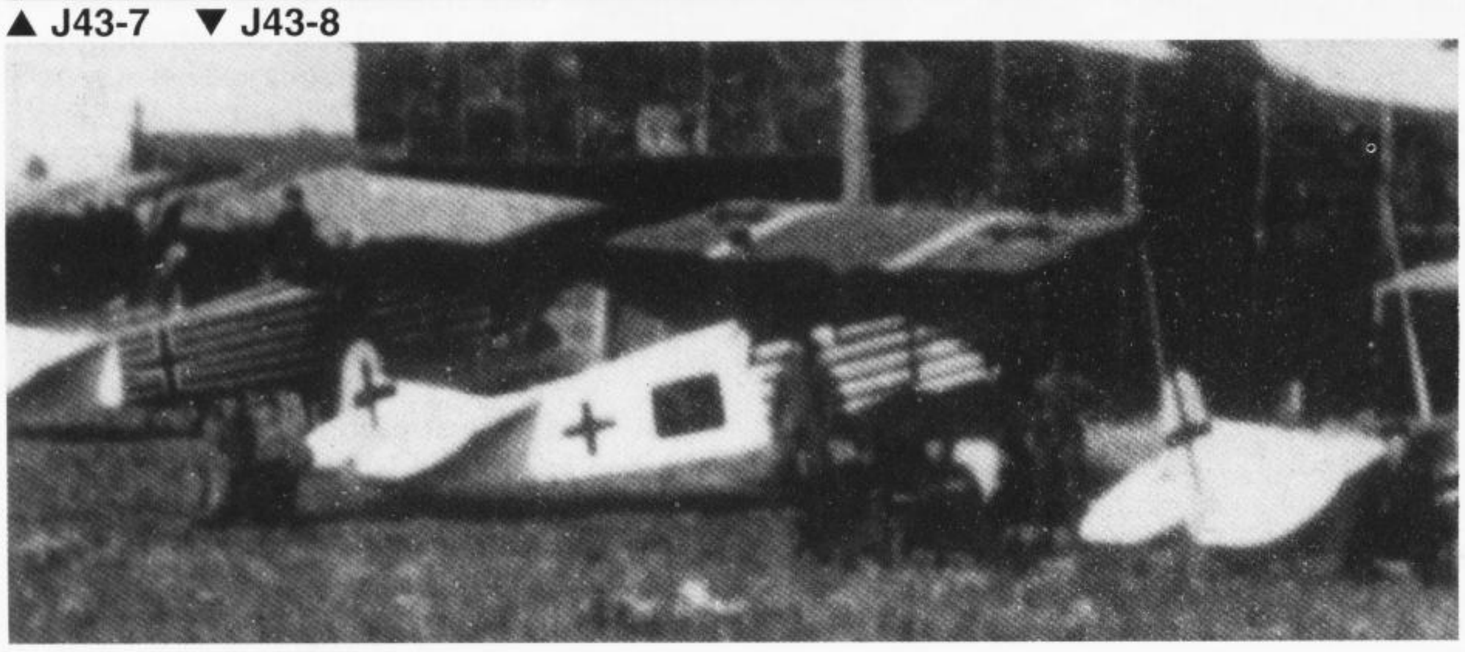


▲ J43-5 ▼ J43-6





▲ J43-7 ▼ J43-8



JASTA 44s

As a component unit of *Jagdgruppe Nr.* 12 in late 1918, Royal Saxon *Jasta* 44 was reportedly equipped with D.VII fighters, at least in part. However, virtually no documentary evidence nor photographs have surfaced to provide information on the heraldry these aircraft employed. As a Saxon *Staffel,* the unit may have made use of the state colours of green and white in its markings, but this is only speculation.

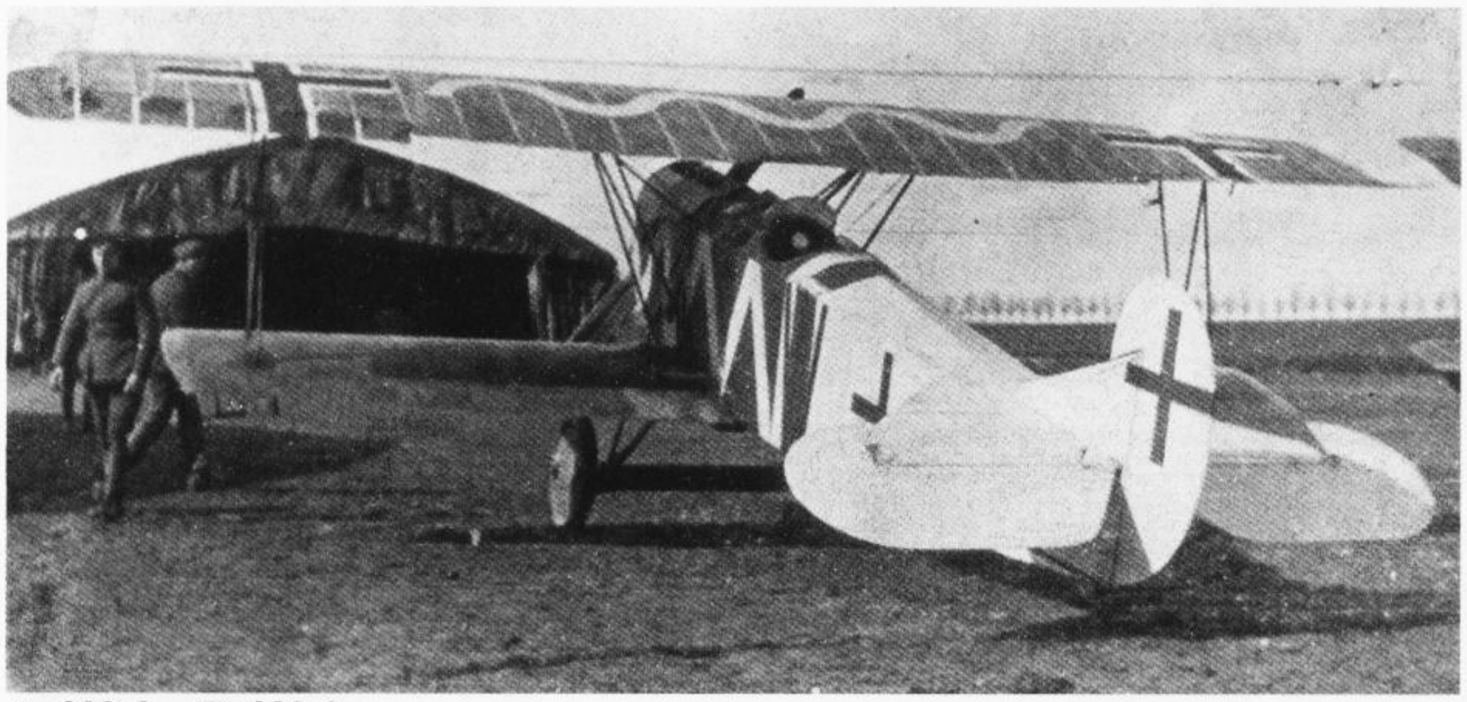
▲ J45-1

JASTA 45

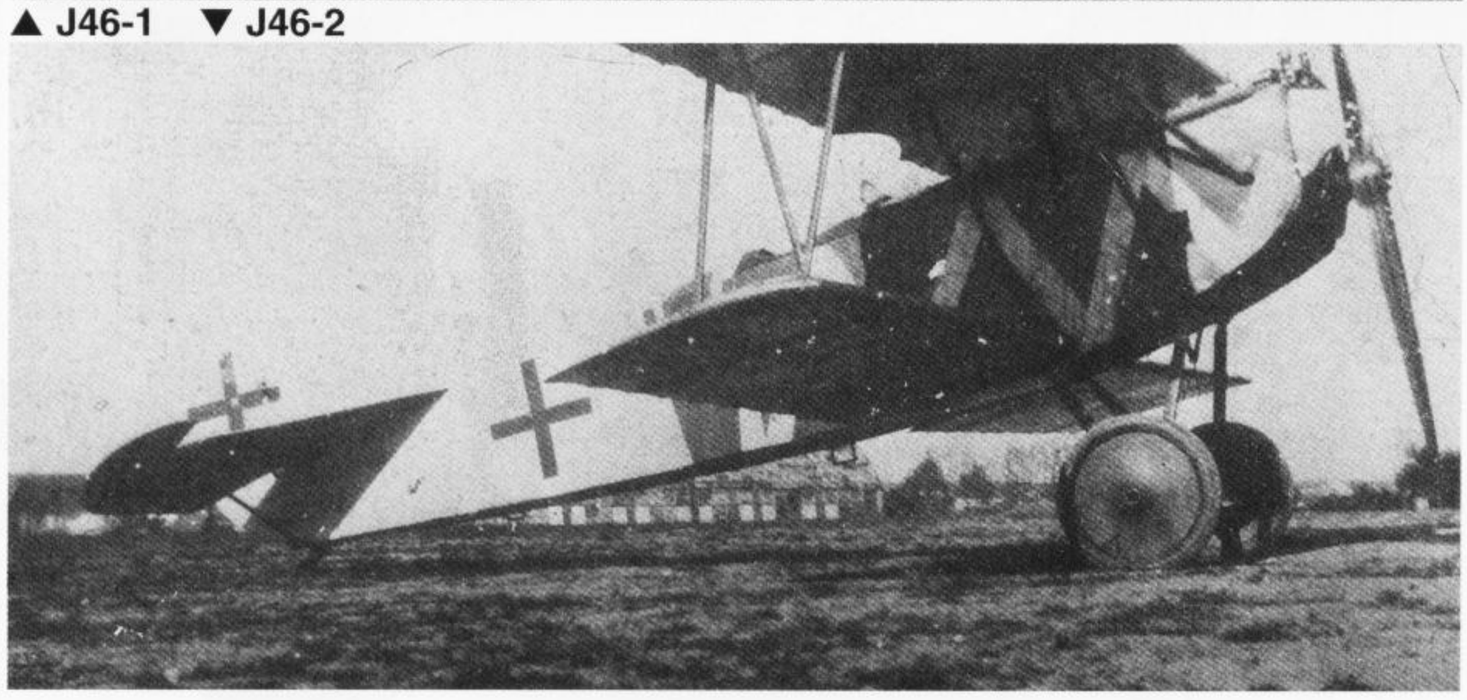
J45-1: Six D.VII fighters and five Albatros types are visible in this *Jasta* 45 line-up photo, reportedly taken in June 1918. The unit marking of the *Staffel* at this time was seemingly a dark nose and a white tail section, both areas having sharply oblique borders. Personal markings generally consisted of coloured bands aft of the nose; often these were applied in the same oblique fashion as the nose decor. Unfortunately, details of the colours employed on these OAW-built Fokkers are unavailable. While the white serial numbers are not legible, it is recorded that *Ltn.* Friedrich Wilhelm Dieves of this unit was taken prisoner on August 25 1918 in D.VII (OAW) 4162/18. *Jasta* 45 was one of the more successful *Staffeln* in 1918, claiming at least 113 victories that year, of which 28 were balloons. (*via H H Wynne*)

J45-2: Ltn. Ulrich Koennemann poses with what was presumably his D.VII (OAW). This was probably an aircraft from the first or second OAW production batch with white datum line and a white serial legend aft of the fuselage cross. The pilot's personal emblem was a two-colour vertical band aft of the cockpit; the nose was a dark colour (or colours) as per the *Staffel* livery. Four-colour fabric covered the rest of the airframe, with the exception of a white tail section. Koennemann was credited with four victories. (*via R Kastner*)

▼ J45-2



▲ J46-1 ▼ J46-2

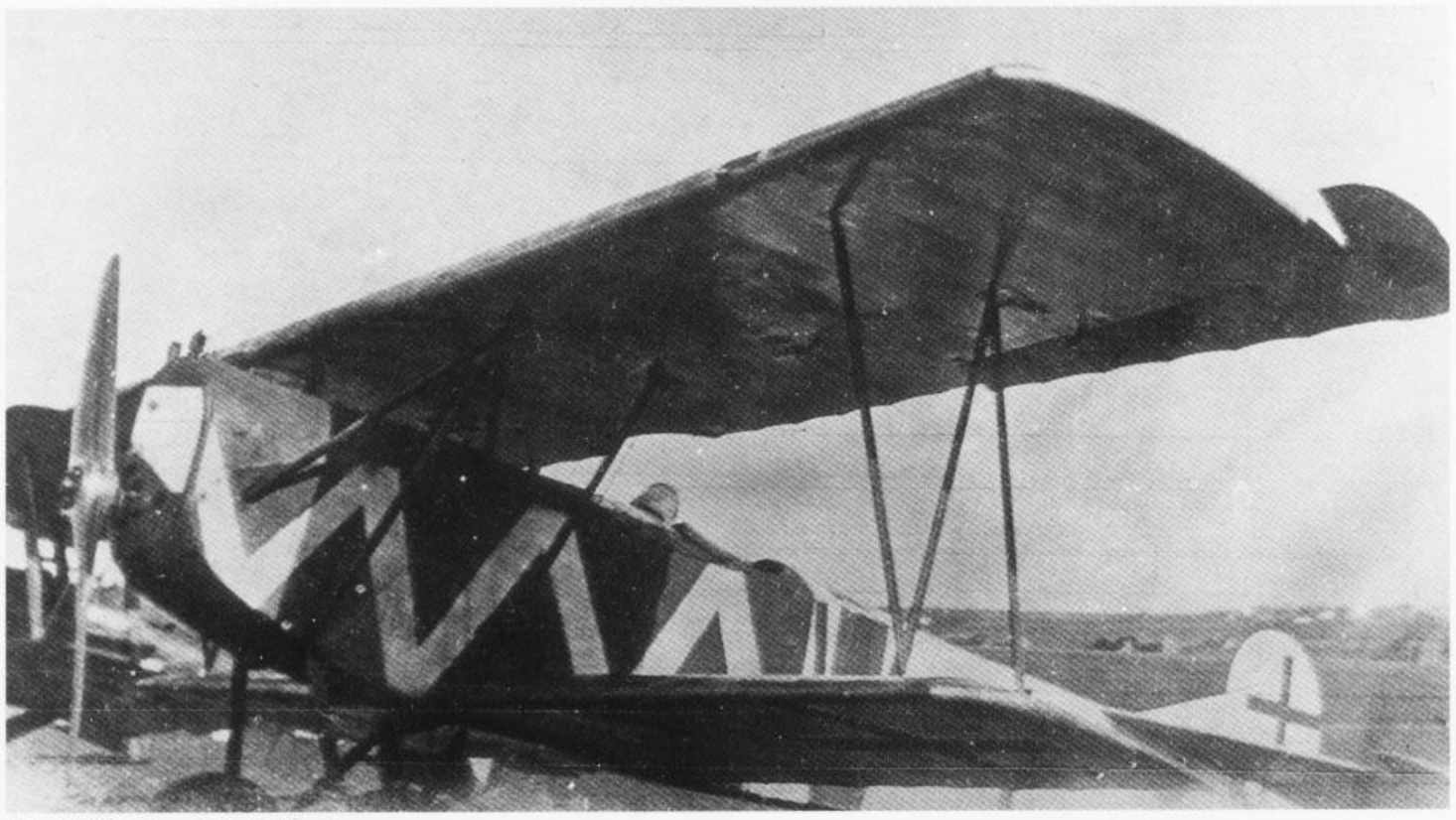


JASTA 46

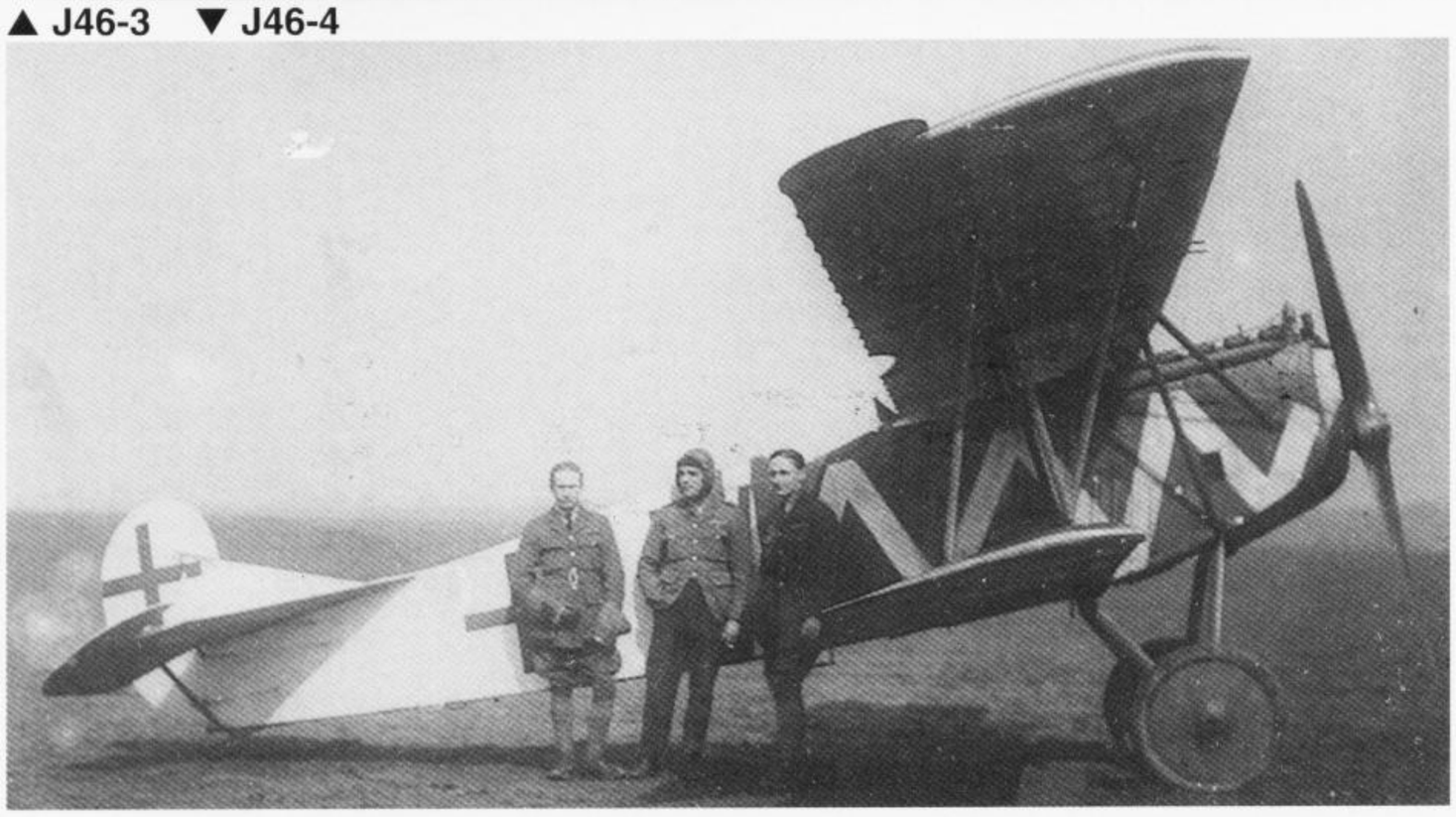
J46-1: While it is not absolutely confirmed that this colourful D.VII (Alb) was actually a *Jasta* 46 aircraft, it seems so likely that it is included here. The subject of several photos, this de-fanged Fokker was supposedly either *'captured by 84 Sqdn. RAF',* or else it was *'D.VII 6539...surrendered to 208 Sqdn at Cologne'.* Both attributions are in doubt, especially as 6539 was an OAW machine, and this aircraft was certainly Albatros-built. The black unit display on the forward fuselage was altered with the addition of white zigzag markings, and just aft of the cockpit was a black (?) W' marked on a dark (perhaps red) band. Other photos reveal a white snake-line was painted on the upper surface of the top wing, which was otherwise covered in printed fabric. While it is not easy to determine with certainty the full unit history or precise colours of this D.VII, it is a most interesting machine.

J46-2: This view of the captured D.VII shows at least two different shades on the forward fuselage – see page 63 for further discussion on possible permutations of *Jasta* 46 *décor. (RAFM via D Roberts)*

Page 57: *J46-3 and J46-4:* Further aspects of the strikingly-marked D.VII. *(J46-4: Rod Millward)*



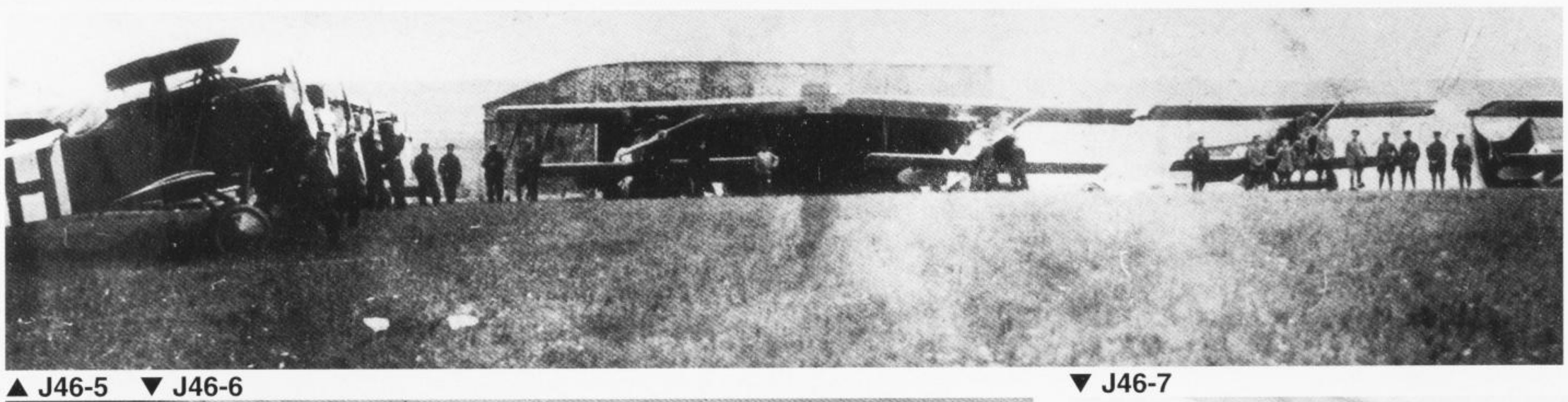
▲ J46-3 ▼ J46-4



J46-5: Fokker D.VIIs (and at least one Albatros D-type) of Prussian *Jasta* 46 on display at the Moislains aerodrome, *circa* August/September 1918. The unit markings of green/yellow striped tails (familiar from the *'Stropp'* D.Va in the NASM) had been abandoned, probably when *Ltn.* Otto Creutzmann took command in June. Instead, each aircraft now displayed a white tail section and fuselage aft of the cockpit, with a dark nose - most likely black. On the far left is one of *Vzfw.* Oskar Hennrich's Fokkers bearing his 'H' emblem. (*A Imrie via P M Grosz*)

J46-6: Jasta 46 pilot Fritz Haack affects a casual stance in front of his Fokker-built D.VII, displaying his personal emblem of an owl. Just visible beneath both lower wings is a white 'G' (or '6' ?) with thin dark border, of unknown significance. This D.VII otherwise bore the usual *Staffel* colours of black and white, with factory-finish struts and wheel covers. Note the manufacturer's plate on the cowling panel. (*A Imrie via P M Grosz)*

J46-7: One of the stars of *Jasta* 46 and a talented 'balloon buster', *Vzfw.* Hennrich poses with his personally monogrammed D.VII. It is thought this was probably an Albatros-built machine, bearing light-coloured rib tapes on the printed fabric wings. As stated, the rear fuselage was white while the nose and forward fuselage are believed to have been black. The colour of the personal marking cannot be confirmed. Several of the Fokkers of this *Staffel* were photographed at Nivelles in 1919 (see *J26-5*), one of which appears to bear Hennrich's 'H', but it seems lighter than that seen here. (*via H J Nowarra*)



▲ J46-5 ▼ J46-6

▼ J46-7

To be concluded...

The face that launched a thousand *clichés*, Frank Clarke with pencil moustache and angular goggles hunched behind the Spandaus of his Fokker. Note the unauthentic central pillar rearsight. The straight-winged all-black Fokker with bare wheels still haunts the late, late TV channels; it has an undying mystique. *(Author)*

Roy Wilson flying the SE5a alongside Frank Clarke's Fokker fitted with dorsal camera over Oakland, California during the making of *Hell's Angels* in 1928.

During the making of *Wings*, stunt pilot Dick Grace crashed his Fokker at Kelly Field in Texas. Grace remained in the cockpit after the crash, which explains all the men rushing to the scene. He broke his neck but survived to fly again.
(*Barton/author*)

FOKKER FILM STARS!

HARRY WOODMAN RECALLS HALCYON HOLLYWOOD HIGHS OF PRE-WAR FLYING FILMS!

Television is not all bad, an arguable point possibly depending in which country the reader lives. In a desperate endeavour to fill in those vast gaps between the soaps, quiz shows and other manifestations of fifth-rate creativity (TV long ago penetrated the barrel's bottom) recent, elderly and ancient films must be used. As a result, old movies, unseen and forgotten except by enthusiasts, collectors and special film clubs, are now regularly served up. Perhaps too regularly for some, whilst the video (both legal and illegal) spreads the material even further. However, the small screen can never recreate the old thrill of the large image, the grainy black and white film, the often harsh sound, seen through a haze of cigarette and pipe smoke in a draughty auditorium and the smell of old clothes. In view of the sometimes neurotic concern of various pressure groups these days one wonders how we all survived.

The writer emerged from the womb in the same year as a film entitled *Hell's Angels,* produced and directed by a young Howard Robard Hughes in his innocent years. Unfortunately the 'talkies' (better known as the 'squawkies' at the time) had just made a great impression and the film was revamped with total sound and dialogue for which the description banal would be flattering. *Hell's Angels* was then formally released in 1930 to the usual Hollywood razzamatazz.

During the war years when new British and American films were in short supply, many of the British cinemas (there were vast numbers then) had to rely on re-issues and that is when the writer first saw the epic. To those of the older generation, the aerial footage in that film left an indelible impression which never diminishes. The sight and sound of the German *'Staffel'* led by four genuine Fokker D.VIIs appearing from behind a ridge is unforgettable. The straight black wings, open-spoked wheels and coffin-shaped noses, the wings jiggling and bobbing can all be re-screened in the writer's imagination.

At the end of WWI a number of German aircraft was acquired by the Allies and removed for study. Over 140 Fokker D.VIIs ended up in the USA where they would be flown by the Army Air Service and studied by the nascent aircraft industry. Most of them would be literally worn out and

The last great pre-WW2 aviation epic was William Wellman's *Men With Wings,* made in 1938. The last surviving flyable Fokker was Paul Mantz's Hisso-powered machine, seen here alongside a Travel Air 'Wichita Fokker'. The film was in colour and the crimson Fokker led the 'German circus'. Note steel propeller and flat dummy nose. Studio art directors insisted on the iron cross insignia because the audience recognised it immediately like the Western villain's black hat. Subtleness was rare in Hollywood epics then and non-existent today. (*Author*)

scrapped by the end of the decade but a few, remarkably, survived.

Waiting for the right clouds to come along

For some time after 1918 Hollywood avoided war films, but in 1925 an early blockbuster, King Vidor's *The Big Parade* was released, which dealt with American foot soldiers in France. This was followed by the first big aviation epic, William Wellman's *Wings,* released by Paramount in 1927. Wellman had gathered a number of WWI aircraft (including some American DH4s still in service) but for most of the flying shots he had to rely on a collection of contemporary Curtiss P.1 Hawks and Thomas Morse MB.3s. However, two Fokker D.VIIs were obtained, one painted black and the other grey, which Frank Tomick acquired for Wellman paying $2000 for one and $3500 for the other. The grey one was to be used in a crash sequence piloted by Dick Grace, who brought the Fokker down to collapse on its half-sawn-through undercarriage legs. Grace actually broke his neck at the time but did not realise it until the evening and after treatment and rest he later flew again. This Fokker was probably powered by a Hall-Scott in-line, the original BMWs and Mercedes having long been burnt out. The Hall-Scott permitted an authentic nose which the other common alternative, the Wright-built Hispano-Suiza, did not. This was a V-8 with side exhausts.

The enormous success of *Wings* led to a plethora of low budget films trying to cash in on its popularity. Most of the plots were feeble and leftover footage from *Wings* was often used; any Fokkers which appeared would only be static background ornaments.

The success of *Wings* also influenced Howard Hughes who had already invested some of his vast inherited fortune in the film industry. He now decided to make the greatest aviation epic ever and instructed his agents to search out WWI aircraft for the project. Eventually they managed to acquire about 50 (figures vary) and an effort was made to be more authentic than *Wings*. The collection included a number of Thomas Morse S4Cs which could pass for Camels whilst other acquisitions were three Eberhard-built SE5as, Curtiss JN-4s and no less than six Fokker D.VIIs.

***'It's my money'* (Howard Hughes)**

The Fokkers were to form the lead aircraft in a large German *'Staffel',* the remainder being made up of Travel Air biplanes, a popular aeroplane of the time. One model had 'elephant-ear' ailerons and they were often used to stand-in for Fokkers. A vast amount of flying was done during the making of the film and two Fokkers were lost. One of them, piloted by Al Wilson, shed its airscrew and Wilson baled out, the Fokker crashing into waste ground near Hollywood Boulevard. During the lengthy filming of the monumental dogfight, Ira Reed's Fokker collided with a Thomas Morse piloted by Stu Murphy. Murphy baled out but Reed nursed his 'plane to the ground. The incident actually captured by one of the camera 'planes was used in the film. It should be noted that unlike a real dogfight which might be spread over a large area of sky, the film pilots were asked to 'keep things in shot', and were pressed to keep the manoeuvring tight. It is quite remarkable that there were so few accidents and it is a reflection on the pilots' skill and courage.

All the Fokkers had to be overhauled and prepared for rough handling. As an example Frank Clarke, one of the best known pilots, later recalled that his particular D.VII had five Hispano-Suiza engine changes! Extra stressing was certainly needed; some Fokkers had new stringer-based turtlebacks

Above, one of the genuine Fokkers used in *'Hell's Angels'*, Howard Hughes' mighty aviation epic of 1929/30. Note the stringers reinforcing the turtleback and the external aileron cables. The scribbled note on Jim Barton's photo refers to the man on the right, Phil Jones, who was killed when the Sikorsky S29A (disguised as a 'Gotha') crashed. (*Barton/Author*)

and headrests fitted and replacement aileron cabling outside the wing.

Smoke from 'flamers' was actually lampblack powder discharged from cannisters. The film of course is in black and white and in order that the audience could rapidly distinguish the 'goodies' from the 'baddies' the Fokkers and Travel Airs were all painted black whilst the Allied squadron was white or pale grey. This was a Hollywood tradition in westerns when the bad guy wore a black hat and the good guy a white one (unless it was Hopalong Cassidy who wore a smart black two-piece). All the German aircraft sported exaggerated iron crosses to leave the audience in no doubt.

Wellman's last epic

In the late 1930s, William Wellman hoped to make one more great aviation blockbuster, but straitened financial conditions in Hollywood restricted his hopes to some extent. The film, Paramount's *Men With Wings* (released in 1938) intended to follow the development of aviation since 1903 and it included a WWI dogfight sequence in Technicolor. By the time that Paul Mantz was engaged by the studio to find appropriate aeroplanes, fewer veterans were left outside of museums. He did locate a derelict Fokker D.VII in a Los Angeles garage but all the other film 'Fokkers' were Travel Airs. Mantz already had another Fokker D.VII which eventually found its way into the Canadian National Aviation Collection. The derelict Fokker was restored to flying condition with a Hispano-Suiza engine, painted blood red, and leads the colourful German formation of Travel Airs. After somehow surviving all this (including *Hell's Angels*) and more, it was purchased by the Fokker company and can be seen today, beautifully restored and painted to represent a Dutch army D.VII *circa* 1921.

Some other WWI flying films were of course made in the 1930s, including the two versions of *Dawn Patrol,* but Fokkers were not used. However, there is one film made in 1938 in Germany but rarely seen outside of special screenings. This is Karl Ritter's Nazi propaganda film, *Pour le Mérite* in which a Fokker D.VII is featured with its engine running. The sound of the BMW idling is magical, a Teutonic tango; *BOBOOM... brm... brm... brm... BOBOOM... brm... brm... brm... BOBOOM... brm... brm... brm...*

The various films of recent years featuring WWI aviation are of a different ilk. The replicas and thinly-disguised Tiger Moths and Stampes lack the panache and period feel. In *Aces High* the 'SE5as' appeared to be moving on rails, the expert flying being comparatively refined. The writer once sat immediately behind a WWI RFC/RAF pilot during a special screening at the IWM for *Cross and Cockade* members; the film was the first *Dawn Patrol.* The old man who had apparently not seen it before was enthusiastic and exclaimed later... *'that is how we flew, we threw the aeroplanes around, wrenched them around, that is how it was...'*

That is the style seen in the films described above. The straight-winged, coffin-nosed black Fokkers with the bare-spoked wheels, jiggling and bobbing in formation, peeling off and going into a screaming, spinning nose dive... that's the picture indelibly fixed on the retina of memory. ❑

Top, Frank Clarke as 'Lt. Von Bruen' settling into his Fokker at Chatsworth Field. This is a blow-up from an actual 35m frame. (*Author*)

Left, several of the Fokkers were either crashed or just worn-out during the filming on '*Hell's Angels*'. One such casualty is here about to be taken away for a decent burial by Jim Barton (or so he said). (*Barton/Author*)

FABRIC – colour plate captions by RAY RIMELL

A brief introduction

The colour plates on pages 9, 12, 21, 24, 41, 44, 53 and 56 depict 25 D.VIIs (obviously not exclusively OAW products otherwise there would be too many gaps!) from 15 different *Jastas* in 1918. Countless hours were expended on research and into creating these paintings and I express my gratitude to both Dave Roberts and to Greg Van Wyngarden for their invaluable input; Greg supplied a number of his fine mono profiles for precise guidance. All nuances in interpretation are, however, my own responsibility and, it has to be admitted, the three of us still do not agree on some of the profiles presented. Where there are areas of uncertainty they are so noted in the appropriate caption. It hardly needs emphasis that great care was taken to ensure the plates were as accurate as possible given the limitations of interpreting monochrome photos over 80 years old. In particular the use, location and orientation of printed fabrics, especially on the fuselage, have been painstakingly cross-checked and measured. Previous comments in respect of printed fabrics set out on page 64 of *Anthology 1* require no repetition here.

THE COLOUR PLATES

N.B. All D.VIIs shown were Mercedes-powered unless otherwise stated.

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Plate 1) **FOKKER D.VII (OAW-built) 646?/18**, *Oblt.* Hasso von Wedel, *Jasta* 24, 1918. BMW-powered, this machine sports typical OAW hard-edged green/mauve engine panels, axle wing and wheels and is covered with five-colour printed fabric overall with a white fin and rudder. Wedel's family crest – a red *Richtrad* – is emblazoned on the fuselage sides and turtledeck. *Jasta* 24 unit markings – if existing at this time – have not been determined.
Source: *Photo J24-4, page 27.*

Plate 2) **FOKKER D.VII**, serial unknown, *Oblt.* Bruno Loerzer, *Jasta* 26, 1918. One of at least two similarly-painted D.VIIs flown by Loerzer, this bears typical black and white *Jasta* 26 fuselage and tail *décor* extended to both wings as appropriate for the commander of *JG* III flying the *Geschwader*'s lead aircraft. Unpainted wing areas were left in the original five-colour printed fabric. Black/white streamers trailed from both lower wings.
Source: *Photo J26-1*, page 27.

Plate 2a) Plan view and lower wing detail of Loerzer's D.VII showing the spanwise black and white overpainting.

Plate 3) **FOKKER D.VII**, serial and pilot unknown, *Jasta* 26, 1918. The white paint of this D.VII was rather thin allowing the original finish to show through in some places. A personal '5' was black-painted on the fuselage and repeated in white on the upper wing - common practice in *JG* III (comprising *Jastas* Boelcke, 26, 27 and 36). Four-colour printed fabric to wings and tailplane.
Source: *Photo J26-2*, page 28.

Plate 3a) Upper wing detail showing typical Fokker printed fabric application with rib tapes cut from the same material.

Plate 3b) Upper fuselage detail with typical *Jasta* 26 tail markings (on both upper and lower surfaces).

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Plate 4) **FOKKER D.VII 278/18**, *Oblt.* Hermann Goering, *Jasta* 27, 1918. Provisional profile of the D.VII Goering flew as CO of *Jasta* 27 in late June. His combat reports describe the white nose and tail (other *Staffel* D.VIIs had these areas in yellow) - struts and wheels similarly painted. Streaky camouflaged fuselage and five-colour printed fabric remained on the wings.
Source: *Photo J27-2*, page 36.

Plate 5) **FOKKER D.VII (OAW-built)** serial unknown, *Ltn.d.R.* Friedrich Noltenius, *Jasta* 27. 1918. Provisional profile of this well-known machine; overall four-colour fabric looks to have been darkened by over-varnishing. OAW mauve/green treatment of the cowlings is evident; the red/white markings are confirmed, but the yellow tailplane is conjectural. As befits many early OAW-built D.VIIs the fin and rudder were left clear-doped rather than painted in white.
Sources: *Photos J27-5* and *J27-6*, page 37.

Plate 5a) Plan view, Noltenius's D.VII with OAW printed fabric applications. Like selvedges together, standard spacing as per 2009/18 - see page 25.

Plate 6) **FOKKER D.VII (OAW-built),** serial unknown, *Ltn.d.R.* Arthur Merz, *Jasta* 28W, 1918. Merz's personal markings were the 'Mercedes star' and letter C on the turtledeck - both white with black outlines. OAW green/mauve on cowling, axle wing and wheel covers; four-colour printed fabric overall. The yellow and black tailplane is provisional - no unit marking for *Jasta* 28W has been confirmed for this period.
Sources: *Photos J28-2* and *J28-3*, page 38.

Plate 6a) Upper fuselage detail, Merz's D.VII showing provisional interpretation of the tailplane colours.

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Plate 7) **FOKKER D.VII 387/18,** *Oblt.* Harald Auffahrt, *Jasta* 29, 1918. As flown by the pilot when leader of *Jasta* 29, and later as CO of *Jagdgruppe* 3. Combat reports describe the green fuselage and yellow nose markings of this unit, and Auffahrt's personal white comet. The forward portion of the fin was painted white in the field. Wings covered in five-colour fabric in the usual Fokker style - see *Anthology 1.*
Source: *Photo J29-1*, page 38.

Plate 8) **FOKKER D.VII (Albatros-built)**, serial unknown, *Ltn.* August Hartmann, *Jasta* 30. Provisional rendering of brown fuselage and orange/yellow tailplane based on British Intelligence reports; nose was possibly also orange/yellow as shown. Certain Allied combat reports also refer to *black* D.VIIs with orange markings – *Jasta* 30's previous confirmed colouring. Four-colour printed fabric applied to airframe.
Sources: *Photos J30-1* and *J30-2*, page 39.

Plate 8a) Fuselage detail of Hartmann's D.VII; colours of witch are provisional.

Plate 9, **FOKKER D.VII (OAW-built)**, serial unknown, *Hptm.* Eduard von Schleich, *Jasta* 32b, 1918. Highly provisional depiction of Schleich's D.VII when commander of *Jagdgruppe* 8b and eventually Bavarian *Jagdgeschwader* IV. Readers are cautioned that this rendering is based entirely on Rudolf Stark's paintings and descriptions. The fuselage, undercarriage, and possibly tailplane were black, with von Schleich's famous Bavarian lion emblem on a field of blue and white diamonds. The wings are assumed to have remained in four-colour printed fabric finish. Blue and white streamers were attached to the trailing edge on both lower wings at mid-point. The form of rudder cross illustrated is one of several possibilities.
Source: *Photo J32-1*, page 39.

Plate 9a) Fuselage detail, von Schleich's D.VII, the famous Bavarian Lion on its diamond-studded field.

Plate 10) **FOKKER D.VII (OAW-built) 6305/18,** *Ltn.* Karl Kuehn, *Jasta* 33. BMW-powered, this D.VII is covered in four-colour printed fabric overall with yellow applied to forward fuselage and wheels as shown - a white individual 5 is painted on the nose cowlings.
Source: *Photo J33-2*, page 40.

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Plate 11) **FOKKER D.VII (Albatros-built)**, serial unknown, *Oblt.* Robert von Greim, *Jasta* 34b, 1918. One of Greim's D.VIIs flown as commander of this unit, based on photographic evidence and Rudolf Stark's paintings. The fuselage aft of the cockpit was 'silvery-white', as was the tailplane. Greim's traditional personal marking of two red bands applied behind the cockpit. The remainder of the machine was in standard finish for late Albatros-built machines, with grey-green cowling, struts and wheel covers and (possibly) four-colour fabric.
Source: *Photo J34-4*, page 42.

Plate 11a) Upper fuselage detail, Greim's D.VII showing the silvery white rear fuselage and tailplane.

Plate 12) **FOKKER D.VII (OAW-built) 4487/18** *Ltn.d.R* Friedrich Stoer, *Jasta* 35b, 1918. This D.VII was marked with a white 'H' on a green band; the nose panels were also painted green at some stage (this must have been a dark green). Later the fuselage stripe colour was extended to the tailplane. Four-colour fabric covered the entire aircraft (inverted on the fuselage!): typical OAW stencilling on the fin, rudder and wheel covers. Most D.VIIs of this *Jasta* bore a unit marking of a white chevron on the top wing, and (probably) a similar marking in black on the underside of the bottom wing.
Source: *Photo J35-8*, page 45.

Plate 12a) Upper fuselage detail, Stoer's D.VII with the white H repeated on the rear turtledeck. Blue rib tapes on tailplane did not extend to elevators.

Plate 13) **FOKKER D.VII (OAW-built) 4523/18**, *Ltn.* Rudolf Stark, *Jasta* 35b, 1918. The profile depicts this well-known D.VII in what is thought to be its final livery, following several stages of decoration. Black-edged

lilac fuselage band with white 'Li', black-edged lilac tail, and lilac cowling panels. The chevron on the upper wing was apparently lilac; that on the bottom wing was probably black. A very well-documented example of an OAW machine from the 4500 series; four-colour printed fabric was applied to the airframe.
Sources: *Photos J35-11, J35-12* and *J35-13* on page 45.

Plate 13a) Undersurface view of Stark's D.VII shows typical placement of lower wing black chevron on *Jasta* 35b D.VIIs.

Plate 13b) Plan view, Stark's D.VII shows typical OAW centrally-seamed four-colour printed fabric wing application and extreme location of *Balkenkreuze*. Lilac chevron was probably unique to Stark; all other *Jasta* 32b D.VIIs carried this in white.

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Plate 14) **FOKKER D.VII (OAW-built)**, serial unknown, *Gefr.* Xaver Prey, *Jasta* 35b, 1918. This D.VII bore black and white fuselage bands as personal markings; at some point the nose was painted black as well, and additional paint and/or repair is seen on the forward fuselage. It would probably have had the *Jasta* 35b marking of chevrons on the wings, white on the upper wing and black on the underside of the lower wing as shown in plates ***14a*** and ***14b***. Four-colour printed fabric overall and the usual OAW stencils.
Sources: *Photos J35-6* and *J35-7* on page 43.

Plate 14a) Split plan view, Prey's D.VII showing white wing chevron - port is mirror image- and 'faded' four-colour printed fabric.

Plate 14b) Split undersurface view, Prey's D.VII showing black wing chevron - port is mirror image.

Plate 15, **FOKKER D.VII (Albatros-built)**, serial and pilot unknown, *Jasta* 36, 1918. This provisional profile shows a four-colour printed fabric covered machine (port fuselage covering at least is inverted) with unit blue nose and rear fuselage band - shades vary. Colours of the bird are purely conjectural - it could also have been blue or red.
Sources: *Photos J36-3* and *J36-4*, page 47.

Plate 16) **FOKKER D.VII**, serial unknown, *Ltn. d.R* Georg Meyer, *Jasta* 37, 1918. Flown by the final commander of *Jasta* 37, this D.VII would have borne the famous unit markings of diagonal zebra stripes on both surfaces of the tailplane. The black (?) edged white fuselage sash was a personal marking; the nose *may* have been painted black as further personal distinction, as was sometimes practised in this *Staffel* at this time. Five-colour printed fabric covered overall - note that aspects of this illustration are provisional.
Source: *Photo J37-4*, page 48.

Plate 16a) Upper fuselage detail, Meyer's D.VII showing *Jasta* 37 tail markings.

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Plate 17) **FOKKER D.VII (OAW-built)** serial and pilot unknown, *Jasta* 37, 1918. Late OAW machine with standard patch-camouflaged nose panels, with *Jasta* 37 unit marking of black and white diagonal stripes on horizontal tail surfaces. The individual 'R' on the fuselage and upper wing was of an unknown colour, as was the vertical fuselage stripe. The undercarriage and interplane struts, as well as the wheel covers, are thought to have been black/white. The machine is provisionally illustrated in four-colour printed fabric with white fin and rudder.
Source: *Photo J37-1*, page 48.

Plate 17a) Plan view. *Jasta* 37's distinctive unit colours were painted above and below tailplane. Individual pilot's initial and stripe are provisionally shown as black.

Plate 18) **FOKKER D.VII (Albatros-built)**, serial unknown, *Ltn.d.R* Carl Degelow, *Jasta* 40, 1918. Black fuselage, cabane and undercarriage struts, wheel covers, with white tail assembly. Five-colour fabric on wings, with a white diagonal stripe on the upper wing. Crosses on rudder were of 4:5 proportions, and those on wings may also have been. Grey/green or black interplane struts? (Garuda airscrew).
Source: *Photos J40-1* and *J40-2*, page 49.

Plate 18a) Fuselage detail, Degelow's D.VII, starboard side - see photo *J40-1* on page 49.

Plate 18b) Upper wing detail, Degelow's D.VII showing five-colour printed fabric covering. The lower wing at least had strips laid the same way, top to starboard as shown provisionally here - not typical Albatros practice. Position of wing stripe marking is interesting; *Ltn.* Rosenstein, who brought up the rear, had a fore-and-aft stripe – were they formating marks?

Plate 19) **FOKKER D.VII (Albatros-built)** serial unknown, *Ltn.* Adolf Auer, *Jasta* 40, 1918. Black fuselage, wheels and cabane struts; white tail with apparently dark (Prussian) blue (or black) stripes. The dark stripes may have been a bit narrower than the white. Personal emblem of a white six-pointed star. This aircraft had what appeared to be wooden racks for anti-personnel grenades on both sides of the fuselage, and a flare cartridge rack fitted to the starboard cockpit side. Four-colour printed fabric was applied to the airframe.
Sources: *Photos J40-4*, *J40-5*, *J40-6* and *J40-7*, page 50.

Plate 19a) Tail detail, Auer's D.VII. The dark blue and white stripes were applied to both surfaces of the tailplane.

Plate 20) Fuselage detail of *Ltn.* Hans Jeschonnek's D.VII with its rampant bull bison marking depicted here provisionally in the colours of Degelow's stag - see photo *J40-9*, page 51.

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Plate 21) **FOKKER D.VII (Albatros-built)**, serial unknown, *Ltn.d.R.* F Jakobs, *Jasta* 43, 1918. This D.VII apparently retained the Albatros factory grey-green on its nose panels and wheels but the fuselage and tail were overpainted black and white as shown. The crescent moon marking was handed. Probably covered in four-colour printed fabric - fin number is not known.
Sources: *Photos J43-5* and *J43-6*, page 54.

Plate 22) **FOKKER D.VII (Albatros-built?)**, serial and pilot unknown, *Jasta* 43, 1918. This is a very provisional reconstruction based on a single, rather fuzzy original, so be warned! The over-painted black surround to the apparently red raven - see detail - confirms this as an ex-*Jasta* 18 D.VII (see *Anthology 1*). Four-colour printed fabric is likely for this machine. Fin number is not known.
Sources: *Photos J43-7* and *J43-8*, page 54.

Plate 22a) Plan view, *Jasta* 43, D.VII. The upper wing looks very dark on the photo and so has been depicted in *Jasta* 18 red. *Balkenkreuze* appear to be in the early Albatros location and since depots often replaced *Jasta* 18 wings before re-issue, this plate is again provisional.

Plate 23) **FOKKER D.VII (OAW-built)**, serial unknown, *Ltn.* Ulrich Koennemann, *Jasta* 45, 1918. This machine, from one of the first two OAW batches, bore four-colour fabric on all surfaces, with white datum line and serial legend. Fuselage cross was in 4:5 proportions, as were (probably) all others. The tail section was white with an oblique demarcation; the nose was factory finish, beyond this a roughly parallel demarcation, possibly dark cobalt blue - as was the dark stripe on the fuselage.
Source: *Photo J45-2*, page 55.

Plate 23a) Upper fuselage, Koenemann's D.VII showing the white and dark blue markings.

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Plate 24) **FOKKER D.VII (Albatros-built)**, serial and pilot unknown, *Jasta* 46. The one certainty is that this D.VII's upperwing was covered in five-colour printed fabric and the lower in four-colour, but whilst Dave Roberts suspects this is an ex-*Jasta* 18 machine and the colours here are correct, Greg Van Wyngarden believes the whole forward area was probably black. But it could be all red or dark green too! The white rear fuselage and tail is fairly certain, the colour(s) of stripe and 'W' are not. Dave discusses the thorny *Jasta* 46 topic overleaf.
Sources: *Photos J46-1* and *J46-2*, page 55; *J46-3* and *J46-4* opposite.

Plate 24a) Plan view, *Jasta* 46 D.VII, shows probable OAW upper wing with five-colour-printed fabric, central seam, strips joined like-to-like. Unusually, the blue (?) rib tapes extend over the ailerons as well. Lower wing tapes appear to be cut from printed fabric.

Plate 25) **FOKKER D.VII (Albatros-built)**, *Vzfw.* Oskar Hennrich, *Jasta* 46, 1918. This unit's colours of black and white are depicted, although the forward area may have been red *if* this was an ex-*Jasta* 18 machine. The lower wings are of OAW build. BMW powered, this machine has four-colour printed fabric covering. The pilot's initial could be black, red, or yellow....
Sources: *Photos J46-5* and *J46-7*, opposite.

Plate 26) FOKKER D.VII, serial unknown, *Uffz.* Fritz Haack, *Jasta* 46, 1918. This is a Fokker-built BMW-powered machine, the colours of which echo those of Hennrich's above. The owl is provisionally presented in natural tones, but some details are lacking. Four-colour printed fabric on wings and factory finish wheel covers.
Source: *Photo J46-6*, opposite.

Plate 26a) Undersurface view, Haack's D.VII showing typical Fokker application of four-colour printed fabric: see *Anthology 1*. White, black-outlined initials under both lower wings: full details of these markings are lacking.

●

THE ENIGMATIC COLOURS OF *JASTA* 46

LITTLE is known for certain about *Jasta* 46's colourful D.VIIs, beyond the fact that a black nose overpaint was introduced by the unit's last commanding officer, *Ltn.* Otto Creutzmann, formerly of *Jasta* 43. Photographs of these aircraft in service, apparently on orthochromatic film, show a uniformly dark shade back to the rear of the cockpit, a white rear fuselage and tail unit, and dark personal markings. However, pictures taken on more versatile filmstock by RAF personnel at Nivelles after the war tell a different story; three distinct shades of grey are visible. The black *appears* to be confined to the radiator surround and chin panel back to the front undercarriage legs, with at least one aircraft (Hennrich's) having a black forward top cowl as well. Aft of this is an intermediate shade, and the personal markings, wheels and interplane struts are in a lighter colour still. The well-known Albatros D.Va of the US National Air and Space Museum bears *J.*46's previous marking of a dark green and rich golden yellow chevronned-tail, not so far noted on a Fokker D.VII. This yellow is a strong candidate for personal markings, wheels and struts, but we have no way of knowing if the dark green was also continued. If it was, this could be the intermediate shade of the forward fuselage. However, the colour layout is identical to that of *Jasta* 18, right down to the fully overpainted undercarriage, differentiated radiator and chin panel. It is possible that *J.*46 had Albatros-built D.VIIs second-hand from that squadron, and modified the livery enough to make it unmistakably its own. The forward fuselage could have been left in weathered red, or repainted green, thin black or some other dark colour; whatever the paint was, it was either matt or well worn. The Raven outfit's red mainplanes, and possibly the tailplanes, would have been replaced at the overhaul depot, but small oval holes below the prop boss are typical of that unit. 'Home-made' cowling panels with unique, angled louvres are of unknown origin. Some photographs also show a hint of dark tone, in the right place for the raven's wings, under the new personal markings, particularly Hennrich's 'H' and the stripe behind the 'W' on the aircraft with the white zigzag. It is not suggested that *all* the squadron's aircraft had come from *Jasta* 18; the Ravens had a high throughput, but not *that* high. However, the layout was easily reproduced, with or without red paint, and appears to have influenced *J.*46's livery. Creutzmann would have encountered it in *Jasta* 43.

We have shown *Jasta* 46 D.VIIs in different possible interpretations of the shades found in the photographs, and leave it to the reader to mix and match if you wish; this exuberant lot in *Jasta* 18 red and white modified with black, green or yellow could have qualified to be called the 'Pizza Squadron!'

D. ROBERTS ❐

FABRIC COLOUR TABLE – all notations are approximate!		
OAW Colours	**Methuen match**	**FS match**
Dark Green	26F3	No close matches
Lilac/mauve	17D5-18D6	

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ACKNOWLEDGEMENTS

The publishers would like to thank many individuals for their invaluable help during the preparation of this volume, in particular, George H Williams and Dr. Larry D Sall, Associate Library Director for Special Collections for their kind assistance in accessing the late AE Ferko Collection at the History of Aviation Collection/University of Texas in Dallas, noted as HAC/UTD in photo credits. Additionally, thanks are due to those *WINDSOCK* readers who kindly donated various photographs and whose names are recorded alongside the appropriate illustrations, while grateful appreciation is also extended to J M Bruce and P M Grosz, RAF Museum Library Staff and the D.VII restoration team at the Museum's restoration and storage centre, Cardington: Roy Barber, John Chapman, Ted Freeman, Darren Hammond and Pat Waterhouse. ❐

PUBLISHERS' STATEMENT:

FOKKER FIGHTERS D.VII Anthology 2 is published by **Albatros Productions, Ltd.,** 10 Long View, Chiltern Park Estate, Berkhamsted, Hertfordshire, HP4 1BY, Great Britain.

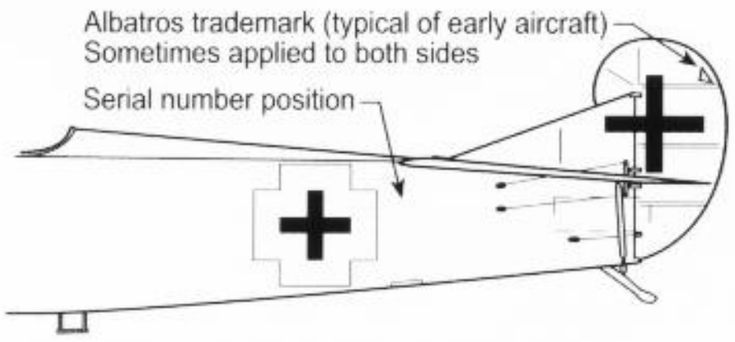
Printed in Great Britain. ISBN No. 1-902207-10-6. Designed, edited and produced by R L Rimell. Co-Publisher: A M Hogan. Scale drawings by I R Stair.Colour profiles by R L Rimell, mono profiles by Greg VanWyngarden. Mono origination, printing and binding in Great Britain by The Magazine Printing Company Limited, Enfield, Middlesex, EN3 7NT. Colour origination by Technographics Pte, Ltd., Singapore.

(January 2000)

Variations to National Markings.

Early Versions

720mm Cross and Variants

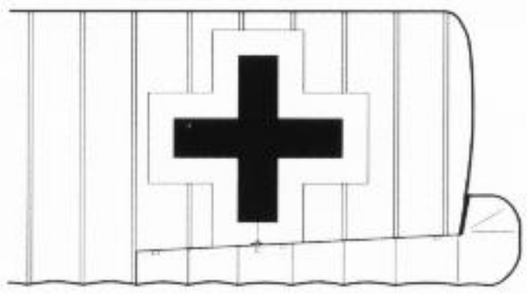


Fuselage
Earliest known version. Outside dimensions of fuselage cross: 720mm. White border: 150mm
Tail
Bar dimensions 120mm x 600mm Applicable to all aircraft unless otherwise noted

Modification of the 720mm Fuselage Cross
Black cross extended to the edge of the white border. Applicable to 2009/18. It carried later markings than many aircraft built after it. It may have been modified either at the factory or in service, or it may have been held back for factory testing. (To scale)

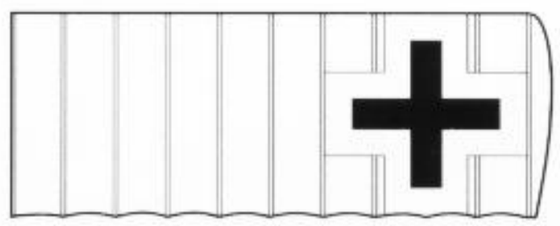
Early Wing Crosses

Applicable to 230/18, 2010/18 and possibly most in the 2000 series.



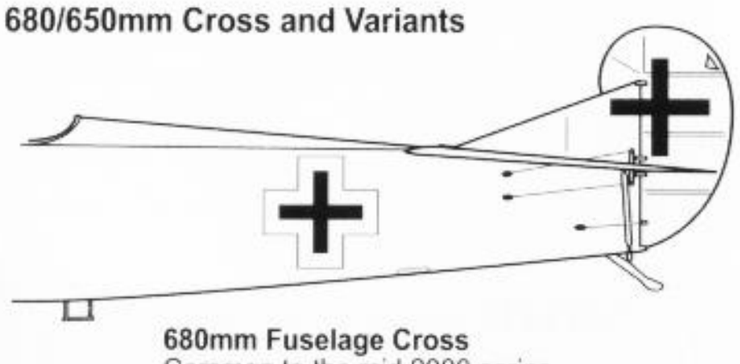
Top Wing, Uppersurface
Cross is centred on aileron horn.
Outside cross dimensions: 1300mm. White border: 150mm. Bar dimensions: 240mm x 1000mm
There was considerable inconsistency in the application of national markings on the upper wing of OAW built aircraft.

Note: Because of heavy top camber the cross was centred slightly ahead of mid-chord. Applicable to all OAW built examples



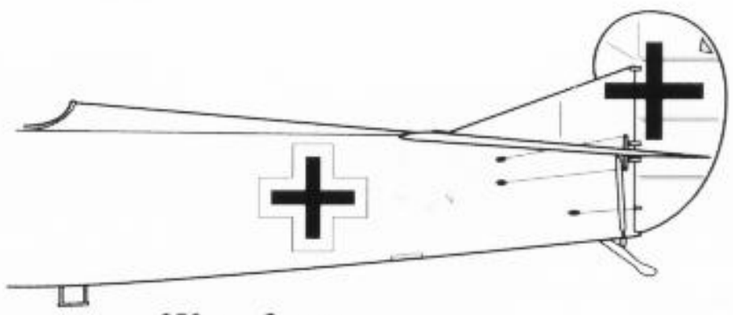
Lower Wing, Underside
Outside cross dimensions: 1200mm.
Bar: 180mm width (160mm possible on some examples, not confirmed)

680/650mm Cross and Variants



680mm Fuselage Cross
Common to the mid 2000 series.
Outside dimensions of fuselage cross: 680mm. White border: 90mm. Bar dimensions: 500mm x 90mm.

Modification of the 680mm Fuselage Cross
Bar has been extended to the edge of the border and the border width has been reduced to 30mm by over painting in dark green. As modified on 2024/18. (To scale)



650mm Cross
Common to the late 2000 series. Factory applied. Same as 680mm cross but with a narrower white border.
Outside dimensions of fuselage cross: 650mm. White border: 75mm. Bar dimensions: 500mm x 90mm.

Jasta 4 Aircraft

Modification of the 650mm Fuselage Cross
Field modification following 4.6.1918 correction notice. Neither is to final specifications. Borders have been reduced by over painting in dark green.

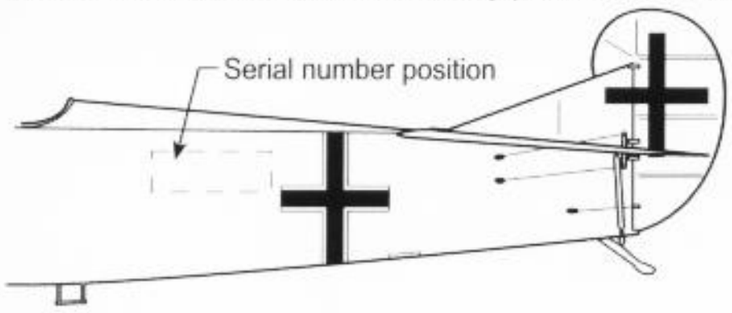
White border: Circa 40-45mm

White border: 30mm

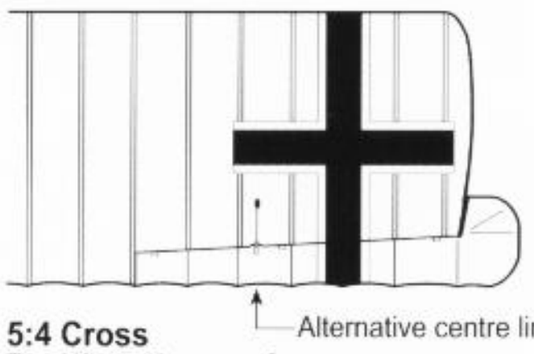
Modification to Wing Crosses
The 1300mm top wing crosses and 1200mm lower wing crosses were modified by over painting in dark green. Border dimensions varied

Final Versions

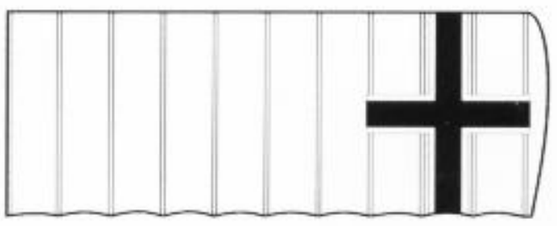
This version was specified in the directive of 13.5.1918. Its introduction coincided roughly with the fitting of the high exhaust and the first louvres.
The directive was initially misinterpreted in transmission leading to the application of crosses with 5:4 proportions. Later versions complied with the 13.5.1918 directive and had a width/length ratio of 8:1. Both styles were used full chord on the top wing (1600mm nominal chord) and lower wing (1200mm nominal chord) and full depth on the fuselage.



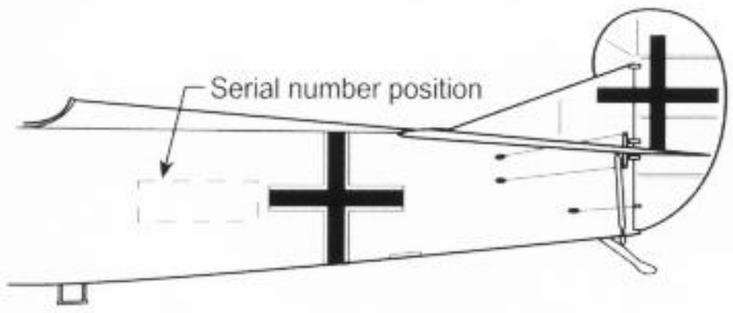
5:4 Cross
Serial number was probably moved forward at the same time as the introduction of the final cross



5:4 Cross
Top Wing, Uppersurface
Centred either on the rib (as shown) or on the aileron horn.

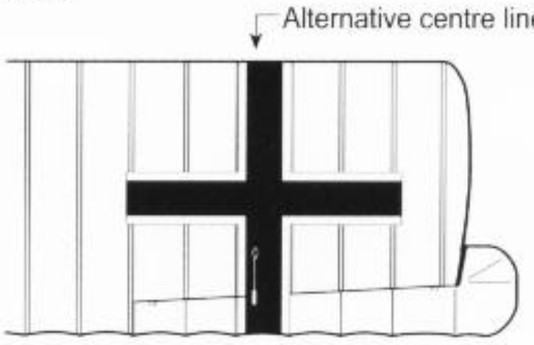


5:4 Cross
Lower Wing, Underside

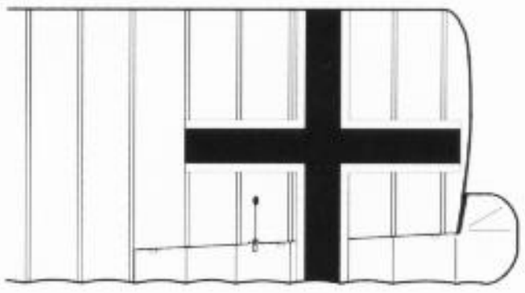


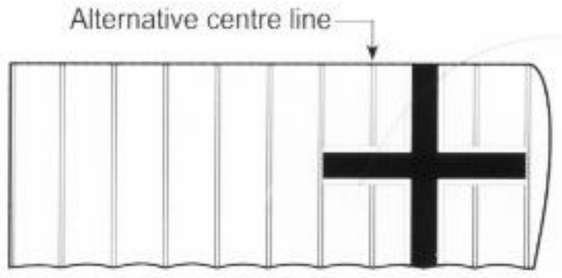
8:1 Cross (Correct version)
Some examples appear to have no border (eg 8425/18), possibly owing to the flaking of low quality white paint.

Alternative Rudder Cross
Applicable to 4649/18, 8539/18, 8541/18, 8840/18

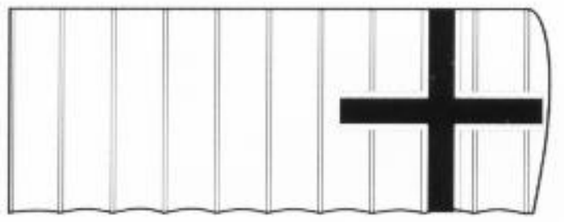


8:1 Cross (Correct version)
Top Wing, Uppersurface
Alternative cross positions: centred on the aileron horn, or centred between the ribs (as shown directly above), or the inboard edge was aligned with the edge of the 6th rib (as shown below)





8:1 Cross (Correct version)
Lower Wing, Underside
Alternative cross positions: centred on the 4th rib (ie 8840/18), or centred on the 3rd rib (as shown directly above), or the cross was positioned with the outboard edge almost touching the wing tip (as shown below)



D.VII

The fame of Germany's World War One Fokker D.VII borders on the legendary – its qualities as a fighting machine universally acknowledged by those who flew it and by those who fought it, while the colourful heraldry it carried into battle still continues to engender lively debate amongst aero historians.

Although much has been written about this classic fighter over the years it seems there is still much to learn about the Fokker D.VII. The intricacies of its structure; the seemingly endless permutations of engine cowling design; contractors' hallmarks and covering practices; cockpit and armament fittings; the wide variation in *Jasta* liveries and much else besides. These topics, a d others, are fully addre ed in our second Fokker D.VII Anthology with cont ibutions from an international team of well-respected writers and illustrators. Highlights include accurate and completely revised scale drawings of OAW-built D.VIIs with many cowl variations, eight pages of exciting and original *all new* colour art, specially selected archive material, plus features on film D.VIIs, stencil data and covering methods – all combining to provide another classic reference work on this famous WWI fighter aeroplane.