



Ninaks of B Flight, No. 47 Squadron, based at Helwan, Egypt, 1926. Nearest, J7086, was piloted by Flight Lieutenant S. D. Macdonald (later AVM, CB, CBE, DFC), whose pet bull mastiff, Monty, is seen braving the slipstream with the gunner. (Photo: C. A. Sims)

de Havilland D.H.9A (R.A.F. 1918–30)

by Chaz Bowyer

The de Havilland D.H.9A, like the doughty Bristol F.2B¹ was born in war, proven on operations and then soldiered on for a further 12 years in frontline service with the Royal Air Force, helping to maintain the uneasy 'peace' throughout the British Empire. Known to all as the 'Ninak',² its genesis was circumstantial, being a reasonably hasty improvisation on an existing discredited design—a situation which was to have its parallel over 20 years later when the superb Lancaster bomber emerged from the chrysalis of the condemned Avro Manchester.

The Ninak's origin can be said to have been one result of the German daylight bombing raid on London on Wednesday, June 13 1917 when the Air Board, pressured by public and political agitation, decided that emphasis for future aircraft equipment of the Royal Flying Corps (RFC) must be placed on bombers capable of deep (*sic*) penetration into the German homeland.

A Cabinet decision of July 2 1917—to increase the existing RFC strength of 108 squadrons to 200—implied that a majority of these units would have such bombers; and one 'new' design mooted was the de Havilland 9, a re-designed version of the successful D.H.4 already in operational use. Fully detailed histories of

these aircraft—by J. M. Bruce—have appeared in earlier *Profiles*; the D.H.4 as *Profile* No. 26 and the D.H.9 as No. 62.

Apart from relocating the crew positions of the D.H.4, a major difference in the proposed D.H.9 concerned the latter's nominated engine—the 300 h.p. BHP 'Beardmore-Halford-Pullinger'), later known as the Siddeley Puma. For a variety of reasons, mainly that of inadequate development, the BHP finally emerged with a mere 230 h.p. rating; inferior to the more powerful D.H.4 it was intended to replace. Geoffrey de Havilland, then chief designer for the Aircraft Manufacturing Company at Hendon, privately informed the RFC's Commander, Major-General Hugh Trenchard, of his misgivings over the Puma-engined D.H.9, stressing that it would give a lower ceiling and shorter operational range than the D.H.4. On November 16 1917, Trenchard complained forcefully about the whole matter to Major-General John Salmond, Director General of Military Aeronautics, and requested that 'every endeavour' be made to halt production of the D.H.9 and more important, that a replacement be provided '... with a performance equal at least to the D.H.4'. In the event Trenchard was told bluntly that circumstances decreed little choice—he could have the D.H.9 or nothing. In support of Trenchard, General Douglas Haig had requested on November 14 that D.H.9 production should at least be

¹ See *Profile* No. 237 by Chaz Bowyer.

² From contemporary usage of a phonetic alphabet whereby the letter A became 'Ac', 'Ack' or 'AK'.—Editor

reduced and limited to equipping a maximum of 15 squadrons.

Seemingly providential, on August 12 1917, in the United States of America, lavish publicity was initiated about a 'revolutionary' new engine, a 400 h.p., liquid-cooled 12-cylinder Vee, jingoistically titled 'Liberty' which had just been 'perfected' by a USA design team. With thousands of these much-vaunted powerplants promised from the American production lines—and considering the contemporary short supply of Rolls-Royce engines in Britain—the Liberty appeared to be a solution to the D.H.9 dilemma. Because of the existing pressure from the Air Board for the D.H.10 (see *Profile* No. 145), the Aircraft Manufacturing Company found it necessary to contract out the official request for a Liberty-powered D.H.9 to the Westland company at Yeovil, Somerset. To assist in the initial production stages, they 'loaned' a draughtsman, Mr J. J. Johnston, who was already involved in preparation of necessary modifications for acceptance of a Liberty into a D.H.9 airframe. Johnston, in close cooperation with Westland's Robert A. Bruce, set to work without delay and the first 'converted' D.H.9 (military serial no. B7664) was fitted with a 375 h.p. Rolls-Royce Eagle engine as a trial installation, pending the arrival of the promised Liberty engines from the USA.

Although nominally a conversion, in fact the so-named D.H.9A was almost a complete redesign; having greater span, greater chord, increased wing area (this factor being the reason for the 9A designation, not the change in engine) and a heavier all-up weight. General construction was conventional for the period and differed from the D.H.9 mainly in details. Extra strengthening was mandatory for support of the heavy Liberty engine and included a 1-inch thick plywood bulkhead built into the fuselage top, plus two bays of bracing wires under each engine bearer. Two 50-gallon fuel tanks were situated behind the engine with an additional 7-gallon gravity-feed tank let into the upper wing centre-section. The most easily-recognized external feature was the 9A's large and flat-fronted radiator, providing a neater profile to the nose which dispensed with the clutter of 'ironmongery' so evident in the D.H.9 design. Using a four-blade propeller (two two-blade units bolted together), B7664 was first flown at Yeovil in March 1918 by the renowned B. C. Hucks. At almost the same time a second Eagle-powered 'prototype' D.H.9A (C6350) was built and flown by the parent firm at Hendon.

In March 1918, the first 10 Liberty engines arrived in the United Kingdom and the first four production contracts for D.H.9As were placed on March 20 and 21, totalling 75 aircraft. The first 9A to be fitted with a Liberty (C6122) was initially air-tested on April 19 1918 at Yeovil by Captain A. R. Boeree. With Robert Bruce in the rear cockpit, Boeree took off smoothly; but soon



B7664, built by Westland Aircraft of Yeovil, one of the two Eagle powered prototypes.

(Photo: G. S. Leslie/
J. M. Bruce)



C6350, the other Eagle Ninak, seen here at Hendon.

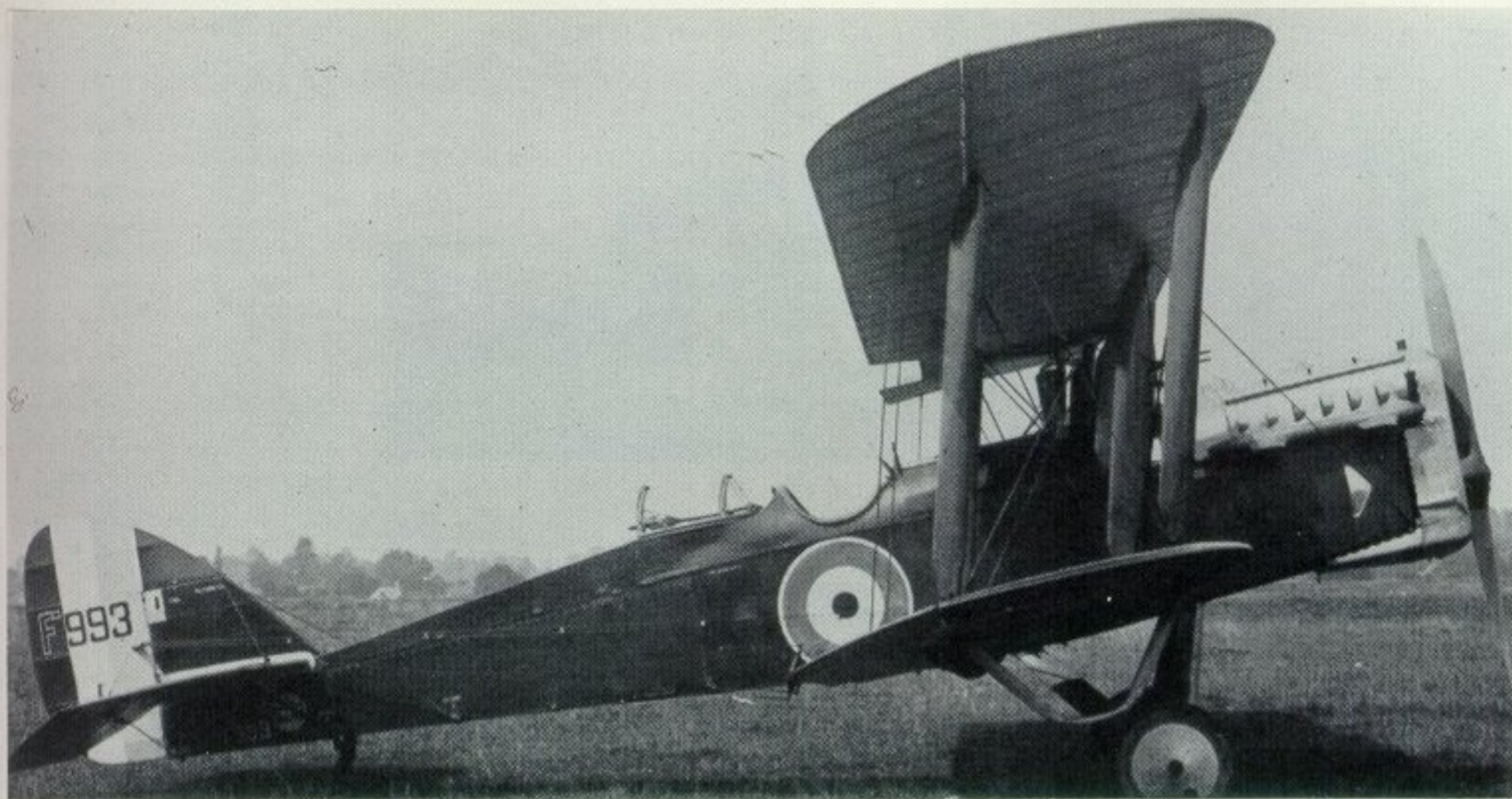
(Photo: G. S. Leslie/
J. M. Bruce)

ran into trouble. Instead of the estimated gliding speed of 70 m.p.h., he found himself 'hurtling down' for the landing at 120 m.p.h. Finally getting the nose-heavy D.H.9A down safely, Boeree immediately instructed the maintenance crew to insert 21 lbs. of lead ballast into the rudder post for counter-balance. He then accompanied C6122 to Martlesham, although he refused to fly the aircraft until it had been fully riggered. At Yeovil, Westland arranged for the top wing to be staggered a further two inches forward and C6122 then completed its trials without undue trouble. Production of D.H.9As soon commenced and by the end of June 1918, 18 had been delivered. During the next three months 288 Ninaks passed their acceptance tests; while in the following three months, 579 more were accepted for service.

Operations, 1918

The first operational unit to be equipped with D.H.9As was No. 110 Squadron, Royal Air Force. Formed on November 12 1917, this squadron was originally intended to have D.H.4s and D.H.9s for bombing duties on the Western Front in the spring of 1918. Instead, No. 110 moved to Kenley on June 15 1918 and began receiving D.H.9As; quickly reaching its full 18-aircraft establishment. Each of the first 18 Ninaks allocated to 110 was suitably inscribed to indicate that they had been paid for and 'presented' by His Serene Highness, the Nizam of Hyderabad.

On August 31 1918, 110 Squadron flew to Bettoncourt in France to join the Independent Force, RAF, and flew its first operations on September 14 when a dozen 9As attempted to bomb Boulay aerodrome, near Metz. Only six Ninaks found the target but all returned un-



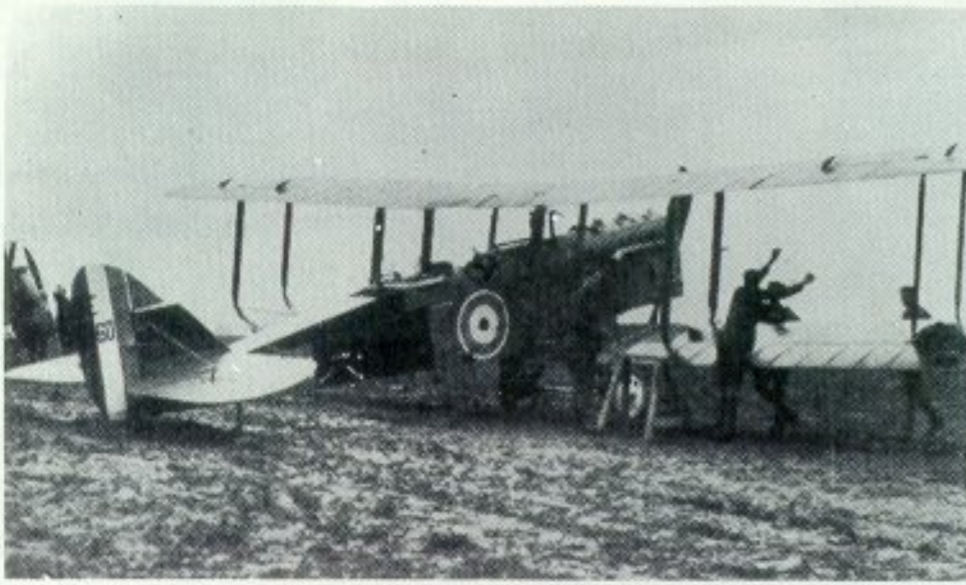
F993, a Westland-built production D.H.9A in factory finish. Allocated to 110 Squadron in the unit's initial 18-aircraft batch, this Ninak was named 'Hyderabad No. 6'.



F1000, another of No. 110's original aircraft. Its presentation inscription read 'Presented by His Serene Highness, The Nizam of Hyderabad' 'Hyderabad No. 7'.



Fine side elevation of E9665, a Ninak of typical 1918-19 construction—in this case by Mann, Egerton of Norwich.

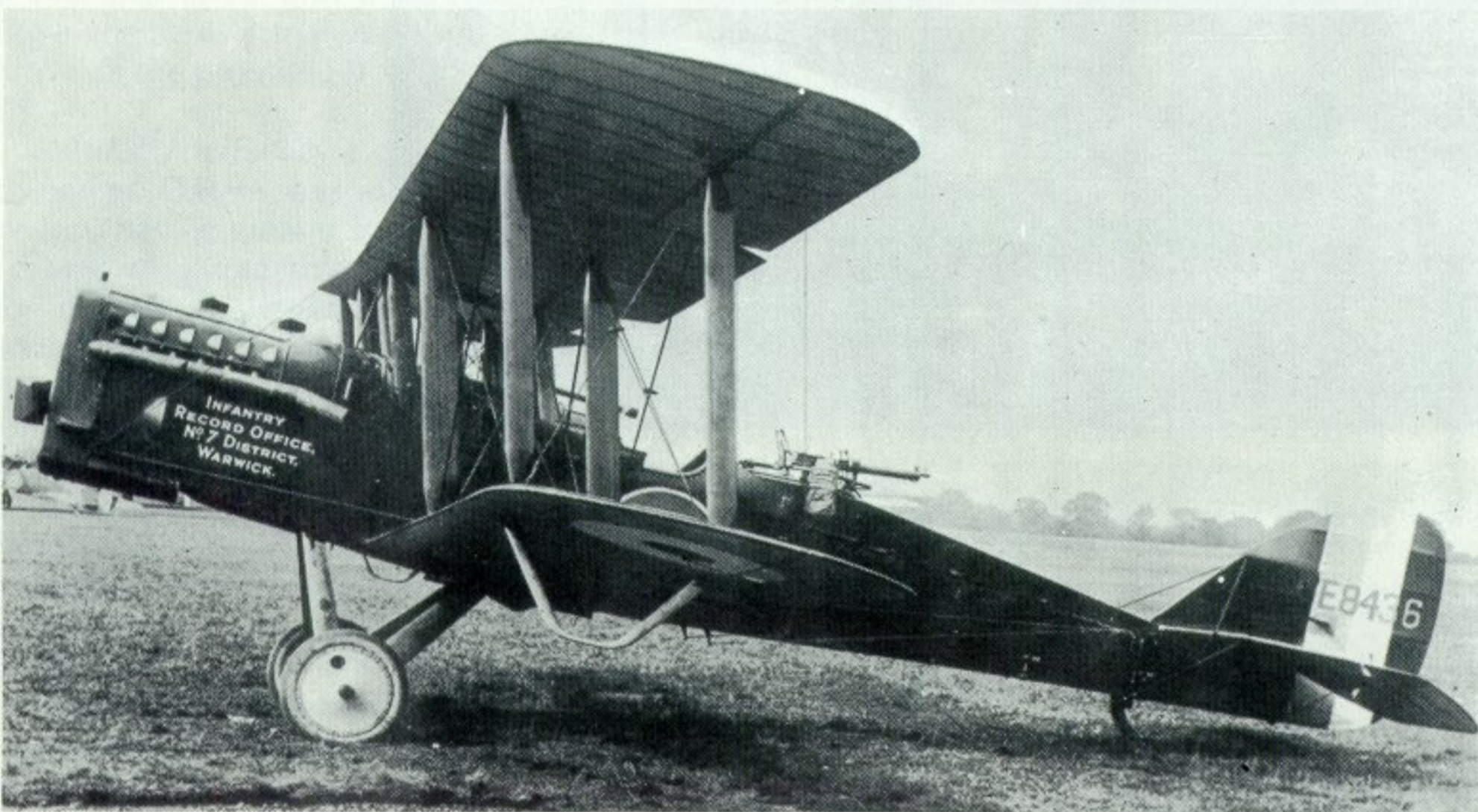


A No. 99 Squadron Ninak, E8560, being checked over at Aulnoye, France, late 1918. In background can just be seen the nose of Sopwith Camel, H6997, personal aircraft of Lieutenant-Colonel Smith, DSO, AFC, OC 91st Wing.
(Photo: G. S. Leslie/J. M. Bruce)

Top right
F2755 of No. 2 Squadron, Canadian Air Force, late 1918. In background is a captured Rumpler C.VII.
(Photo: G. S. Leslie/J. M. Bruce)



A pristine D.H.9A, F1609, at Farnborough (the old airship sheds can be seen behind the starboard wings). No armament is fitted.
(Photo: Crown Copyright; RAE Farnborough)



'Donation' markings which were faked! E8436, an Aircraft Manufacturing Company-built Ninak displaying a 'presentation' inscription which was applied purely for propaganda purposes.
(Photo: G. S. Leslie/J. M. Bruce)

scathed. Their apparent immunity to enemy reaction did not last long. Eleven days later, 12 Ninaks set out to raid Frankfurt and lost five in the trying; while a sixth 9A aborted the mission early with engine trouble. Four more 9As were lost on October 5 during a sortie to Kaiserlautern. Then, on October 21, a further seven of a formation of 12 aircraft failed to return. By the Armistice a total of 17 of 110's 9As had been shot down and a further 28 written-off-charge as 'Wrecked'—a 'wastage' equivalent to $2\frac{1}{2}$ times the normal squadron establishment in a mere eight weeks of operations. The reasons for this apparent vulnerability was due not to any intrinsic fault of the Ninak design, but to a combination of inexperienced crews, unfamiliar

territory and, by no means least, a bitterly intensive opposition in the closing weeks of the war from the German *Jagdstaffeln*. Compared to other units of the Independent Force, the losses of 110 Squadron were relatively small.

The only other Independent Force unit to receive D.H.9As was No. 99 Squadron which flew its first example on September 4 1918 and had six on charge by the end of that month. Continuing to fly an impractical mixture of D.H.9s and D.H.9As until the Armistice, this squadron next received twelve 9As on November 11 and 12 and was fully re-equipped by November 16. The few operations accomplished in Ninaks by 99 Squadron pilots showed emphatically the superiority of the 9A over its

predecessor, lifting almost twice a D.H.9's war-load to a higher ceiling and reaching that ceiling faster.

Other RAF units to receive D.H.9As during the war included Nos. 18 and 205 Squadrons. The latter squadron began replacing its D.H.4s in September 1918, and flew its first Ninak operations on September 29; being fully re-equipped by October 1. No. 18 Squadron received its first 9A on September 28 and was almost fully 'converted' by the Armistice.

With its strong American connections, it was logical that the USA should employ the Liberty-engined D.H.9A and at least 53 were used by the US Marine Corps Northern Bombing Group, starting in September 1918. USMC Day Squadron 9 carried out its first Ninak operations on October 13.

Further examples of Ninaks were sent to a variety of RAF naval units, including Nos. 212 and 273 (Coastal) Squadrons; while on October 24 1918, twelve D.H.9As were in transit at Turnhouse awaiting 'naval disposition'. Another

D.H.4 unit, 25 Squadron, is known to have received a few 9As late in the war, presumably on an operational evaluation basis because no confirmation has been found to indicate any official intention to re-equip the unit fully. On October 31 1918, the RAF had an overall total of 405 D.H.9As on charge, of which 149 were in France and the remainder scattered widely in units and storage in the UK.

Post-Armistice—The 'Peace' Years

With the cessation of hostilities in Europe in November 1918, the D.H.9A squadrons became part of the air complement to the Allied armies of occupation in Germany. As such during 1919, they were used primarily in a conveyance role for passengers, communications and the European end of mail services to British servicemen on the continent. As demobilization and reduction within the RAF reached its peak, the bulk of wartime squadrons were reduced to cadre and eventually disbanded. For example, of the D.H.9A units, 110 Squadron disbanded on



Winter scene—or 'The Mail must go through'. E9707 of No. 205 Squadron at Verviers, February 1919, piloted by Lieutenant Wardlaw, prepares to fly the last leg of the UK-Germany mail route to British occupation forces. (Photo: C. H. Latimer-Needham)



Excellent close-up of Ninak crew accommodation, in this case F1001, 'L' of No. 205 Sqn, Verviers, February 1919. The pilot was Lieutenant W. Esplen. Note that Vickers gun and bomb-sight were still fitted, but that the Observer's Lewis gun was removed. (Photo: C. H. Latimer-Needham)

August 27 1919, 18 Squadron in December 1919 and 205 Squadron—which handed over its aircraft in March 1919—soon followed suit and disbanded on January 22 1920.

Only 99 Squadron continued in service, based at Aulnoye, until May 1919 when it was somewhat hastily despatched to India to reinforce the meagre RAF strength there for the Third Afghan War along India's North West Frontier.

A few D.H.9As saw sporadic operational service in 1919–20 with the RAF Training Mission assisting the 'White' Russians cause in south Russia, fighting Bolshevik revolutionaries. No. 47 Squadron, reformed in June 1919, had one Flight of Ninaks—as did 221 Squadron, based at Petrovsk by mid-1919. In arctic temperatures and makeshift conditions of maintenance, the Ninaks achieved little and, by mid-1920, were withdrawn when the RAF element was taken out of the conflict. Several Ninaks, presumably abandoned, were confiscated by the 'Red' Russians who soon produced an overt carbon-copy of the D.H.9A, labelled R-1 ('Razv'edchik'—Reconnaissance). At first powered by (presumably) captured Liberty engines, these too were copied and produced as 400 h.p. M-5 engines. Further Russian development of the basic R-1 continued until 1932 and at least one claim to fame for the R-1 was that it was Russia's first 'Shturmovik' ('One who storms') when one model had additional guns fitted.

In the USA, the D.H.9A was officially adopted

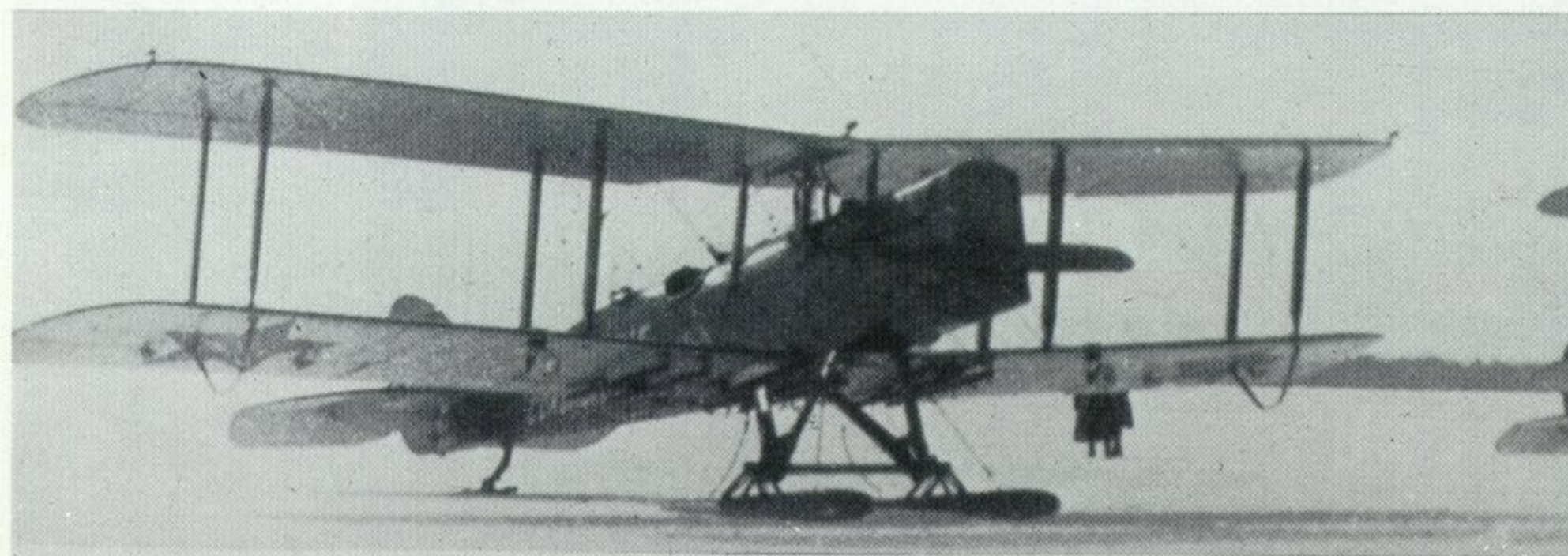


D.H.9A, E752, fitted with Napier Lion, warming up for take-off during deck-landing trials aboard the aircraft carrier, HMS Eagle in 1920. (Photo: via R. C. B. Ashworth)

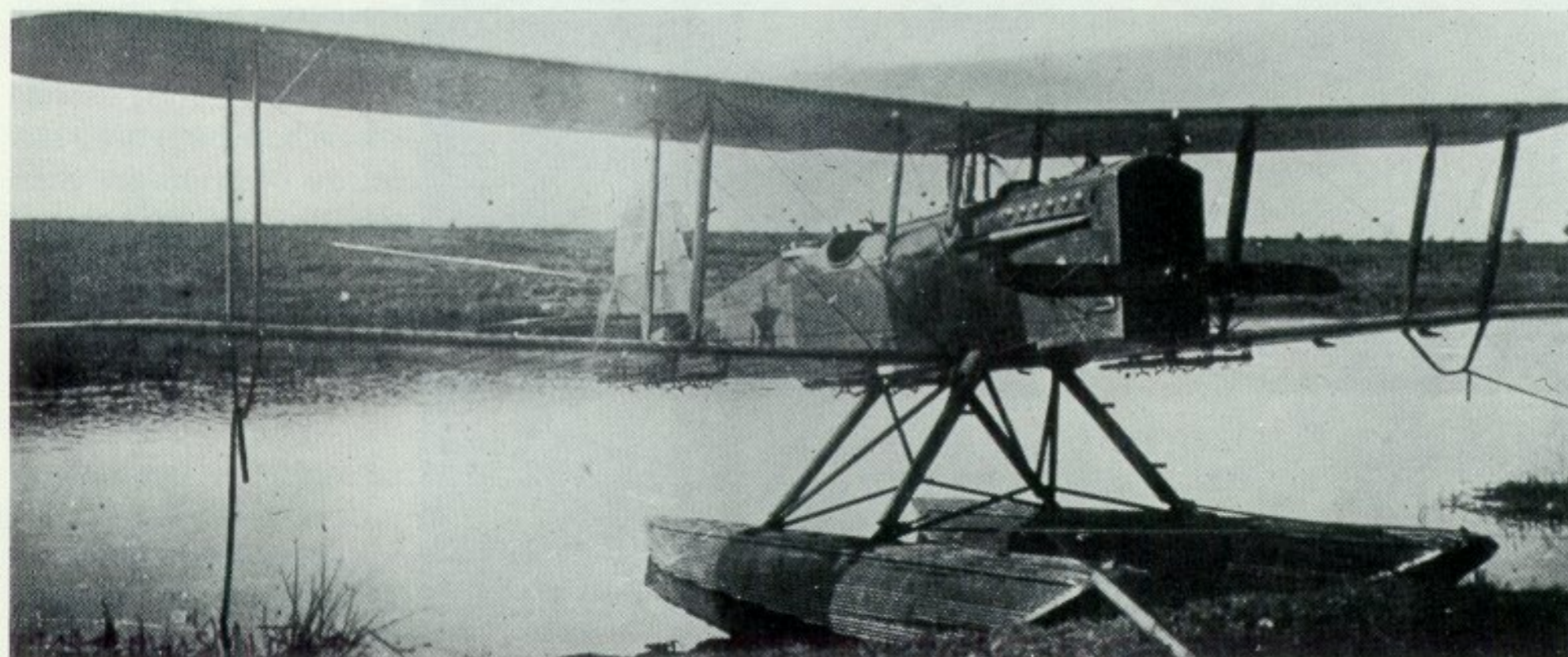
as a replacement for the D.H.4 although, in the contemporary mania for altering any aircraft to 'American standards', the basic design was considerably changed and even its title was changed to U.S.D.-9A. In all, nine prototypes were built, the first four being delivered in October 1918; but an optimistic contract for 4,000 production aircraft was cancelled by the Armistice and no production U.S.D.-9As delivered.

India

The outbreak of the Third Afghan War in 1919 along India's northern frontier imposed a severe strain on the only two RAF units, 31 and 114



Of poor quality, but rare photo of the Russian-built R1 version of the D.H.9A. Seen here in 1920 with snow skis and fitted with nightflying landing and navigation lamps. 'Red Star' markings visible under wings.



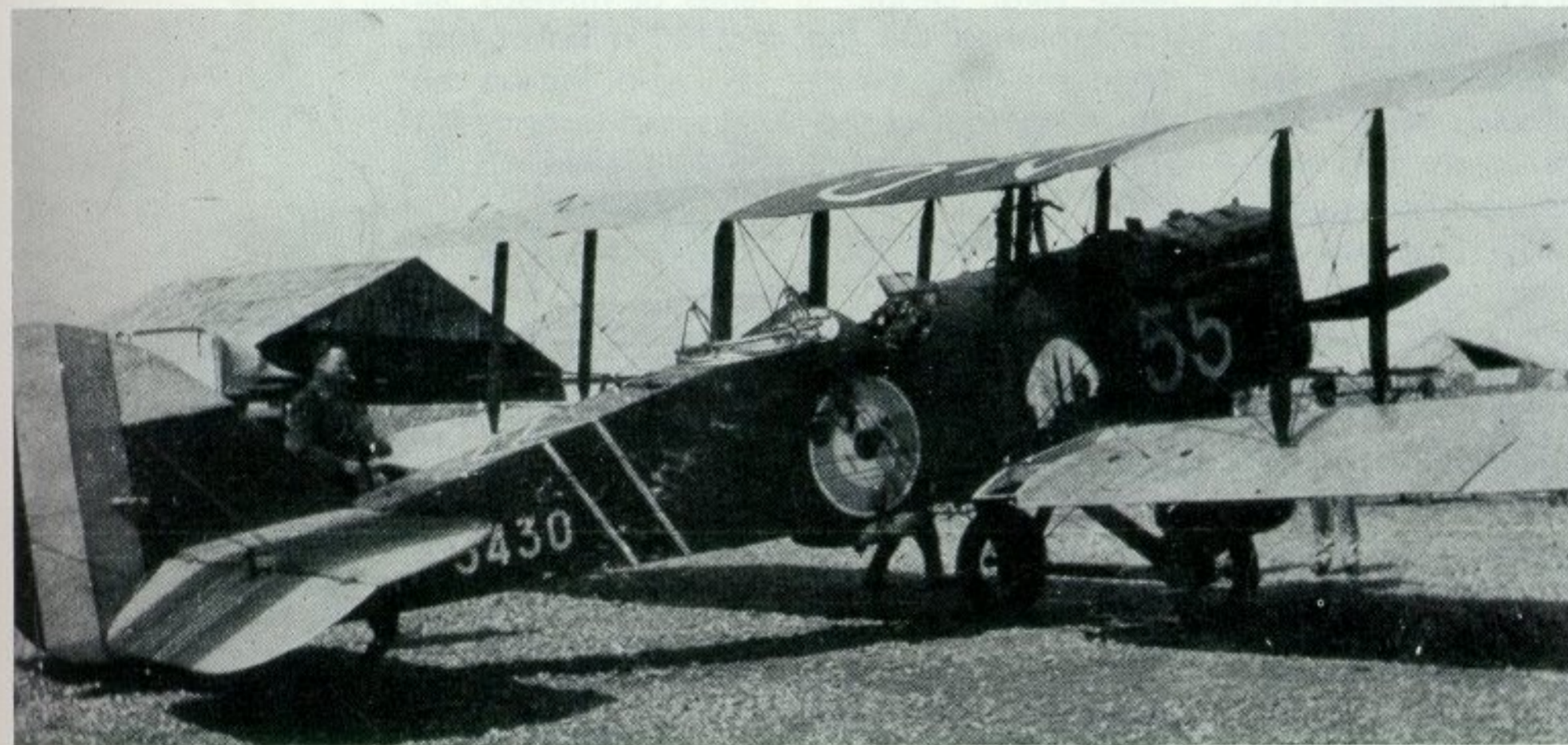
Another Russian improvisation, a metal two-float version of the Ninak with 'Red Star' markings in the mid-1920s. (Photo: via D. B. Robertson)



*B Flight, No. 55 Squadron at Mosul, 1921. Individual aircraft identities, crudely marked, include B3 (E9911) and B4 (E9912) and 1918-style shading overall is still in evidence.
(Photo: via W. H. Osterman)*



*The patchwork appearance was not camouflage, but indicative of the chronic lack of new supplies of fabric and dope . . . H95, 'H' of No. 27 Squadron (Flying Officers Merer and Atkins), 1922 at Risalpur, India.
(Photo: Mrs D. Cowton)*



Colourful Ninak, H3430, personal aircraft of No. 55 Sqns commander, Squadron Leader 'Mary' Coningham (later AM. Sir Arthur). The white-piped fuselage band was in red, a unit marking carried on in later years by No. 55. The black/white Mosque/Minaret silhouette insignia was evident on several of 55's Ninaks in the early 1920s.

Squadrons, already stationed in the area. As reinforcement, three more squadrons were hurriedly sent from Germany—48 (Bristol F.2Bs), 97 (D.H. 10s) and 99 (D.H.9As), all of which arrived in India by June 1919.

Initially No. 99 Squadron moved to Ambala and later were based at Mianwali in the Punjab Province, on the east bank of the River Indus. Mianwali was a bald, rock landing strip almost totally devoid of maintenance facilities but the Ninak crews were given little time to acclimatize, being employed on anti-tribal operations almost immediately.

They soon discovered that performance figures for the Ninak applicable in more tem-

perate zones bore little relation to operational conditions in India. Take-off and initial climb was painfully slow in the thin mountain air, while the usual service ceiling of 15,000–18,000 ft. (with full warload) was virtually unattainable. Even landings presented unusual problems. 'Arriving' neatly by the contemporary practice of side-slipping off a turn before touching down on 'three points' was likely to produce an even neater sideways-shearing of the undercarriage. Similarly, the violent change from the baking heat of the airfield to the bone-numbing cold of operational ceiling on each sortie did little to improve crew comfort and efficiency. In August 1920, extra tropical radiators were introduced



for all aircraft in India, but even after such 'improvement' a Ninak specially flown to test warload height capability could still only reach 13,500 ft.

On April 1 1920, a change of identity for several of the units was effected; No. 48 Squadron being renumbered 5 Squadron, No. 97 becoming 60 Squadron and No. 99 assuming the reborn title of 27 Squadron. The new 'labels' scarcely affected daily routine on the squadrons which were still busily engaged in operations, although the Third Afghan War officially ended on May 7 1920. The 'peace' which followed was short-lived. In November that year, during one five-day period from the 12th to 17th, Nos. 27 and 60 Squadrons combined in support of the army's Wana Column and dropped a total of 10,814 lbs. of bombs among tribesmen attacking the column. Indeed, the term 'peace' never really applied to conditions on India's North West Frontier at any period between the two world wars of this century. If tribes were not engaged in their traditional inter-tribal feuding, they were constantly fermenting trouble with the white 'Raj' (rule). This continuing situation meant an almost constant operational footing for the British Servicemen in India.

No. 27 Squadron remained the only Ninak unit in India until March 1923 when 60 Squadron finally exchanged their D.H.10s for the more reliable 9As. Ideally, squadron establishment in each case was for 12 aircraft; though in 27's case there were seldom more than seven 9As fully serviceable at any given date. This was due mainly to the scandalous financial condition of the RAF in India in the early 1920s—a circumstance which finally resulted in Air Vice-Marshal Sir John Salmond being sent to India to investi-

gate the whole situation in 1922. His report to the Viceroy of India included a recommendation that the existing establishment of six squadrons be raised to eight to include two extra D.H.9A units. In the event, it was to be six years later before the extra two squadrons arrived in India, by which time the Ninak was overdue for replacement by more modern designs. Thus 27 and 60 Squadrons remained the only D.H.9A units in India until their eventual re-equipment.

Apart from the near-constant operational duties, Ninaks were used to open up new communications routes across India. On January 14 1925, all six Flight Commanders of 27 and 60 Squadrons set out from Risalpur to fly to Calcutta—the first such attempted long-distance flight. Despite a series of mishaps, all accomplished the trip of 1,330 miles in four days; in a flying time of 14½ hours. But on the return leg, four of the Ninaks had to drop out and only the remaining pair completed the flight.

In March 1925, both Ninak units moved to occupy Miranshah Fort—the first RAF units to do so (although this Army post had been used in the past as an emergency landing ground on occasion). From March 9 to May 1 1925, all RAF units were engaged in operations—later titled unofficially 'Pink's War'—when, for the first time ever, the RAF was permitted to conduct a complete 'campaign' independent of the Army. In the 54 days of actual operations, a total of 2,720 hours was flown by all units. Only two casualties resulted—the crew of a 27 Squadron Ninak which was shot down by rifle-fire. This impressive demonstration of the efficacy of pure aerial power was to prove a turning point in military thinking in India.



Key to colour

E8650 of A Flight, 84 Squadron, 1923, Shaibah.

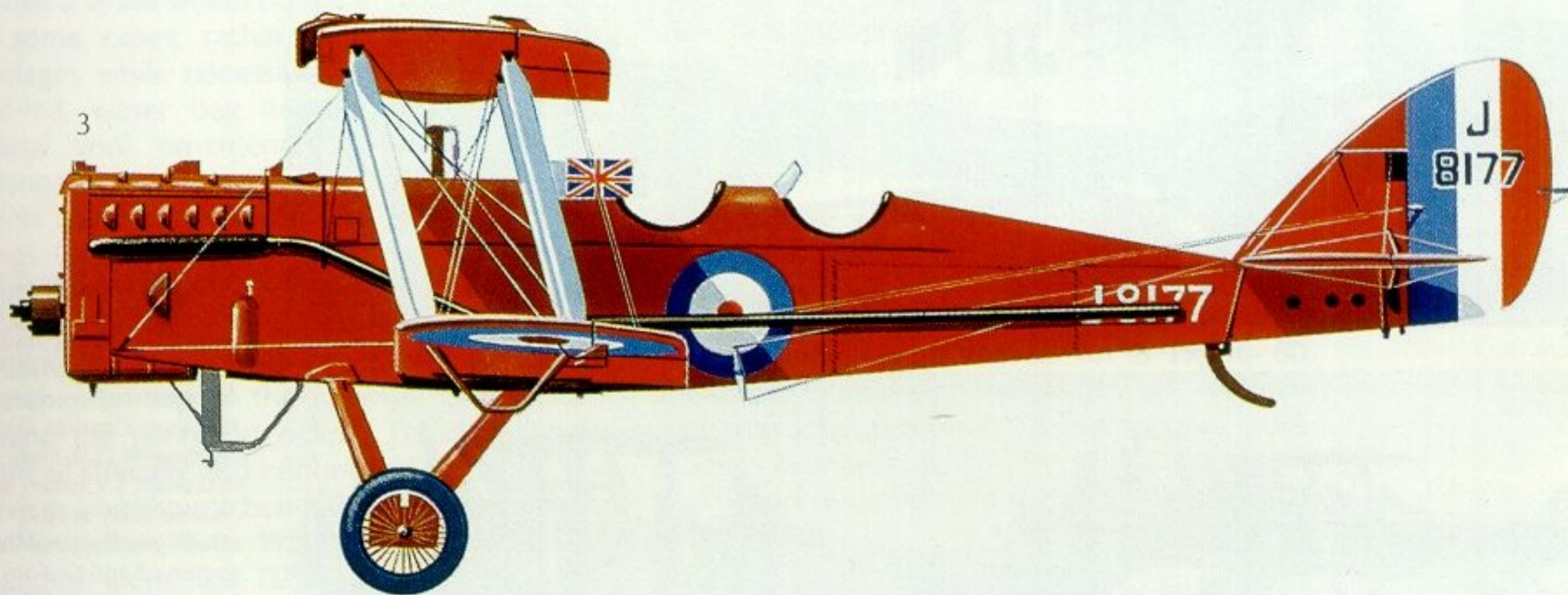
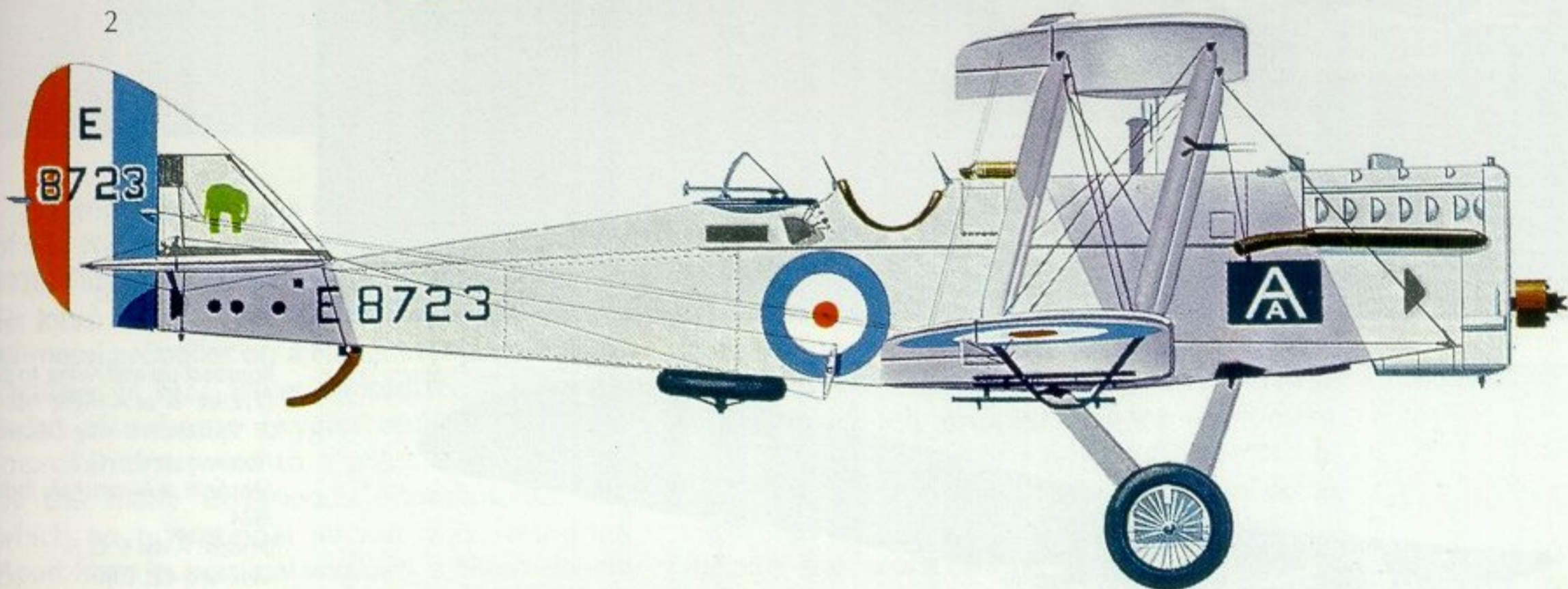
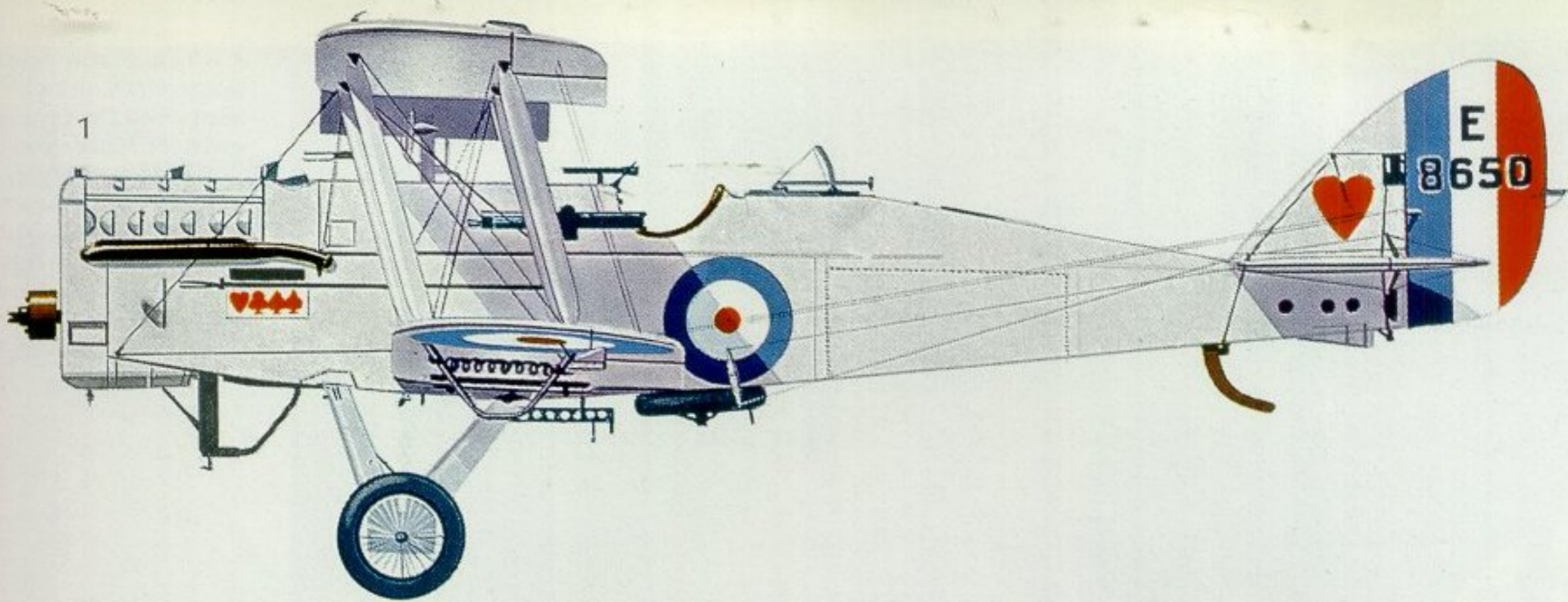
E8723 of 27 Squadron, 1924. The Green Elephant caricature on the fin was applied to all unit aircraft—a reminder of the unit's first operational aircraft, The Martinsyde G100 'Elephant' of 1915/16.

'Racing Red Nine'—the personal transport of the AOC-in-C, RAF Middle East, 1928, AVM Sir Edward Ellington.

H3433 of 30 Squadron, Iraq, circa 1926/27.

Top
H3627, 'C II' of No. 55 Squadron displaying some of the earliest unit markings of the post-1918 era to receive official approval. Fin and fuselage checks were in Black and Flight colour: Light Blue, C Flight; Yellow, B Flight and Red, A Flight. (Photo: MOD (Air))

The beginning of the aluminium/silver-doped aircraft finishes, well depicted by this line-up of No. 27 Squadron's Ninaks in India. Individual aircraft letters A to M incl. were used by No. 27; the remainder of the alphabet by a sister unit, 60 Squadron.





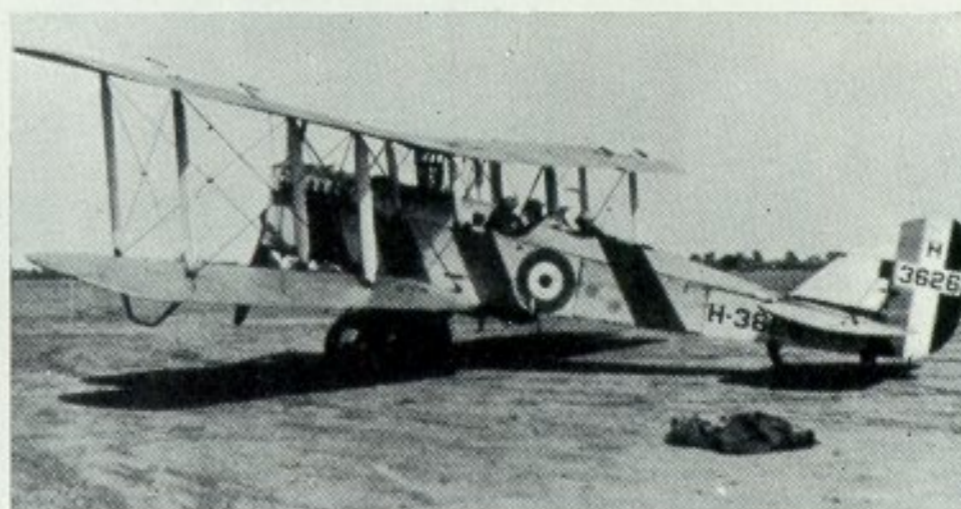
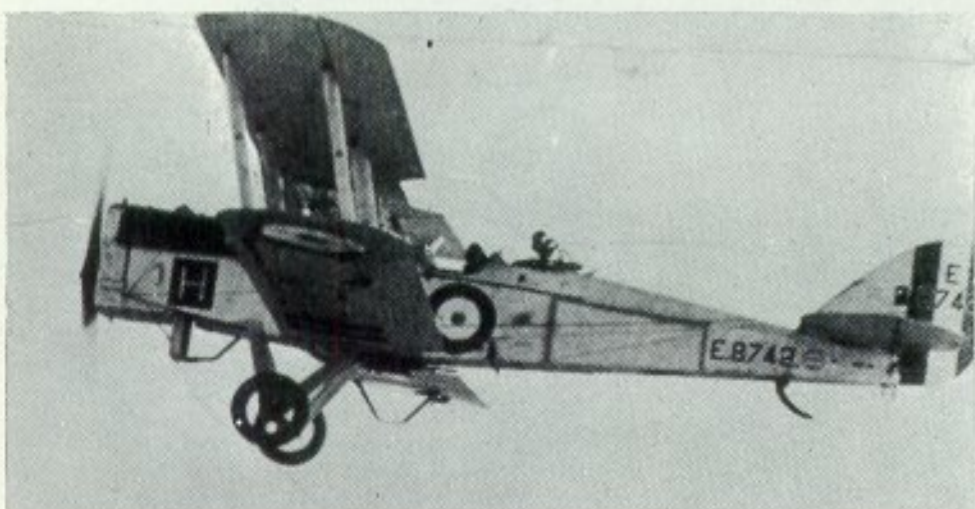
A self-explanatory view of typical terrain on India's North-West Frontier over which the Ninak crews had to operate in the 1920s, without benefit of parachutes. J7340, 'L' of No. 27 Squadron at 4,500 ft. over the region between Spin Wam and Miranshah, April 1928. (Photo: Mrs D. Cowton)



Bombed up and raring to go. D.H.9A, 'B' of A Flight, No. 27 Squadron (Flying Officers Holdway and F. G. S. Mitchell) at Miranshah, India, 1924. (Photo: AVM F. G. S. Mitchell, CB, CBE)



E828 ('A') and J7340 ('L') of No. 27 Squadron flying as aerial escort to the royal train of Amir Amanullah of Afghanistan, December 10 1927, over Chaman. On February 14 1928, Flight Lieutenant S. Graham, MC, crashed badly in E828, resulting in the Ninak being written-off and Graham being repatriated to England for hospitalization. (Photo: Author's collection)



Bottom left E8742, 'H' of No. 27 Squadron airborne, January 14 1925, prior to setting out on the first-ever Risalpur-Calcutta long distance proving flight.

Gaudy conversion of a Ninak by No. 60 Squadron. H3626 modified as a two-seat hack communication transport. (See colour side view). (Photo: Author's collection)



Another two-seat local conversion, this time of E8673, formerly 'E', of No. 27 Squadron.
(Photo: MOD (Air))

Attempts to improve the useful performance of the Ninak had little success. On January 18 1926, Flight Lieutenant (later Air Chief Marshal Sir John) Baker of 60 Squadron tested the first all-metal propeller on a Ninak in India; while on October 17 1927, Baker piloted the first test (in India) of airborne oxygen equipment. These improvements were to a great extent nullified by the many extraneous impedimenta with which an operational aircraft was festooned. Apart from its nominal warload, a Ninak usually carried a spare wheel bolted on to the fuselage (in some cases, rather illogically, *under* the fuselage), while necessary equipment such as bed-roll, water bag (usually made from an animal skin), emergency rations and crews' personal kit were attached or hung on various points around the fuselage or under the lower wings. On occasion, the Ninak was called on for mercy flights, carrying wounded from forward landing grounds to base hospital facilities; the patient being strapped into a Neil Robertson stretcher on top of the fuselage immediately behind the gunner's cockpit. The Ninak bore them all stoically and continued to give sterling service; an example being the operations flown on November 15-16 1928 when Ninaks of 60 Squadron alone flew 117 hours on 59 individual sorties and dropped 146 × 112 lb. bombs, 36 × 20 lb. and four containers of incendiaries. Yet another 'encumbrance' added to the Ninak's load in December 1928 was the first issue in India of parachutes for crews—a device not so universally welcomed by pilots as might have been expected.

On December 17 1928, came an urgent request from the British Legation at Kabul for an air evacuation of all British subjects; the Legation being surrounded by an army of revolutionary tribes attempting to oust the contemporary Afghan king. The request posed a serious problem for the RAF which had no transport aircraft in its command—the nearest

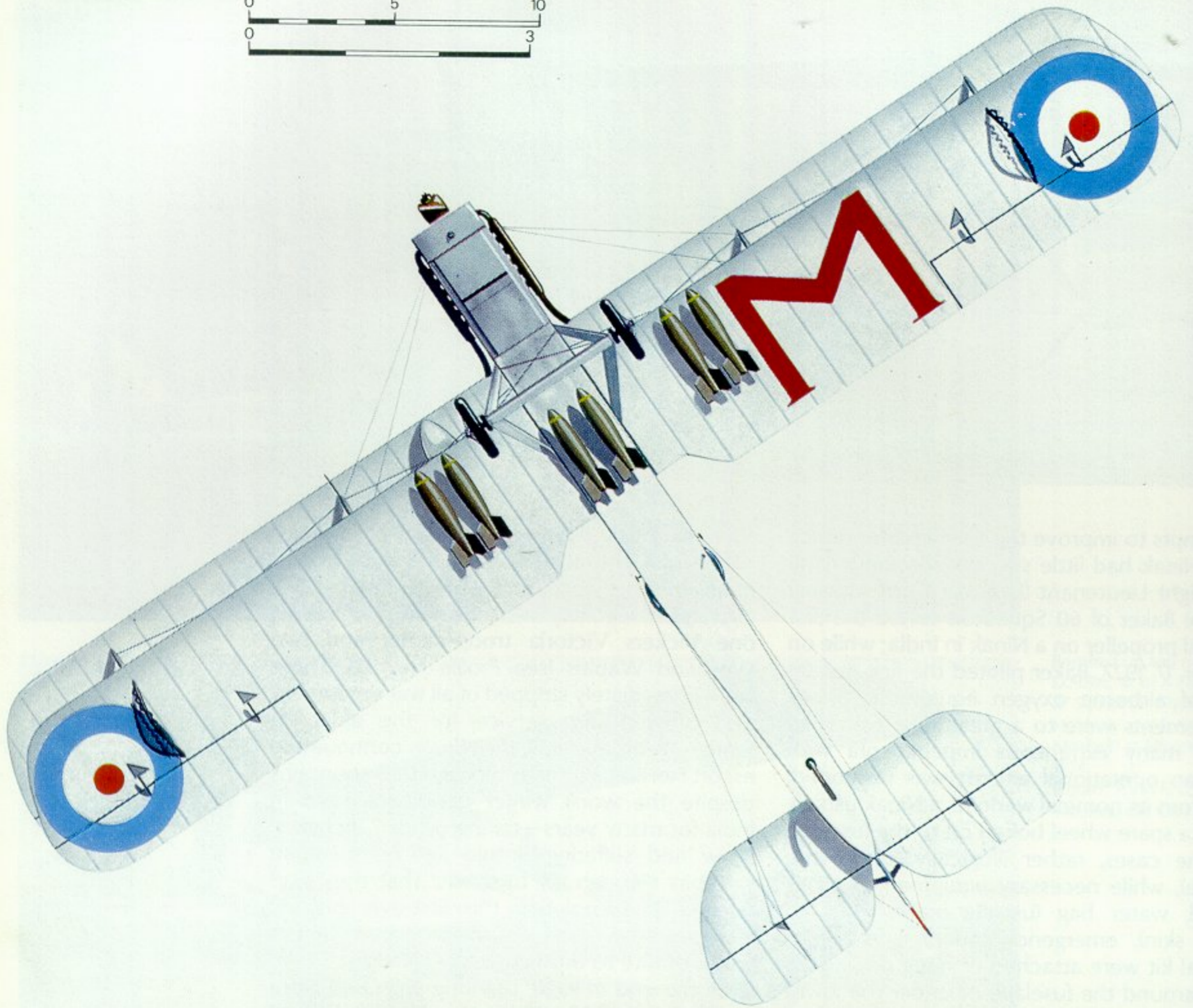
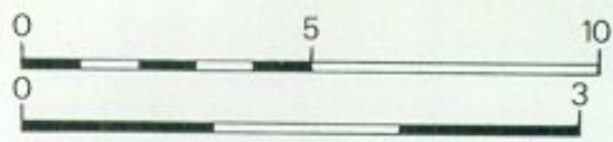
such unit being 70 Squadron in Iraq. Bristol F.2Bs had insufficient range to assist any such evacuation and, on December 23, the only feasible aircraft immediately available were 24 D.H.9As, one Vickers Victoria troop-carrier and two Westland Wapitis (see *Profile* No. 32). These were immediately stripped of all war equipment and pressed into service for the airlift. In January-February 1929, the Ninaks continued to escort No. 70's Victorias through the mountains despite the worst winter conditions seen in India for many years—taking off in 17 inches of snow and suffering untold agonies in open cockpits through icy blizzards. That they succeeded in completing this first-ever historic evacuation in such desperate circumstances was a tribute to both crews and aircraft.

By the end of 1928, the long-promised extra two units for RAF India had arrived, 11 and 39 Squadrons, each equipped with Wapiti IIAs. But it was not until March 8 1930, that the first Wapiti replacement arrived on B Flight, 60 Squadron. Within eight weeks No. 60 had fully exchanged their veteran Ninaks for the more modern bombers; while in April, 27 Squadron also began re-equipment with Wapitis.

Middle/Near East

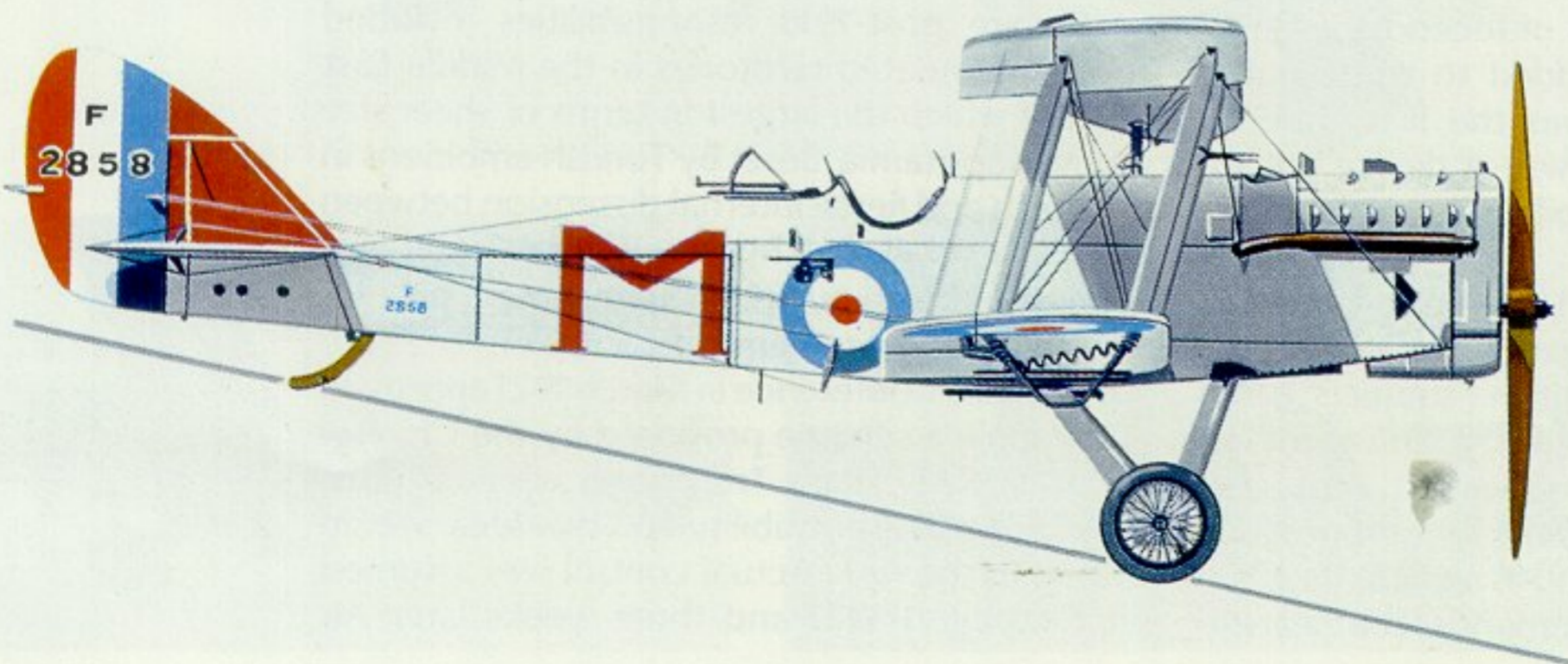
Apart from her Empire commitments, Britain's immediate post-1918 responsibilities included several mandated territories in the Middle East area; of which the largest in terms of sheer size was Mesopotamia. Beset by Turkish ambitions in the north and fierce internal dissension between the many tribal sheikhdoms, 'Mespot' (as it was familiarly known by British Servicemen) presented formidable problems of control.

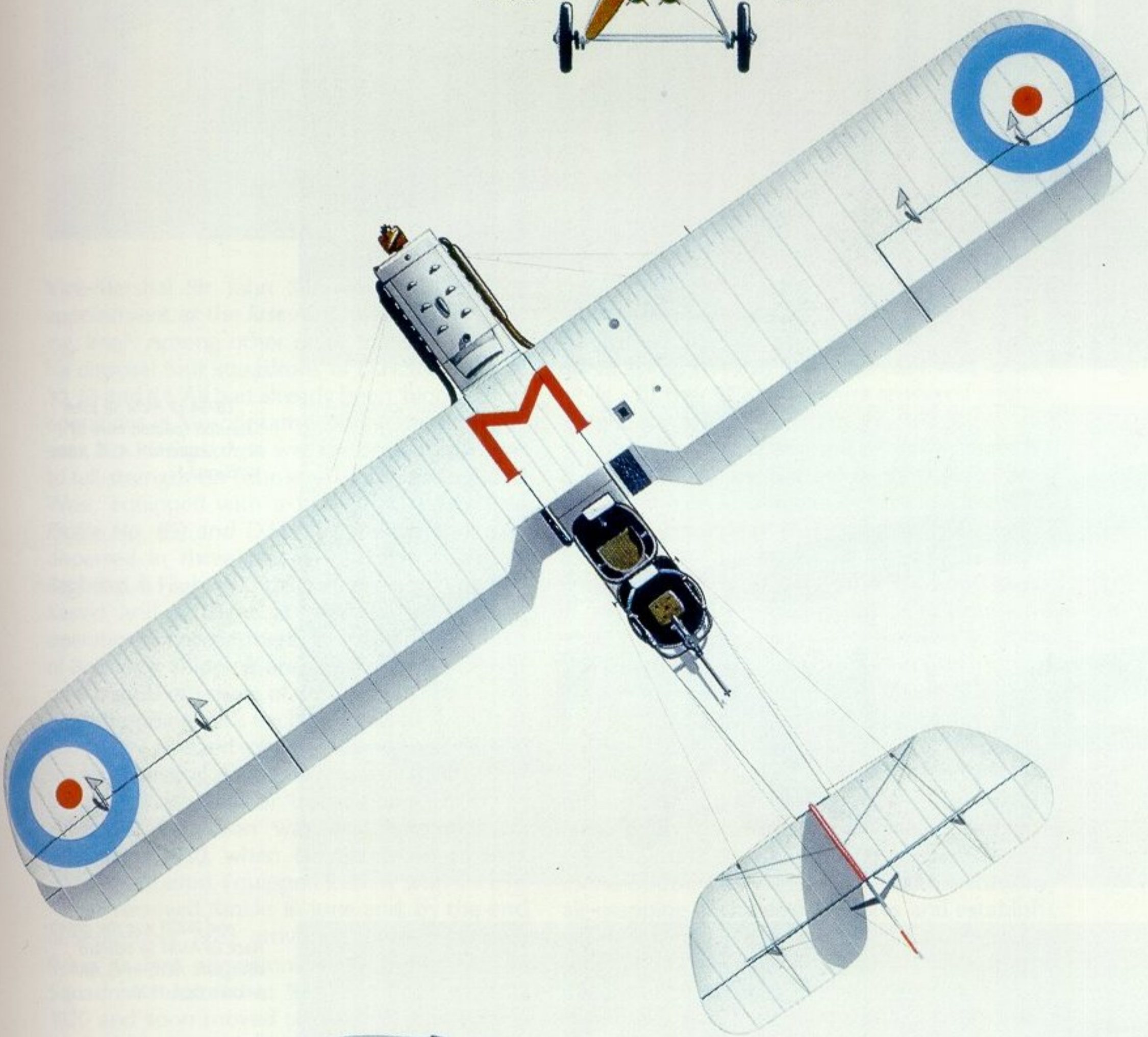
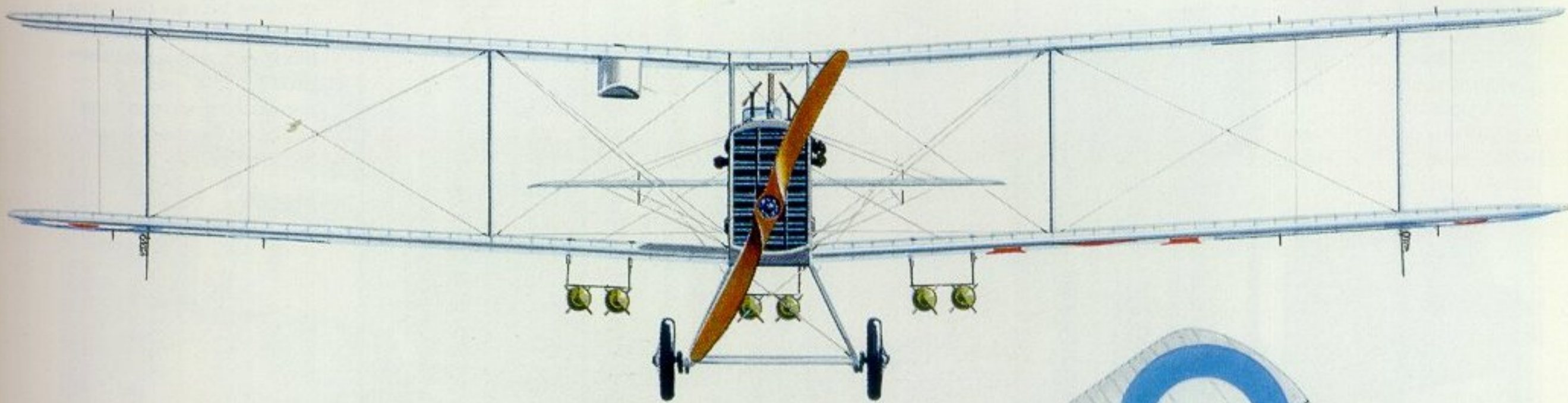
The Cairo Conference in March 1921 approved in principle a scheme proposed by the Chief of Air Staff, RAF, Hugh Trenchard, whereby final control and responsibility for the area would belong to the RAF. Actual control was assumed on October 1 1921 and three weeks later Air

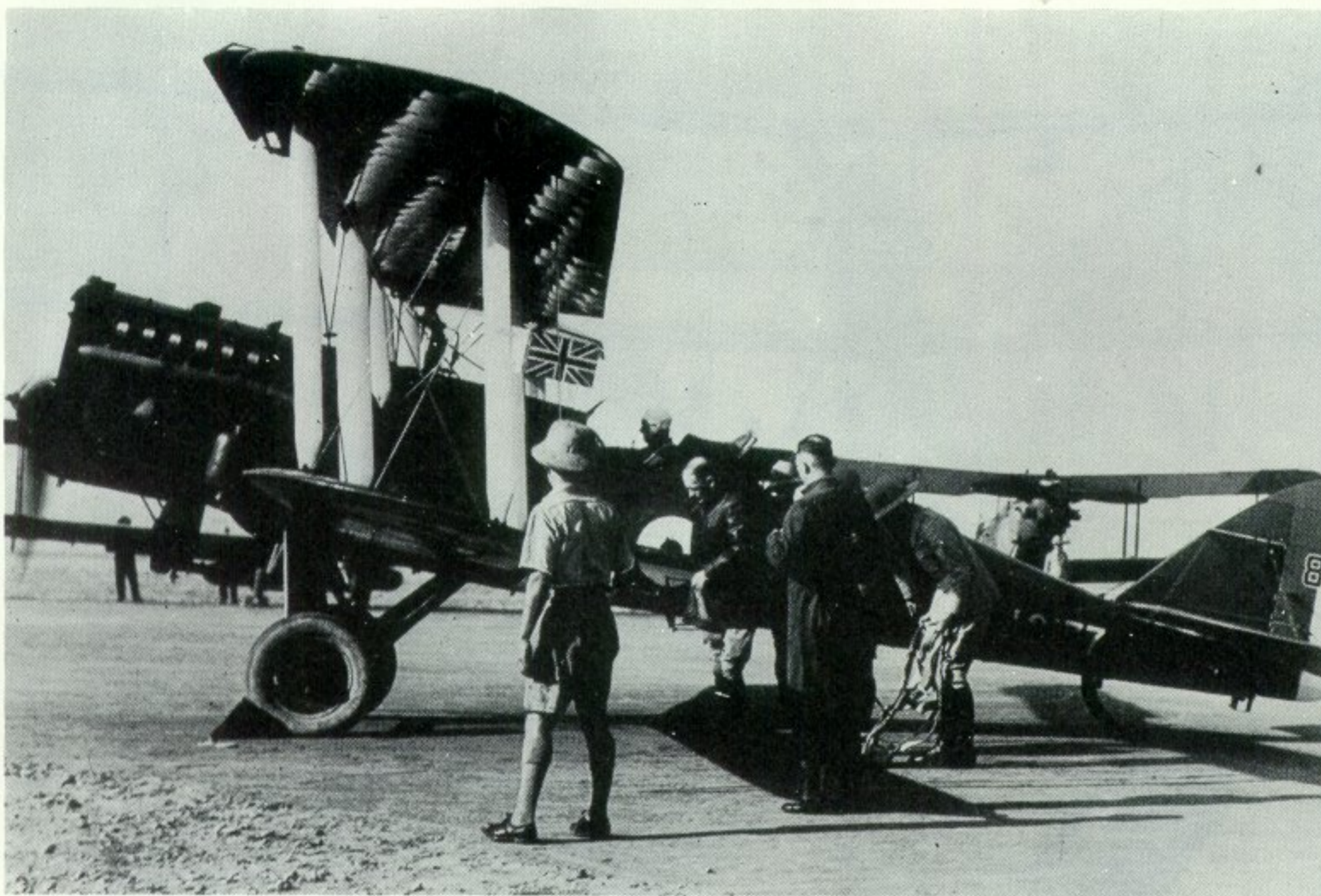


F2858, 'M' of B Flight, 8 Squadron, flown by Flying Officer N. H. F. Unwin (later, Wing Commander, MBE) in Iraq, 1924.

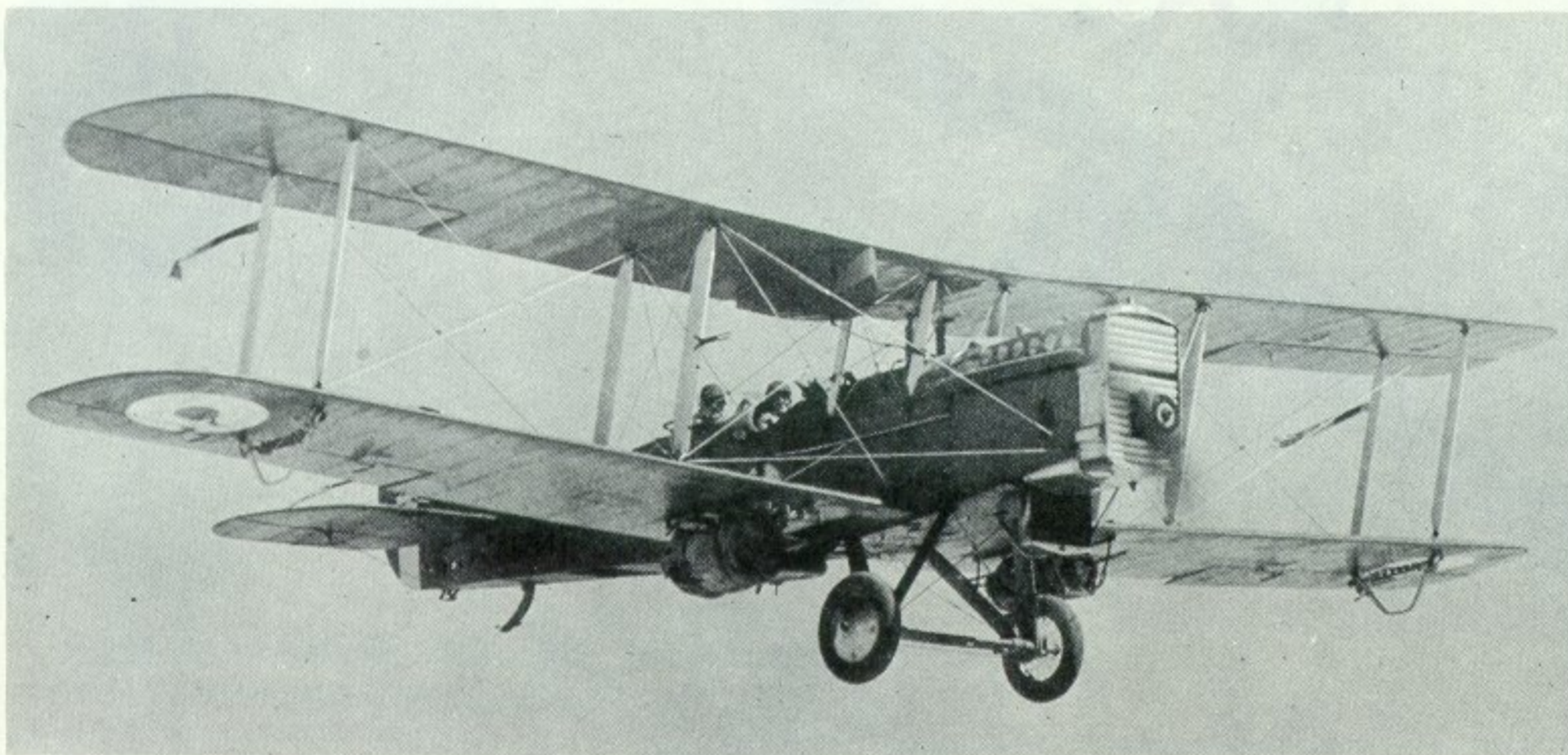
P. Endsleigh Castle, ARAS © Profile Publications Ltd







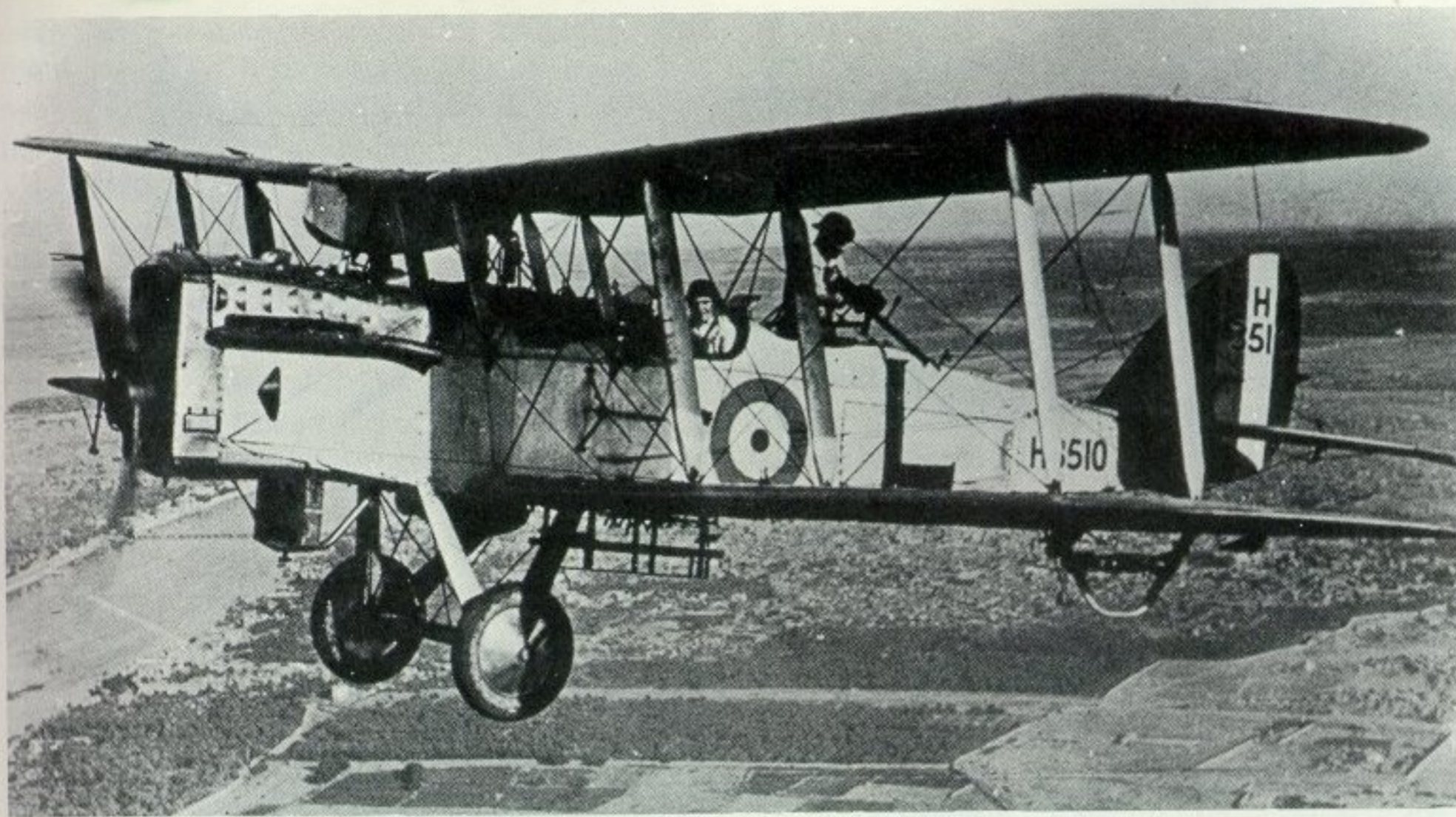
The 'Racing Red Nines'. VIP Ninaks appropriately coloured for easy distinction. All were doped overall in blood-red, with white strutting. J8177 was the personal transport of AVM Sir Robert Brooke-Popham ...



... E8754 of AVM Sir John Salmond (piloted here by Flight Lieutenant A. G. Jones-Williams) ...



... and J6959 was the private hack of AVM Sir Edward Ellington, AOC-in-C, RAF Middle East, 1928.



A splendid view of a Ninak which epitomizes the 'Christmas Tree' capability of the type. H3510, 'L' of B Flight, No. 8 Squadron, based at Hinaidi, seen here flying over Baghdad and the Tigris River. Pilot was Flight Lieutenant A. G. Jones-Williams and gunner, Flight Sergeant Benson.

Vice-Marshal Sir John Salmond took up his appointment as the first Air Officer Commanding, Iraq¹. Among other units, Salmond had at his disposal four squadrons of D.H.9As, Nos. 8, 30, 55 and 84. All had already been 'blooded' on operations in Mesopotamia during the previous year. No. 30 Squadron was restored from cadre to full strength on February 1 1920, at Baghdad West, equipped with a mixture of R.E.8s (see *Profile* No. 85) and D.H.9As, but by April was dispersed in three places—A Flight being at Baghdad, B Flight 400 miles to the north-east at Kasvin and C Flight at Mosul. Part of their operational commitment included 'disruption' of Bolshevik shipping around the port of Resht on the southern shore of the Caspian Sea. Flying dawn bombing raids each day, the 30 Squadron pilots were amazed to meet air opposition in the shape of several Avro 504s—actually, Russian-built U-1s ('Uchebnii' or 'Instructional').

No. 55 Squadron was also reformed on February 1 1920, when 142 Squadron at Suez was renumbered. Equipped initially with D.H.9s, No. 55 received Ninaks in June and, by the end of September 1920, arrived in Constantinople; flying its first operations in October. No. 84 Squadron reformed at Baghdad on August 13 1920 and soon moved to Shaibah in southern Iraq; which was to be its 'spiritual' home for the next two decades. The fourth Ninak unit, 8 Squadron, reformed at Helwan, Egypt, on October 18 1920, with D.H.9As and moved to Baghdad at the end of the year.

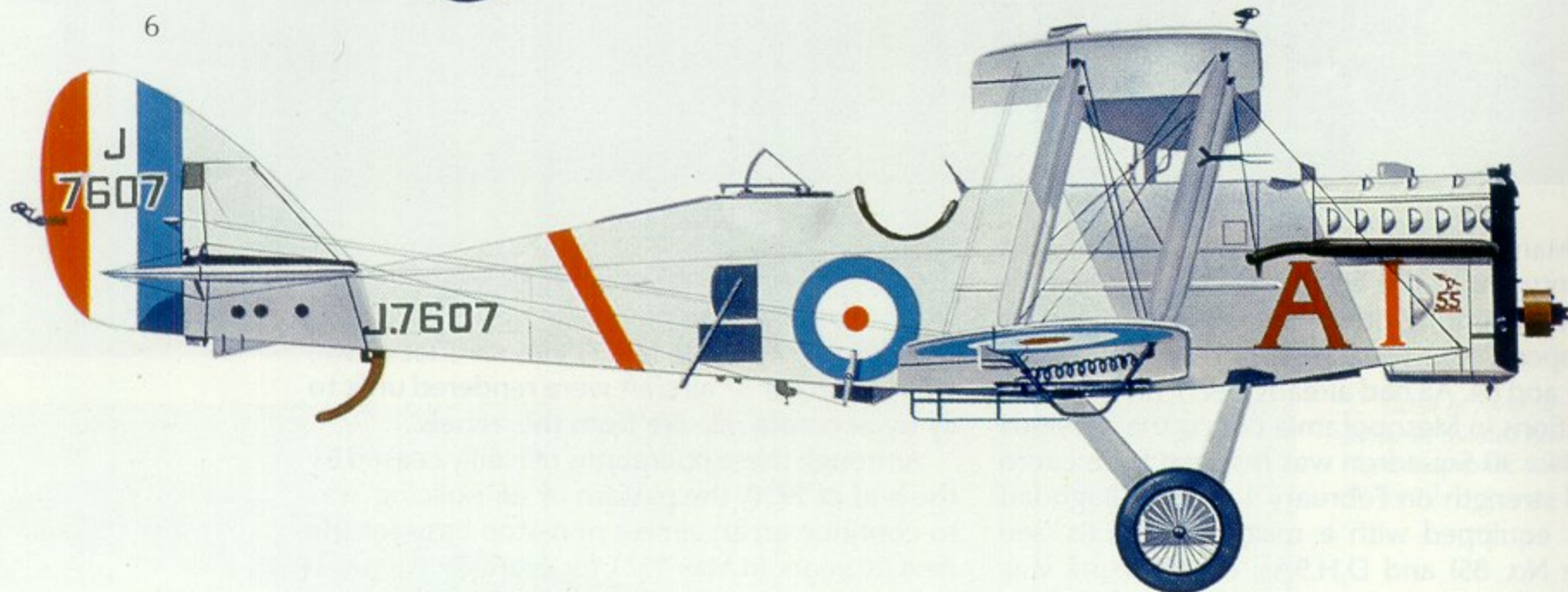
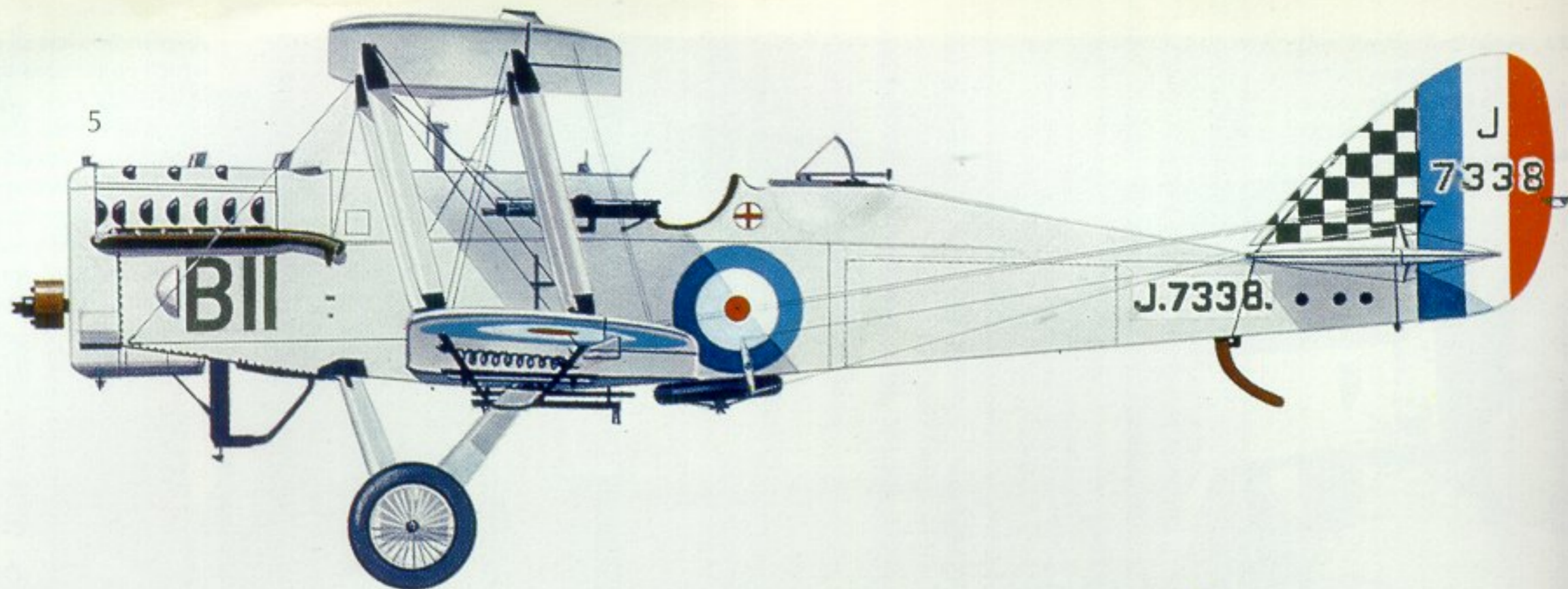
All four squadrons became involved in the widespread Arab revolt of 1919–20 when an estimated 200,000 Arabs attempted to throw off foreign control of their country. The British Army employed 120,000 troops during the conflict and suffered 876 killed and over 1,000 wounded. The air effort in support was pro-

digious. A total of 97½ long tons of bombs was dropped and over 180,000 machine-gun bullets were expended during 4,000 hours of operational flying. The RAF lost 11 aircraft shot down, while a further 57 aircraft were rendered unfit to fly by accurate rifle fire from the 'rebels'.

Although these operations officially ceased by the end of 1920, the pattern of 'air policing' was to continue on an almost non-stop basis for the next 20 years. In May 1921, for example, 8 Squadron went into action against Surehi tribesmen, dropping 20 tons of bombs and flying 300 hours in an intensive ten-days period. And from June 14–16, No. 55 Squadron, in company with six Ninaks from 8 Squadron, dropped 10 tons of bombs during operations against a Turkish incursion at Rowanduz—the start of continuing anti-Turk sorties until the end of September.

In spite of the continuous operational status of the Ninaks in Iraq, they were by no means used solely on war-like pursuits. Indeed, the greater part of their efforts in the years 1920–30 in the Middle East concerned communications, air-mapping of the desert wastes and establishing new routes for the future civil air liners. On June 21 1921, Ninaks of 30 and 47 Squadrons initiated the Cairo-Baghdad mail run. No. 47 Squadron, reformed on February 1 1920—by renumbering 206 Squadron—was based at Helwan, Egypt; although one flight of their Ninaks had been almost immediately detached south to Khartoum and remained there until joined by the remainder of 47 in October 1927. The two squadrons again cooperated on opening up a permanent Cairo-Baghdad land route. Starting in May 1921, each unit supplied a Ninak escort for car convoys establishing a visible track across the Syrian desert. This primitive, but effective, route was officially 'open' on June 23 1921, and in the following year the track was literally ploughed along its 840 miles length, with emergency landing grounds being marked

¹ Mesopotamia was officially designated 'Iraq' in September 1921.—Author.



every 20 miles as guide points for aircraft. It was the first stage of a projected 'All Red' route for mail and civil air transport to India and, eventually, Australia.

Operations soon became necessary again, however, when the self-styled 'King of Kurdistan', Sheikh Mahmoud began to assert himself by stirring anti-British rebellion in the Sulaimania district in 1922. On September 5 a force of 24 Ninaks, three Bristol F.2Bs and two Vickers Vernons evacuated a total of 67 British subjects plus a large quantity of guns and stores to Kirkuk—a little-publicized airlift which pre-dated the famous Kabul evacuation by several years. Bombing and reconnaissance sorties against Mahmoud's followers continued into 1923; although a large part of the Ninaks' duties included supply drops to army outposts and retrieving sick and wounded from positions otherwise inaccessible. One incident during bombing operations exemplified the courage

and initiative of the Ninak crews. A Ninak of 8 Squadron, piloted by Flying Officer N. Vintcent, was forced down close to the target he had just been bombing. As a vast crowd of Arabs closed in on the stranded crew, Vintcent positioned himself under the tail of the Ninak and lifted the aircraft bodily, while his passenger, Flight Lieutenant J. I. T. Jones, DSO, MC, DFC, MM—a noted wartime fighter 'ace'—made crisp use of the rear Lewis gun to ward off the vengeance-bent tribesmen. Vintcent continued to hoist the Ninak in different directions as each new threat approached for nearly an hour, before some Sopwith Snipes (see *Profile* No. 50) of 1 Squadron appeared and strafed the Arabs. Rescued by another D.H.9A, Vintcent was later awarded a Distinguished Flying Cross—the first RAF ex-Cranwell cadet to be so honoured.

In 1924, trouble erupted in Palestine when a force of 4,000 of Ibn Saud's fanatical Wahabi followers began plundering the country. On

Key to colour

J7338 of 47 Squadron, Helwan, Egypt, 1926.

J7607 of 55 Squadron, Iraq.

H3626, a two-seat local conversion of 60 Squadron, India.

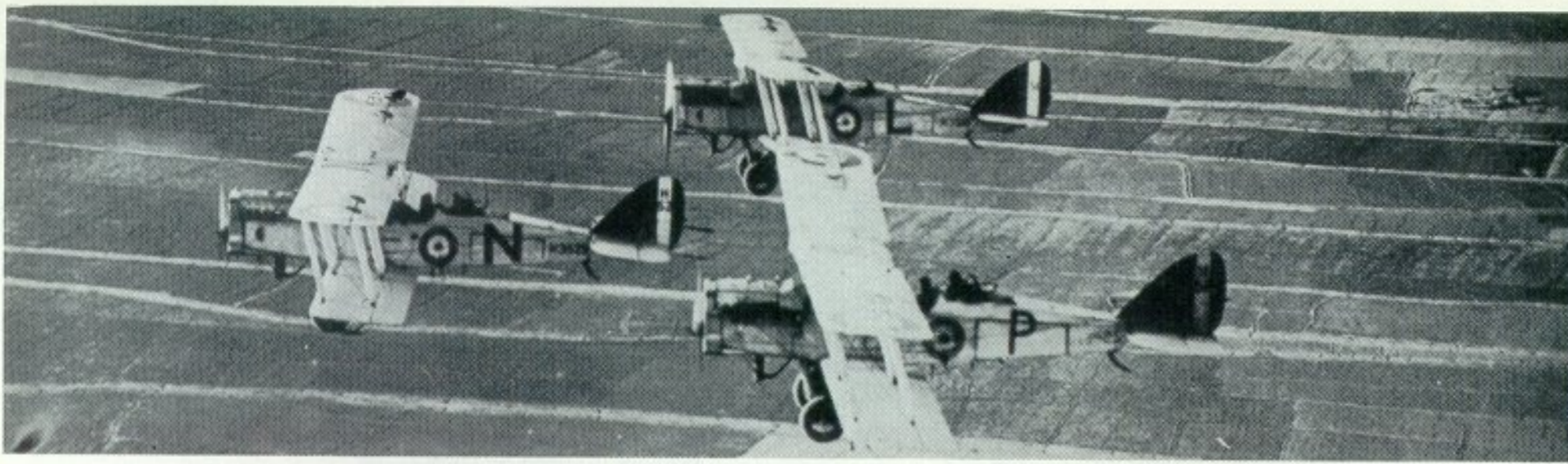
J7818 of 39 Squadron, June 1926.



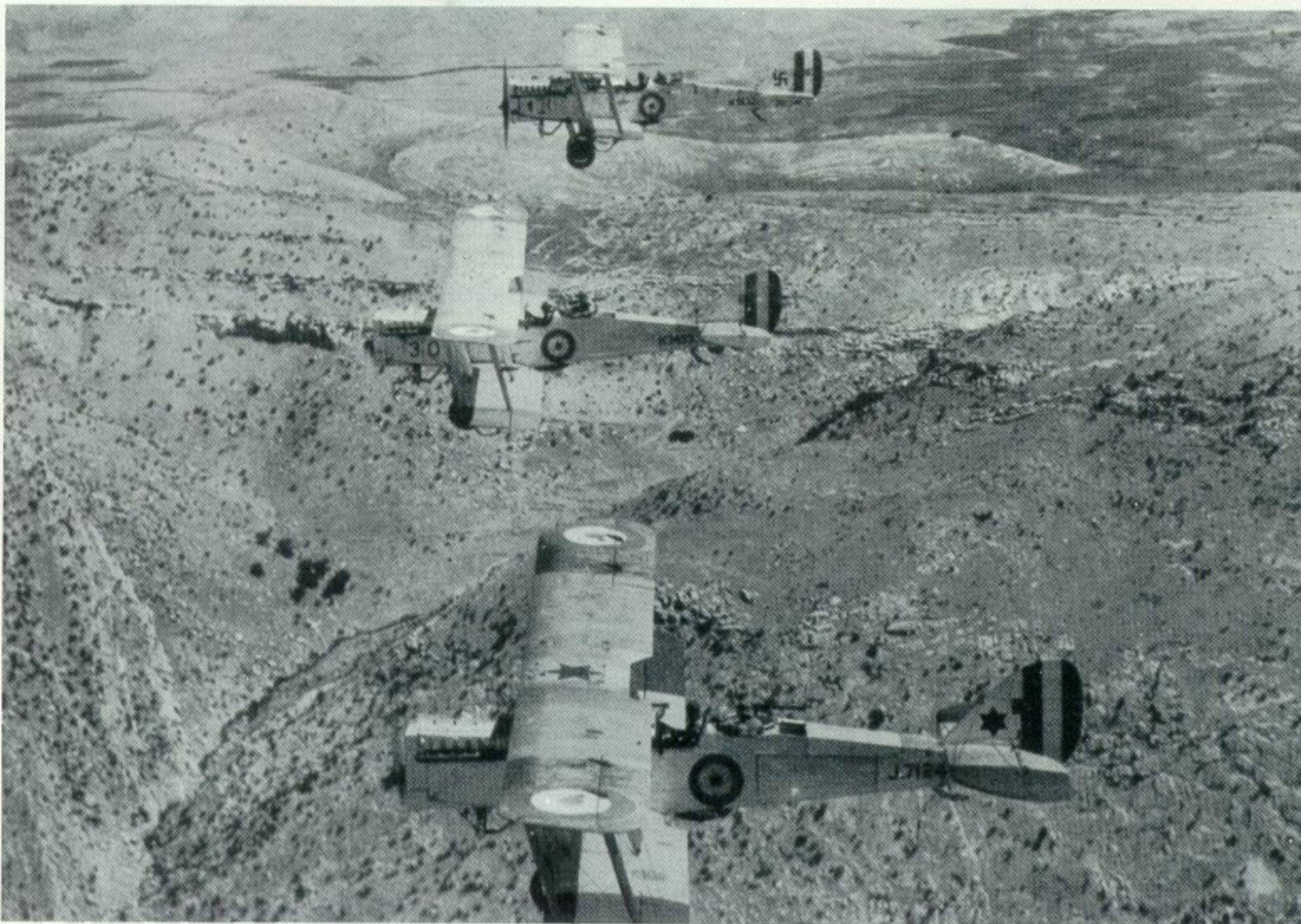
F2858, 'M' of B Flight, No. 8 Squadron (subject of the 5-view colour centrespread) after a forced landing in lava country, Palestine, 1924. The airman is raising the W/T aerial for communication. (Photo: Wing Commander N. H. F. Unwin, MBE)



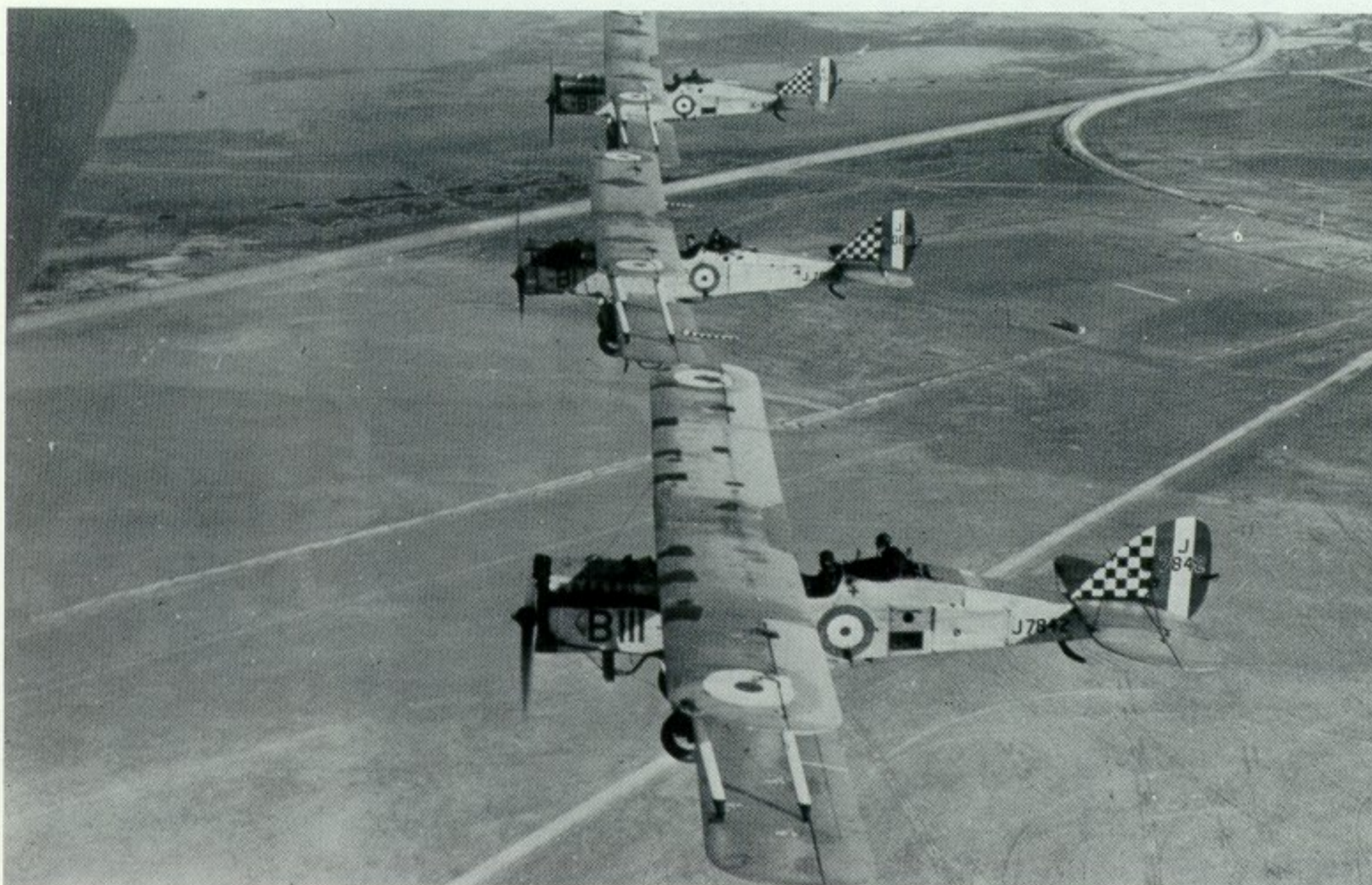
'And on reflection . . .' Proof that the desert is not always arid. J7050, 'B' of No. 8 Squadron on Samawah advanced landing ground after a brief but torrential rainstorm. (Photo: Wing Commander N. H. F. Unwin, MBE)



Formation stuff in variety. H3529 (N), H3510 (L) and H3525 (P) of B Flight, No. 8 Squadron in broad Vic formation, 1926 . . .



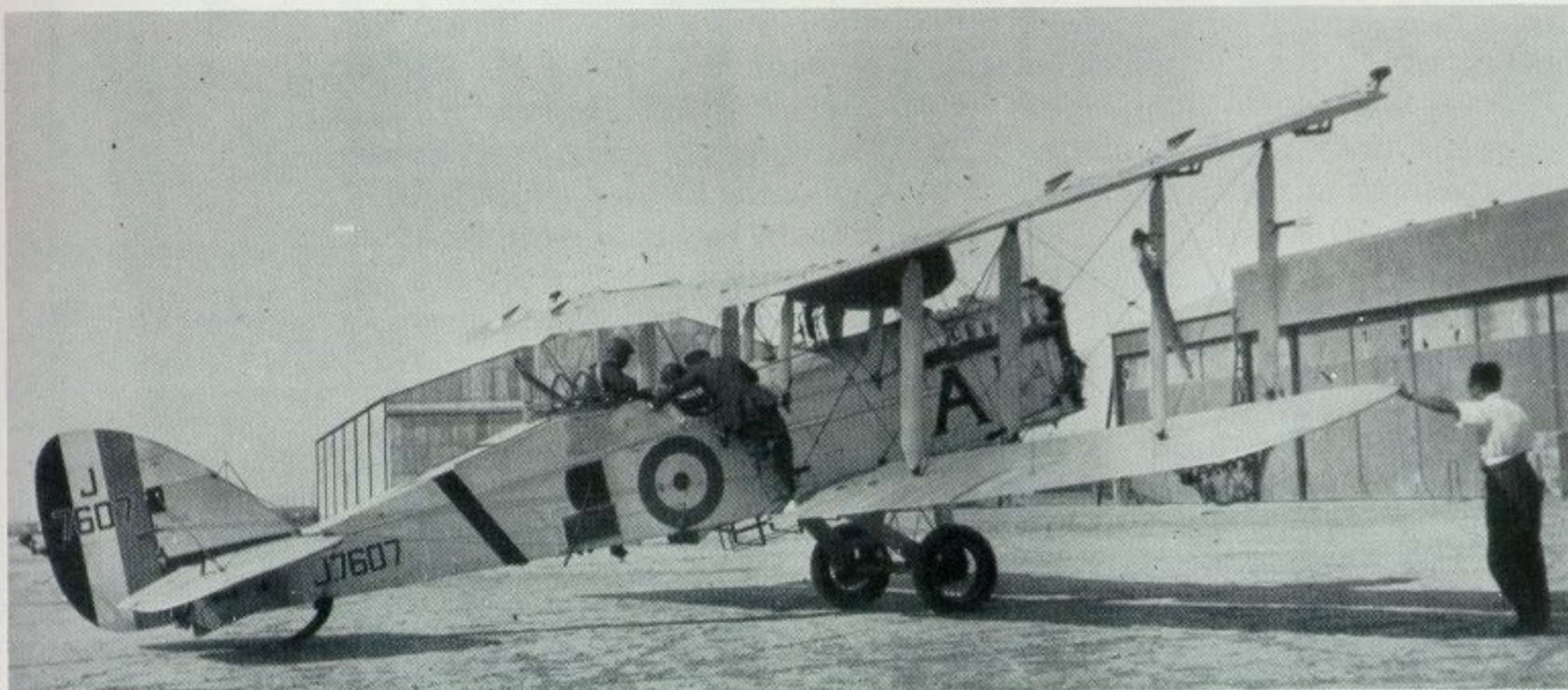
. . . Ninaks of No. 30 Squadron returning from a bombing raid on Sulamania 1924. In foreground, J7124 is piloted by Flight Lieutenant S. M. Kinkead, DSO, DSC, DFC; the leader, H3633, by 30's commander, Squadron Leader J. Robb (later ACM Sir James) while the far Ninak is H3632, piloted by Flying Officer 'Monkey' Sherlock. When the photo was snapped, Kinkead's Ninak still retained a 'hang-up' 230-lb. bomb, but he managed to unstick it before landing . . .



. . . and a neat example of line-abreast formation from No. 47 Squadron's Ninaks (B Flight) over their base station, Helwan, on December 24 1926. The fin check markings only applied to B Flight aircraft and were not (as frequently stated) a squadron marking. (Photo: C. A. Sims)

August 14, Ninaks and Bristol F.2Bs, supporting a formation of RAF armoured cars, dispersed the Wahabis on the Ziza Plain, 12 miles south of Amman. The Ninaks were from 14 Squadron which had only recently re-equipped from their former Bristol F.2Bs. And in January 1925, No. 14 Squadron was again in action against some local dissidents; pioneering the use of a camel-mounted W/T (wireless-telegraphy) set for ground direction of their bombing sorties. In October 1925, Squadron Leader A. Coningham of 47 Squadron at Helwan, Egypt, led two other Ninaks, piloted by Flight Lieutenants Baggs and

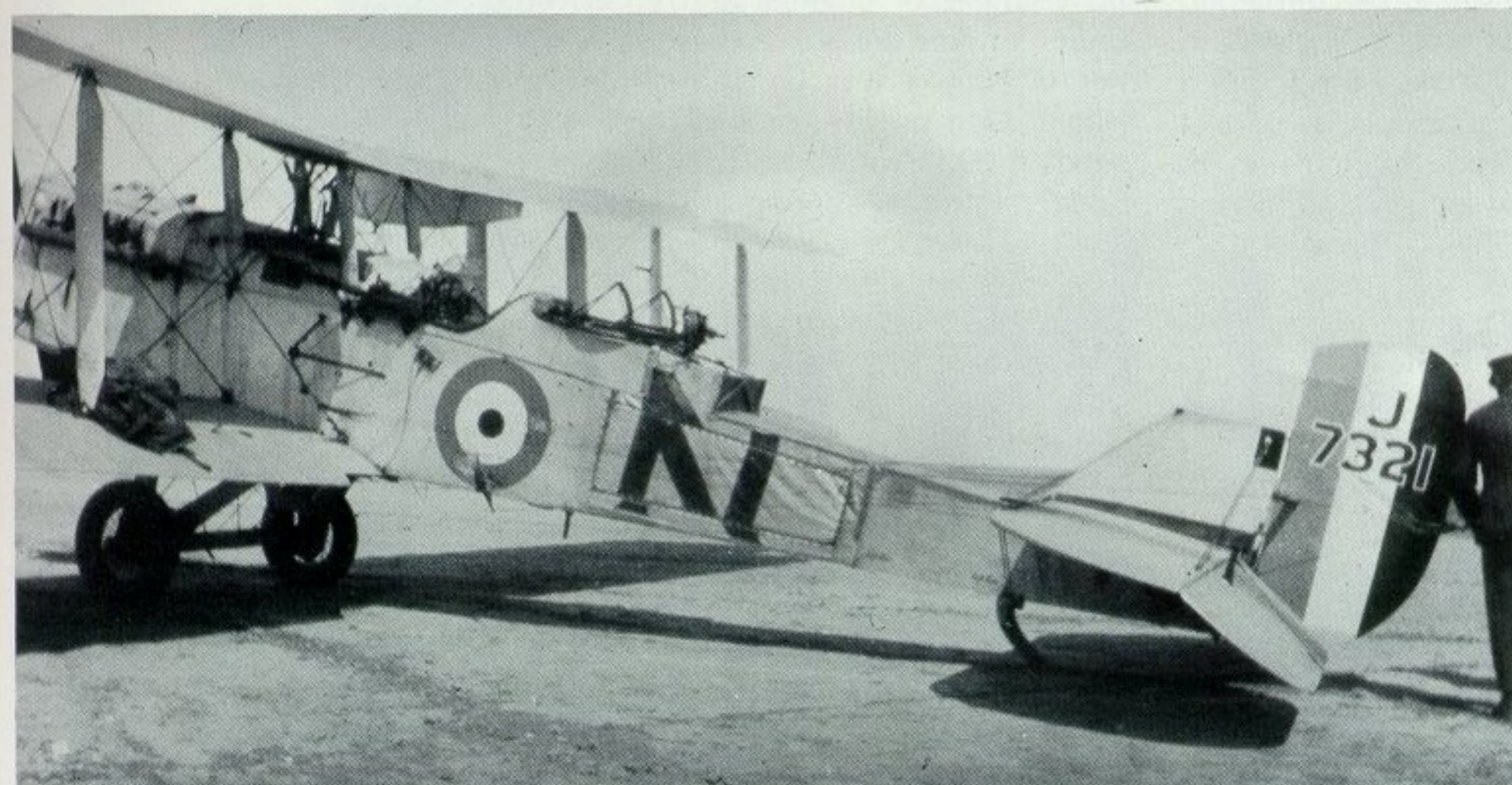
Rowley, on a long-distance formation flight to Kaduna in Nigeria. Leaving Helwan on October 27, the three Ninaks arrived in Nigeria on November 6 to a massive reception. It was the first time the residents there had ever seen an aeroplane! Returning to Helwan on November 19, the three Ninaks covered the round trip of 6,268 miles in 85 flying hours. One more Middle East unit employed D.H.9As; this was No. 45 Squadron which began conversion at Heliopolis on April 25 1927. In the same year, 8 Squadron was moved to Aden and began conversion to Fairey IIIFs (see Profile No. 44) in January 1928.



J7607, 'A' of 55 Squadron running-up, displays the mid-1920s unit marking of a red diagonal fuselage band. The squadron's unofficial badge, an uplifted arm with spear, appeared in black on the sides of the nose. (Photo: D. I. Newman)



Before and After. A landing accident between J7321 (N) and J7102 of No. 8 Squadron on the southern frontier with Nedj territory during anti-Ibn Saud operations. Despite being deep in hostile country, both aircraft were hastily but effectively repaired by a working party airlifted in a Vickers Vernon and both Ninaks eventually flew back to base . . .



. . . The temporary repairs made to J7321 to permit air evacuation. (Photo: Wing Commander N. H. F. Unwin, MBE)

Meanwhile in Iraq, 55 and 84 Squadrons again saw widespread action from January to June 1928, when they were detailed as part of 'Akforce' for operations against some 50,000 rebelling tribesmen in the Nedj territory. Although several Ninaks were lost to rifle-fire, all crews were rescued (usually in fraught conditions and under heavy fire) and the only RAF casualty was one pilot killed on February 20. No. 84's Ninaks performed a unique raid in May when they bombed the remote island of Gubbah, on the Hammar Lake, which had become one rebel sheikh's stronghold. Deliberately, the bombs were aimed against the bund (bank) surrounding the island, thus flooding the rebels out of their refuge—a sort of pre-'Dambusters' operation.

By 1928, however, the D.H.9A was rapidly becoming obsolete and all Ninak units soon began receiving more effective aircraft in their place. No. 47 Squadron at Khartoum exchanged their faithful 9As for Fairey IIIFs in April 1928; while No. 84 at Shaibah had two flights equipped with Wapitis by mid-September—its last Ninak leaving the unit in January 1929. No. 45 Squadron changed to IIIFs in September 1929; while 14 Squadron began re-equipment with IIIFs in December and was completely 'converted' by March 1930. No. 55 Squadron received its first Wapitis in February 1930, although it still had Ninaks on charge until the following year. Finally, 30 Squadron converted to Wapitis in 1930.

United Kingdom Service

With Trenchard's determination in the immediate postwar years to use the nucleus of his future Royal Air Force in an overseas 'police' role, the strength of the RAF in the UK was minimal. Having selected the D.H.9A as the standard light bomber, only two units were equipped with Ninaks initially. No. 207 Squadron was reformed at Bircham Newton on February 1 1920 as a day bomber formation, and in the following year, on April 1, No. 39 Squadron was also reformed as a Ninak unit at Bircham Newton. For several years these two squadrons remained the only RAF first-line Ninak units in England. In September 1922, No. 207's Ninaks were shipped to San Stefano, near Constantinople, as part of the RAF element facing Turkish incursion in Greece. After a year of non-action, and having endured a near-complete lack of reasonable maintenance facilities, No. 207 returned to England in September 1923 and took up residence at Eastchurch, on the Isle of Sheppey. Having settled into their new quarters, 207 became the vehicle for several forms of experiments, including the fitting of silencers for the Ninak engines, designed by the Royal Aircraft Establishment, Farnborough, Hampshire—although these proved virtually ineffective. In 1924, 207's Ninaks were also fitted with radio-telephony (R/T)—a refinement which proved of great help during the contemporary annual Royal Air Force Displays at Hendon.

With its sister unit, 39 Squadron, No. 207 became acknowledged as the finest exponents of bomber formation flying in the yearly 'Taxpayers' Benefit' (as the air display was referred to in Service circles). Replacements for 207's ageing Ninaks began arriving in December 1927—a mixture of Fairey IIIFs from Gosport and Hendon—and by February 1928 the squadron was fully re-equipped.

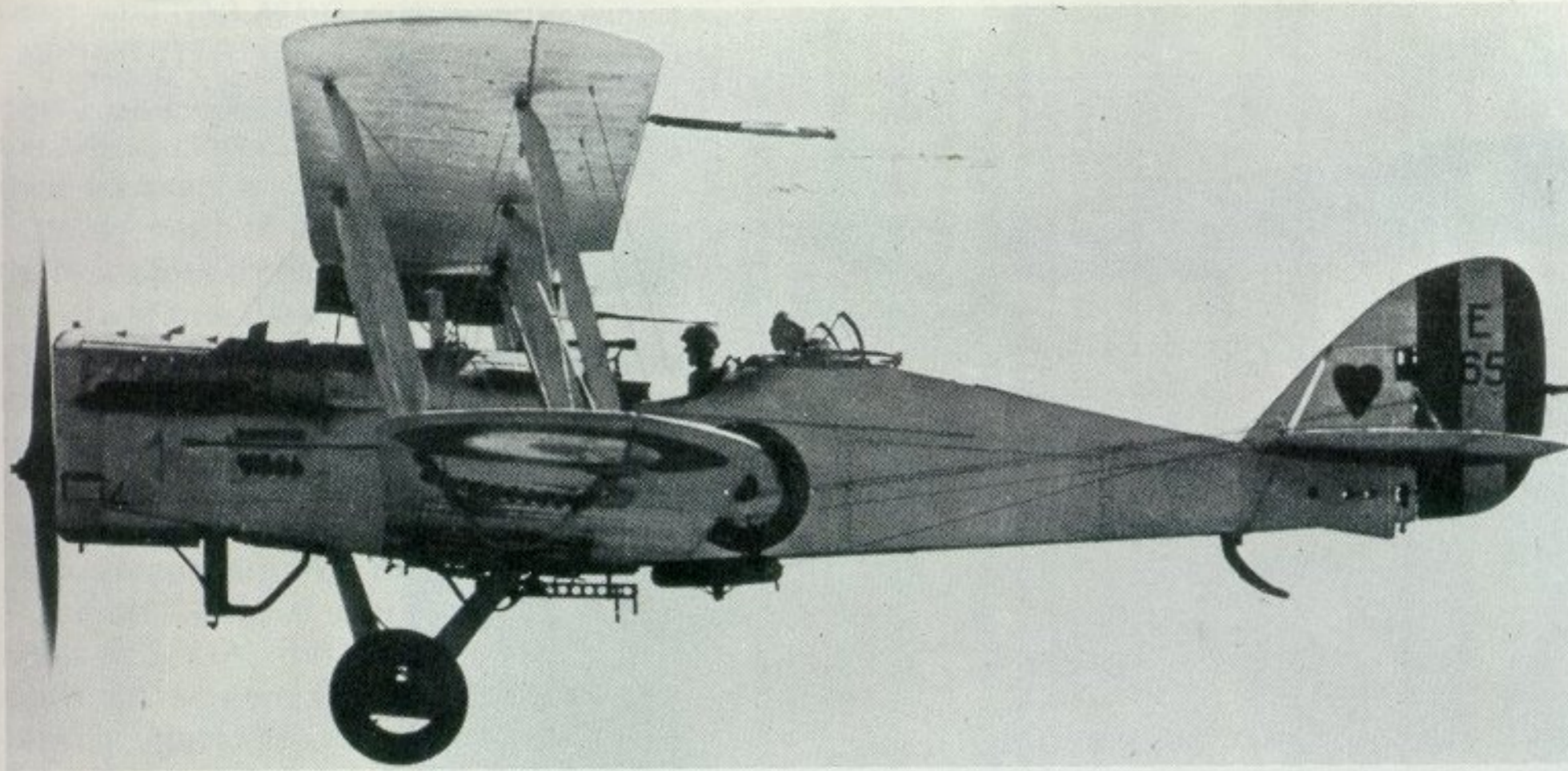
No. 39 Squadron moved base to Spittlegate in January 1928 and in November began receiving Wapitis as its new equipment. Once fully up to establishment, the squadron left the UK in February 1929 on route to India.

Several other units in the UK received Ninaks, albeit mainly for secondary duties. No. 11 Squadron which reformed at Andover on January 15 1923, was initially equipped with D.H.9As but, by April of the following year, had replaced these with Fairey Fawns. Meanwhile, at the Aeroplane and Armament Experimental Establishment, Martlesham Heath, 15 Squadron was reformed on March 20 1924 and was soon up to squadron strength with a full complement of Ninaks. For the next three years No. 15's Ninaks were employed in a wide variety of bomb ballistics trials and other experimental work and, in October 1926, the 9As were exchanged for Hawker Horsleys.

No. 3 Squadron, the RAF's senior aeroplane unit, received at least five examples of a Ninak three-seat conversion, known initially as the 'Tadpole'—possibly the ugliest version of the Ninak ever made. Specified as a Fleet Spotter, the Tadpole also served with Nos. 420 and 421 Flights, Gosport, and later became known as the Westland Walrus. Production of Walrus fleet spotters—36 in all—was made possible by utilizing the vast stocks of D.H.9 and D.H.9A components then available.

In common with most Service aircraft of the 1920s, the basic D.H.9A design was the vehicle for a vast diversity of modifications and experimental installations. These mainly concentrated on changes of engines and improvements in undercarriage designs. A reasonably small number of Ninaks was converted for use of the Napier Lion engine; one of these, E752, being used in 1920 for deck-landing trials on HMS *Eagle*, piloted by (among others) Flight Lieutenant R. E. Keys, DFC.

By the mid-1920s, the D.H.9A was rapidly approaching obsolescence, but the creation of the Auxiliary Air Force (AAF) brought a new lease of life for the doughty Ninak. The first AAF unit to be formed was 602 Squadron on September 15 1925, which took delivery of its first Ninak (H144) on October 7. Seven days later, three more Auxiliary squadrons, Nos. 600, 601 and 603, were formed; each equipped initially with D.H.9As. On October 15 1926, No. 605 Squadron came into being as a Ninak unit; while on March 17 1930, the last Auxiliary unit intended for Ninak equipment, No. 604 Squadron, formed at



Remarkable in-flight study of E8650 of A Flight, No. 84 Squadron from Shaibah, 1923. Pilot is Flying Officer F. F. Inglis (later AVM, CB, CBE). 'A' Flight used playing card symbols on fins for identification, in this case a Red Heart. Alongside nose can be seen all four Heart/Club/Spade/Diamond symbols in miniature. (Photo: C. A. Sims)



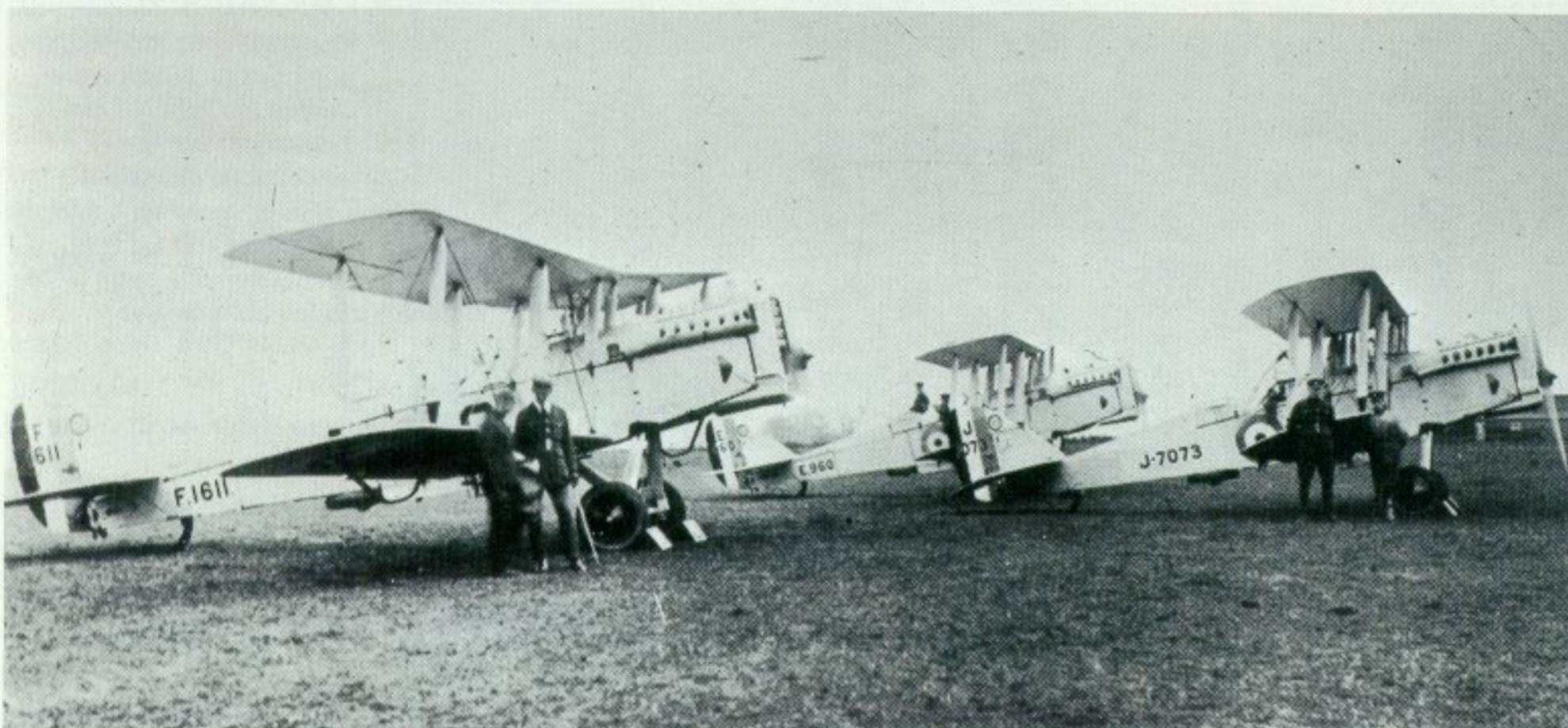
Yet another variety of unit symbolism. H3632 of No. 30 Squadron over Iraqi territory. Wing tips of 30 Sqn were painted in Flight colours (contrary to previous descriptions published). These were A Flight, Red; B Flight, Blue and C Flight, Black. Later, fins came to be doped accordingly.



Another pile-up, when Sergeant Walker of B Flight, No. 47 Squadron hit Flying Officer Coggle of A Flight during a formation landing. Of interest is the extension of B Flight's check markings under the tailplanes. The groundcrews, amazed that no one was injured, ponder on how long this mess will take to clean up... (Photo: C. A. Sims)



D.H.9A, E9891, factory-fresh from the production line of the Vulcan & Motoring Engineering Company.



B Flight of No. 39 Squadron at Spittlegate, Lincs, 1924, prior to a goodwill visit to France. Aircraft from left are F1611, E960 and J7073. The squadron number '39' appears in a small black circle on all fins. (Photo: AVM F. G. S. Mitchell, CB, CBE)



Practising for the public's benefit. No. 39 Squadron's immaculate Ninaks moving up into a precision line-abreast during rehearsal for an RAF Hendon Air Display. (Photo: G. S. Leslie/ J. M. Bruce)

Hendon. In the event, 604 Squadron received only two D.H.9As, being almost immediately issued with Wapitis. By the end of 1930 all of the AAF squadrons using Ninaks had exchanged them for Wapitis.

Unlike most of its wartime contemporaries, the Ninak found comparatively little application in civil use after the war. Eleven D.H.9As (E992 to E1002 inclusive) went to Canada and were used for several years, mainly in a communications role. A mere 12 found their way on to the British Civil Register. Today, the only known surviving example of a Ninak is a rather battered heap of main components of F1010, one of No. 110 Squadron's original complement of D.H.9As. Numbered '12A', this 9A was one of five shot down on September 25 1918 and captured virtually intact; its crew (Captain A. Inglis and Second Lieutenant W. G. Bodley) being uninjured and taken prisoner. The near-defunct remains of F1010 now reside in the Polish National Air Museum at Krakow.

Essentially a military aeroplane, the de Havilland D.H.9A was a rock foundation for the infant Royal Air Force. A patient, sturdy workhorse which served its crews faithfully and fulfilled its many roles, the Ninak has a secure niche in Royal Air Force history.

SPECIFICATION

Dimensions

Span (Both)	45 ft. 10 ³ / ₄ in.
Length	30 ft. 1 ¹ / ₂ in.
Height	11 ft. 3 in.
Chord	5 ft. 9 in.
Gap	5 ft. 10 ³ / ₁₆ in.
Track	6 ft. 0 in.
Stagger	1 ft. 4 in.
Tail Span	14 ft. 0 in.
Dihedral	3°
Incidence	3°
Propeller diameter	10 ft. (Liberty)

Weights

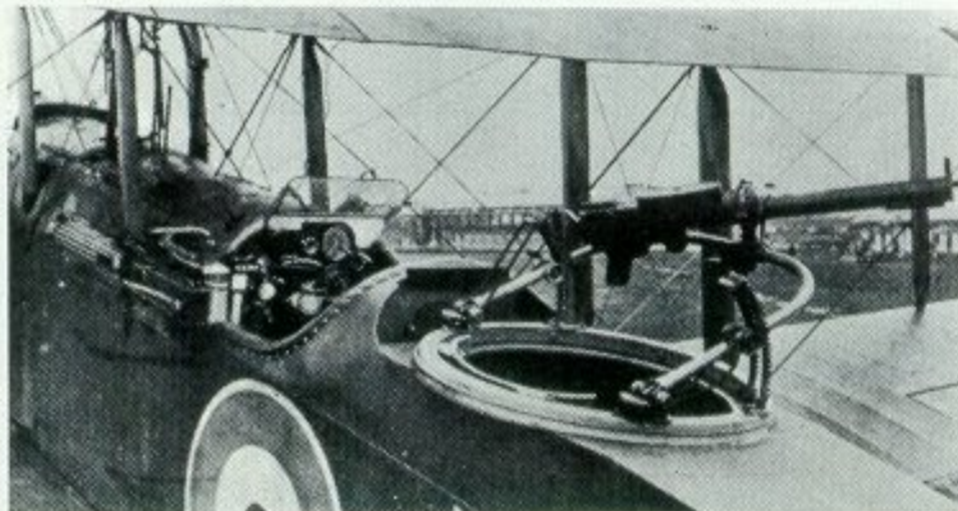
Empty	2,800 lb.
War Load	940 lb.
Fuel/Oil	905 lb.
Loaded	4645 lb.

Performance (Liberty 12)

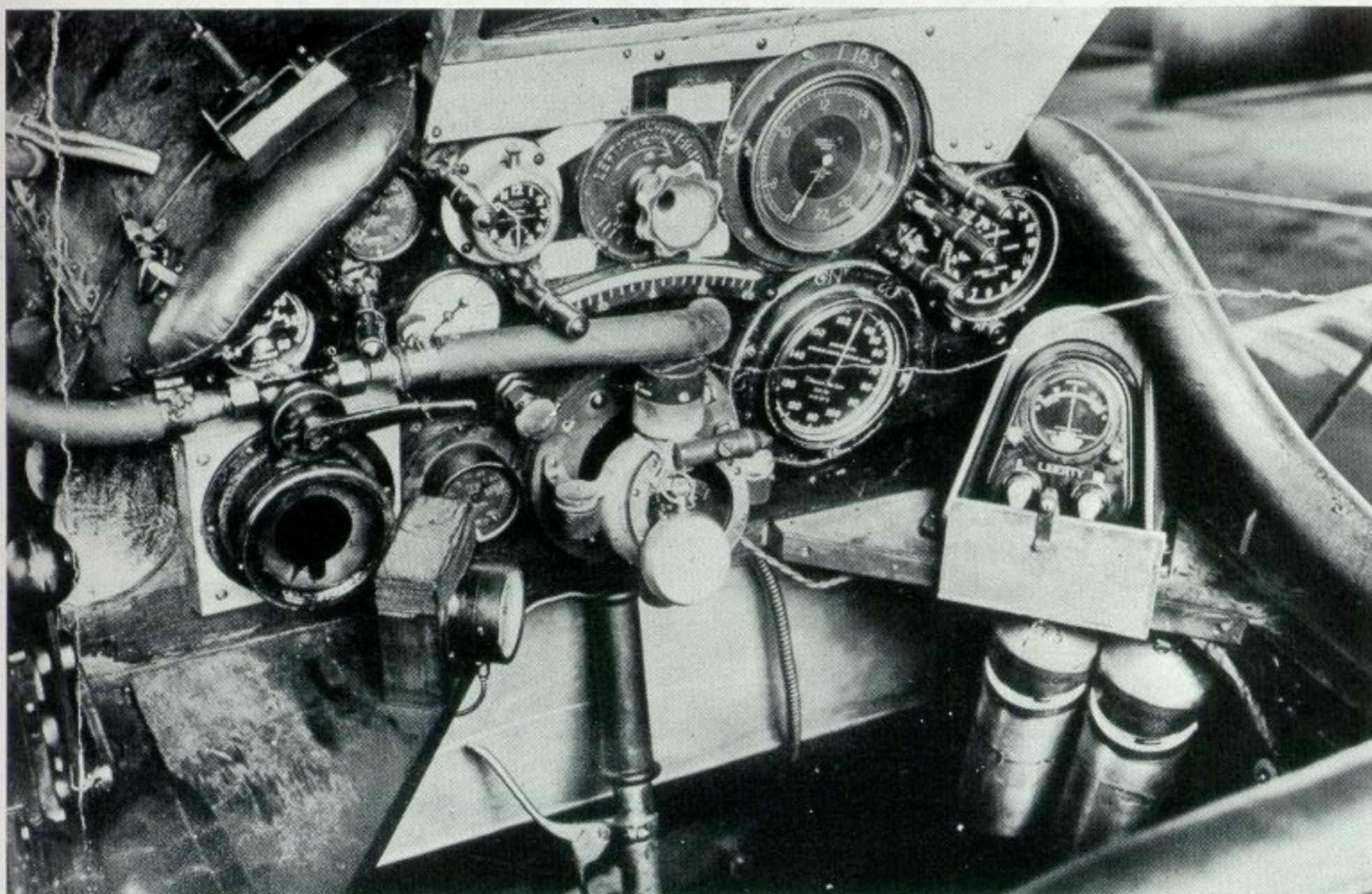
Max. Speed	123 m.p.h. (sea level) 106 m.p.h. 15,000 ft.)
Climb to 10,000 ft.	15 min. 35 sec.
Climb to 15,000 ft.	33 min.
Service Ceiling	17,750 ft.
Endurance (normal)	5 ¹ / ₄ hr.

Armament

One Vickers .303 (0.303-inch) machine-gun synchronized to fire forward.
 One Lewis .303 gun on Scarff Ring in rear cockpit.
 Bomb load up to max. 740 lb. carried under wings and fuselage.

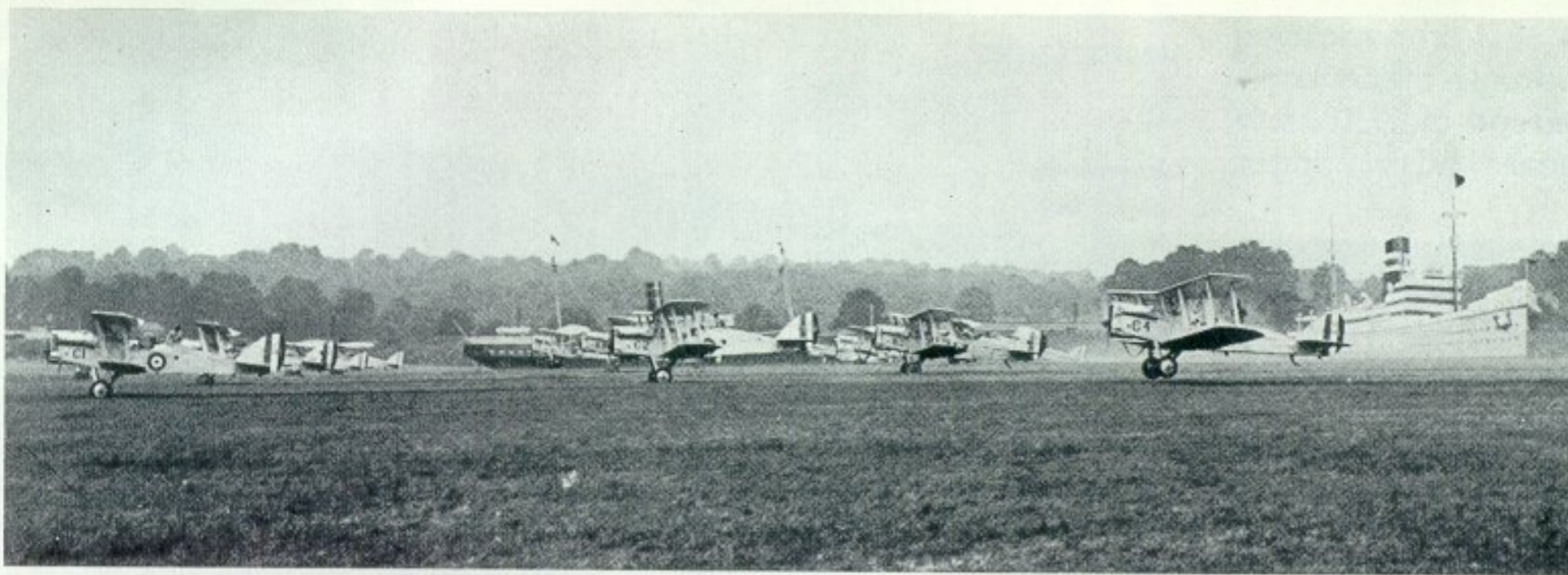


A variation in No. 30 Squadron markings on H3433, showing twin fuselage bands in red with painted wing tips (for air identification if forced down in the desert). The squadron's (then) unofficial insignia of a single Palm Tree appeared between the fuselage bands. (Photo: R. C. B. Ashworth)



Above right
 Clear view of the two cockpits of a D.H.9A, emphasizing the physical proximity of pilot and gunner so successful on operations.

Cockpit detail of a D.H.9A (400 h.p. Liberty) of 1918 vintage. Although this is a basic instrumentation, there are several additional instruments to norm to be seen here, eg the extra stop-watch at bottom and the added piping with turn-cock to left side. These were presumably fitted for a specific trial or experiment.



Hendon Air Pageant, 1924. No. 207 Squadron takes off prior to a 'bombing' attack on the 'enemy fleet' seen in background. To help tail-up, fast take-off, most gunners are standing at near-full height, leaning forward. (Photo: 'Flight International', ref. 0283)



The Ugly Sister—Westland's Walrus version, a three-seat Ninak with prone Observer's under-compartment, flotation bags (shown inflated), Napier Lion engine and forward hydrovane extended; it was not a success. (Photo: Westland Aircraft Limited)

SERVICE USE

UK Squadrons: 3, 11, 15, 22, 24, 25, 39, 100, 207, 212, 273, 501, 600, 601, 602, 603, 604, 605. Cranwell Halton Fowlmere Waddington Digby Netheravon (1 FTS) Duxford (2 FTS) Shotwick (5 FTS) Spittlegate (7 FTS) Manston (6 FTS) Eastchurch (AGS) Leuchars (Station Flight) Hawkinge	30 Squadron 39 Squadron 45 Squadron 47 Squadron 55 Squadron 60 Squadron 84 Squadron 99 Squadron 110 Squadron	E773, E802, E843, E944, E961, E8512, F2815, H90, H3433, H3504, H3632, J7114, J7881, J8192. E812, E873, E948, E8491, E8631, E8673, F1611, F2851, J7037, J7067, J7613, J7792, J7812, J8105, J8133, J8143, J8152, J8170, H3552. J7832. E850, E959, E993, E8662, F1086, F1641, H3519, H3522, H3635, J7086, JR7107, J7119, J7842. E8512, E8640, E8796, E8806, E9885, E9909, F2775, F2833, F2842, F2850, H53, H77, H88, H3430, H3523, H3627, J565, J7104, J7256, J7305, J7607, J7850, J8102, J8147, J8176. E785, E878, E951, E8584, E8655, E8660, E8685, E8721, E8758, E8799, E9925, E9888, F979, F2812, H3528, H3632, J7091, J7109, J7341. E803, E849, E899, E8601, E8650, E8741, H22, H165, J6961, J7013, J7026, J7027, J7854. E720, E8560, E8561, F967, F977, F1035, F2739, H3410. E703, E8410, E8421, E8439, E8481, E8523, E9660, E9711, F977, F980, F984, F986, F992, F1000, F1005, F1010, F1021, F1029, F1065. E8413, E9029, E9707, F990, F1001, F1007, F1025, F1618.
France/Germany Squadrons: 18, 99, 110, 205, USMC (NB Group)	207 Squadron	E852, E871, E8754, E8805, F1616, H138, J556, J561, J6964, J7038, J7041, J7048, J7611.
Middle/Near East Squadrons: 8; 14; 30; 45; 47; 55; 84 Abu Sueir (4 FTS)	600 Squadron 601 Squadron 602 Squadron 603 Squadron 604 Squadron 605 Squadron	J8116, J8154, J8165, J8184, J8223, J8502. E8605, J7319, J7835, J8108, J8221, J8478. H144. J8136, J8472. J7319, J8472. E8656, E8711, J7814, J8107, J8208, J8480. F1636, H3488, J7317.
Russia Squadrons: 47; 221. RAF Training Mission	Cranwell Fowlmere Old Sarum Halton Digby 4 FTS 5 FTS No. 2 CAF Squadron—F2749, F2755. USMC, Northern BG—E736, E8452, E8463, E8470, E8480, E8501, E8538, E8540, E8565, E8570, E8632, E9868, E9870, E9873, E9874, E9876. RAF Training Mission, Russia—F1089, F1094.	E9664. F1635. E9891, J8103. 18489. E890, E914, E961, E8642, E8794, E9887, F2743, F2816, F2857, J7022, J8098, JR8188, J8202. J7077, J7348.
India Squadrons: 99; 27; 60		
Examples of D.H.9As used		
3 Squadron	H3512, H3515, H3518, H3539, H3540 (All 3-seat conversions).	
8 Squadron	E785, E954, E886, E8622, E8754, H24, H110, H175, H3510, H3525, H3628, J7050, J7102, J7321, J8194, J8195, J8200, J8201.	
14 Squadron	J7035, J7067, J7116, J7254, J7829, J7839, J7831, J8098, J8101, J8197, J8203.	
18 Squadron	E8415, F1018, F1042, F1051.	
24 Squadron	J7310.	
25 Squadron	E9705.	
27 Squadron	E728, E844, E911, E993, E1098, E2772, E8389, E8468, E8573, E8636, E8660, E8674, E8722, E8761, E8799, E9683, E9948, F1098, F2772, H23, H41, H95, H3450, H3528, J7055, J7125, J7242, J7340, J7342, J7343, J7347.	

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