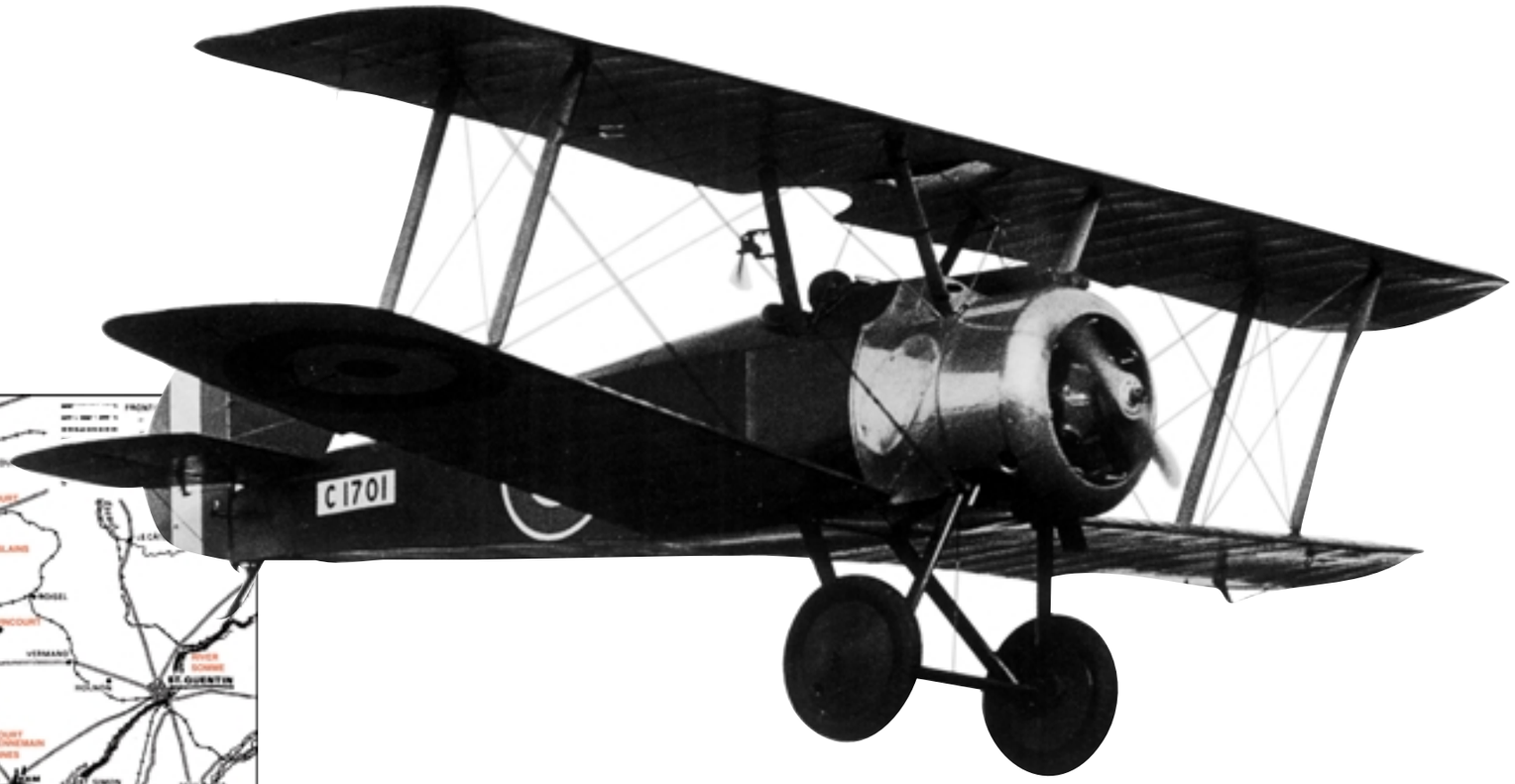
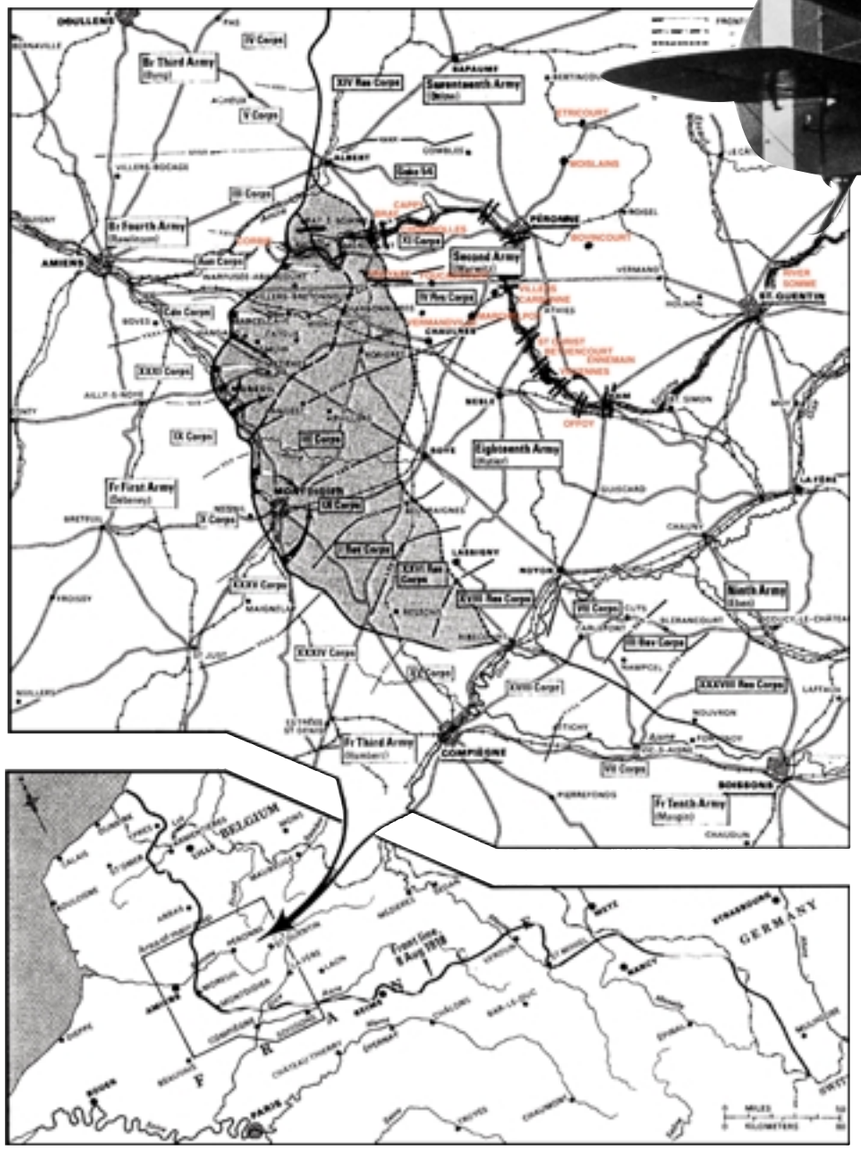




Air Power Taken to its Limits, and Beyond

The

Battle of Amiens

(8-11 Aug 1918)

In July 1918 the British Fourth Army and the neighbouring French First Army prepared an offensive along the 28-mile section of the line in front of Amiens. In the previous April the German offensive in that area had come to a halt just in front of the city. An important communications centre, Amiens was now within range of German long-range artillery and suffered from frequent shelling. One aim of the new offensive was to push the front line back far enough to remove that threat.

The German Army regarded this part of the front was as a jumping off point for a future advance, rather than as a barrier to repel an Allied offensive. Consequently the defences there were relatively weak, with no bunkers or concrete fortifications to protect troops against an artillery bombardment.[1]

The Allies took pains with camouflage to conceal the preparations for the new offensive. There was plenty to hide. The British Fourth Army was reinforced by five infantry divisions, two cavalry divisions, nine armoured battalions with 462 heavy and 72 light tanks, and one thousand additional artillery pieces. Nearly 300 extra trains ran into the Fourth Army area, in addition to its normal traffic.[2] Generally poor weather during the first week in August assisted in keeping these moves secret. On 7 August the skies cleared, and RAF fighters flew a vigorous programme of barrier patrols to prevent enemy planes photographing or otherwise observing the rear areas.

The RAF's 5th Brigade was the formation normally attached to the British Fourth Army. During the two days preceding the offensive its strength was much increased with the arrival of units from 9th Brigade, the General Headquarters reserve held for that purpose. Also 3rd Brigade, assigned to the neighbouring sector, sent its units into action over the battle area.

When the offensive opened the RAF units supporting it possessed about eight hundred aircraft, divided as follows:[3]

Single-seat fighters (Sopwith Camel, Sopwith Dolphin, SE 5A)	376
Fighter-reconnaissance (Bristol Fighter F2B)	75
Day bombers (DH 4, DH 9)	147
Night bombers (Handley Page 0/400, Fe 2D)	92
Corps (army co-operation) aircraft (RE 8, Armstrong Whitworth FK 8)	110

In addition there were eight Sections of tethered observation balloons in the battle area, each operating one balloon.

The French air units supporting the French First Army possessed 1,104 aircraft, divided as follows:[4]

Single-seat fighters (Nieuport 28, SPAD XIII)	612
Day bombers (Breguet 14, Salmson A.2)	195
Night bombers (Farman F. 50)	52
Corps (army co-operation) aircraft (Breguet 14, Salmson A.2, SPAD XVI)	245

The number of observation balloons in position in that sector is not known, but was probably about ten.

Thus the total Allied air strength positioned along the 25-mile wide front to support the offensive amounted to about 1,900 combat aircraft and about eighteen observation balloons. There was no shortage of landing grounds within easy reach of the battle area.

…the total Allied air strength positioned along the 25-mile wide front to support the offensive amounted to about 1,900 combat aircraft…

The German Air Service units supporting the Second Army facing the offensive possessed 365 aircraft of all types, divided as follows:[5]

Single-seat fighters (Fokker D VII, Pfalz XIII, Albatross D III)	140
Bombers (AEG G4)	36
Ground attack aircraft (Halberstadt CV, Junkers J.1, AEG J1)	18
Corps (army co-operation) aircraft (Halberstadt CV, Junkers J.1, AEG J1, LVG C.VI, DFW CV)	171

The number of observation balloons in position in that sector when the offensive opened is not known, but it was probably about four. It is likely that more arrived in the battle area after the offensive opened.

RELATIVE EQUIPMENT OF THE OPPOSING AIR FORCES

The latest BMW-engined version of the German Fokker D. VII fighter was now in service with several front-line units. As fast as the fastest Allied fighter types at altitude, its rate of climb was superior to any of them making it a formidable opponent in close combat.[6] The availability of the D. VII would be a major factor in enabling the outnumbered German flying units to continue effective resistance during the final months of the war. The Allied fighter type that came closest to matching the performance of the D.VII was the newly-introduced Sopwith Dolphin,[7] but only two squadrons of these fighters were in place to support the offensive.

The German Air Service also had the advantage of possessing armoured aircraft for low altitude operations over the battle area. The AEG J-1 and Junkers J-1 aircraft carried sheets of armour plate 5 mm thick to protect their two-man crews and, in the case of the latter, the engine. Neither the Allied front-line troops nor their covering fighter units possessed automatic weapons larger than rifle calibre, so the armoured aircraft were able to operate at low altitude over the battle area with a high degree of impunity.[8]

As well as being heavily outnumbered, the German Air Service had to contend with the cumulative effects of an Allied naval blockade that had lasted four years. The German fighter ace Ernst Udet later wrote:

> “The strain of the war increased from day to day. For every one of our machines which took-off, five enemy machines started. And should one of them happen to be brought down on our side of the line we pounced upon it, and eagerly seized all instruments and articles of nickel and brass – metals which had long since ceased to exist in Germany. Against the abundant supplies at the disposal of the enemy, we had nothing to stake save our sense of duty and four years’ fighting experience. Now each start [take off] meant a fight, and we started often.”[9]

Against the abundant supplies at the disposal of the enemy, we had nothing to stake save our sense of duty and four years’ fighting experience

Among other items in very short supply were copper, rubber and leather, as well as a whole range of foodstuffs.

THE RAF PLAN

During the battle the French Air Force units in the south flew a similar pattern of operations to those of the RAF. The account that follows will concentrate on the RAF plan and its execution, however.

The RAF plan to support for the Amiens offensive was more detailed and ambitious than any previously attempted. In addition to the normal air superiority, reconnaissance, contact patrol and artillery direction tasks, the following were ordered:[10]

(i) Soon after dawn on the first day, day bomber squadrons were to attack the main German airfields.

(ii) Eight RAF fighter squadrons, with about 150 aircraft, were to deliver low-flying bombing and strafing attacks on enemy troops moving towards or away from the battle area.

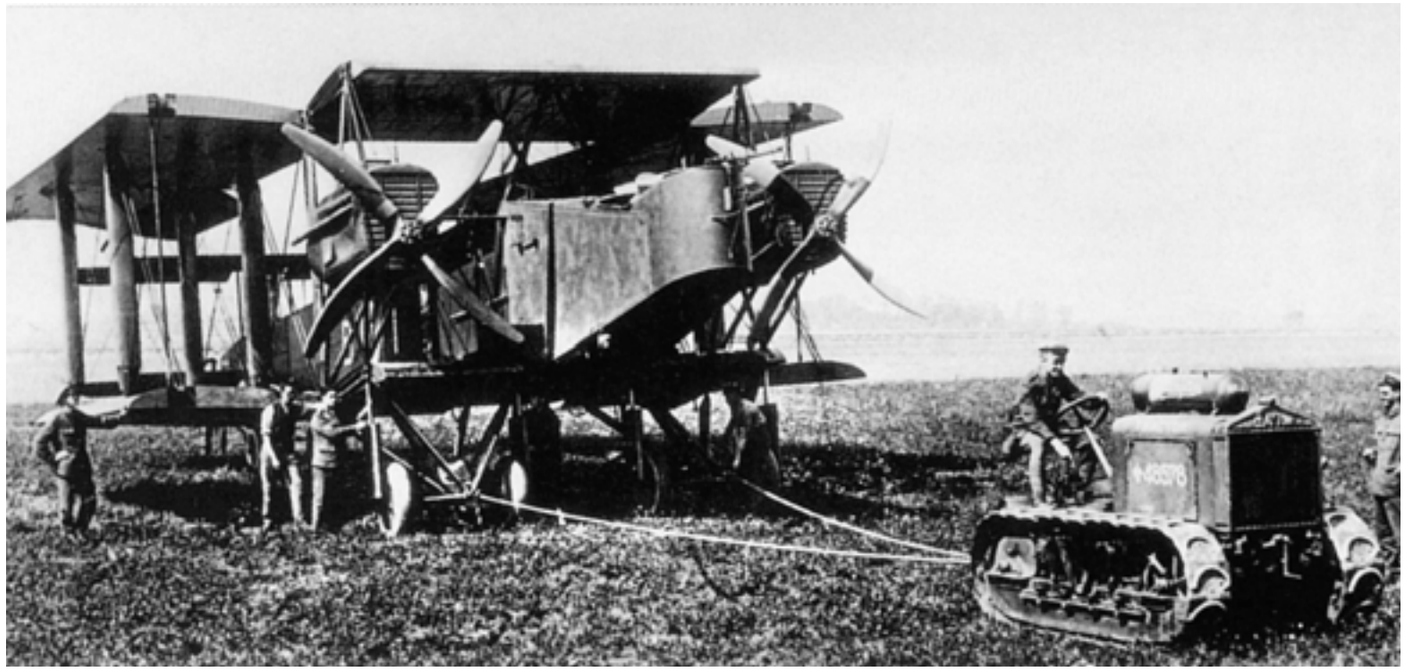
(iii) On the evening of the first day, when enemy reinforcements were expected to arrive in the battle area, day-bomber squadrons with fighter support were to hit the rail stations at Peronne, Chaulnes, Marchelepot, Villers Carbonnel, and Etricourt.

During this operation, for the first time, a squadron of Armstrong Whitworth FK 8 army co-operation planes was to work with the tank units, with an allocation of one flight of six aircraft to each of the three tank brigades. Before the battle these aircraft flew photographic sorties over the ground over which tanks were to pass, so tank commanders could pick suitable lanes through the defences. Once the offensive began, the aircraft were to fly contact patrols and deliver reports on the vehicles' progress to the various headquarters. These planes also were to scout the ground ahead of the advancing tanks, searching for enemy anti-tank gun positions which were to be put out of action by direct air attack or by air-directed artillery fire. Although there had been several experiments with systems to provide direct communication between tanks and aircraft, none had proved successful.[11]

On the first morning, two squadrons of RE 8s were to drop lines of phosphorous bombs to produce smoke screens ahead of the advancing troops, to screen them from view. Later, one of these squadrons would be employed in parachuting boxes containing 1,000 belted rounds of machine gun ammunition, to units near the head of the attack that had run short.[12]

COURSE OF THE BATTLE

On the nights of August 6/7 and 7/8, a pair of twin-engined Handley Page 0/400 bombers flew up and down the front line for several hours dropping bombs and strafing any source of light seen in enemy territory. Any damage caused was incidental; the primary purpose of these flights was to conceal the noise from the British tanks as they moved into position for the attack.[13]



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More than 1,380 field guns and howitzers, and 826 heavy guns, supported the offensive. At 0420 hours on 8 August these commenced a hurricane artillery barrage on the German forward positions, designated artillery batteries and other important targets. The torrent of high explosive and shrapnel shells arrived as a fortuitously thick blanket of mist covered much of the area. Three minutes after the barrage began, the gunners began a creeping barrage that advanced in 100-yard steps every three minutes. Following the barrage, British, Australian and Canadian infantry and tanks began their methodical advance. Their advance concealed by the mist, these troops quickly overran the German forward positions and moved on.[14]

Lieutenant Paul Winslow US Air Corps, flying an SE 5A with No 56 Squadron RAF, took part in a dawn patrol over the battle area that morning. Later he noted in his diary:

> "We took off while it was still dark and got to 12,000 feet. All that could be seen were hundreds of our machines and thousands of gun flashes, denoting the top of the barrage. It was a wonderful sight to watch, and we were not bothered by Archie [anti-aircraft fire] so we could enjoy it. Landed at 7:00 am."[15]

Lower down, the mist greatly hindered the work of those units assigned to the army co-operation and ground strafing tasks. Writing of the RE 8 operations that morning by No 3 Squadron Australian Flying Corps, the Official Australian Historian noted:

> "In the event the airmen saw little of the opening of the attack. From the moment of `zero' (4.20 am) till nearly 10 o' clock in the forenoon fog assisted the artifice of the smoke-screens on the Somme in hiding all the conflict in the valleys and copses between Cerisy and Warfusee…The infantry attack, however, met with little or no difficulty. A lifting of the fog enabled contact patrols to locate the line at 10 am and 11.30. So swift and complete was the advance that the artillery and counter-attack machines had very little of their contemplated work to do. The German batteries were smashed or overrun. The German infantry delivered no counter-attack, for the simple reason that its reserves were rounded up and captured."[16]

A few words are necessary at this point, to explain the various roles undertaken by the two-seat army co-operation planes operating over the battle area. Each Royal Air Force plane engaged in this work carried a Sterling spark transmitter operating in the 2-Megahertz band, with a maximum range of about 10 miles. These planes did not carry wireless receivers, however. The crews transmitted reports in Morse code, but messages from the ground to the aircraft were passed by signal lamp or by means of large signal panels laid out on the ground.[17]

The purpose of the contact patrols was to establish the location of the forward elements of the attacking infantry and tank units. Flown at altitudes below 1,000 feet, the mission required the aircraft to fly a series of tracks parallel to the start line and advancing methodically forwards. In those pre-R/T days, communications had to be improvised. At intervals the contact patrol aircraft sounded a Klaxon horn with the Morse letter “A” (dot dash) to ask “Where are you?” On hearing that signal, infantrymen responded by lighting flares and displaying reflective metal discs carried for the purpose. Once the forward edge of the battle line had been determined, the observer marked this on maps. These were placed in weighted message bags and delivered to the appropriate division, the corps and the army headquarters.[18] Typical contact patrol reports from RE 8s of No 3 Squadron Australian Flying Corps that day ran:

> “Lt R Armstrong pilot, Lt F. Hart observer. Contact patrol, airborne 10.30 landed at 11.30. Flares called for at 10.50 am and 11.30. Our line apparently runs [series of map references given]. Message and map dropped at 5th Australian Division, Australian Corps and 4th Army report centre. Height 1,000 feet. Tanks and infantry moving forward without opposition.”
>
> “Lt Foale and Lt F. Sewell. Contact patrol, take off 11 am landed at 1220. Right division sector. Flares called for at 11.30. Line appears to run, [map references given]. Message and map dropped to 5th Australian Division, Australian Corps and Fourth Army Report Centre. Our troops and tanks well forward. Enemy shelling at [map reference]. Also scattered shelling all over the front. Our cavalry behind Harbonniers, also small body of cavalry along road in [map reference]. Discs were very easily distinguished, flares were difficult to see.”[19]

If a contact patrol ventured too far forward in the crew’s efforts to determine the extent of the troops’ advance, enemy tracer rounds heading in their direction would announce the fact. These planes were also in danger from the hundreds of “friendly” and enemy artillery shells passing over the battle area on their way to targets. Last, and certainly not least, there was the risk of attack from enemy planes engaged in the same task.[20] It was dangerous work, but it was vitally important to the success of the army’s operation. Ground commanders required regular reports on the progress of their forces, if they were to exert any degree of effective control over their forces.

Another important role carried out by army co-operation planes was that of mounting artillery-spotting patrols up to 10 miles beyond the front line, usually at altitudes above 7,000 feet. These planes had the task of calling down artillery fire on enemy batteries in action and not being engaged, and other worthwhile targets. Usually the pilot controlled the shoot by wireless, while the observer kept a wary eye for approaching German fighters.

A further role of the army co-operation planes during an offensive was that of maintaining patrols to warn of imminent counter-attack. These planes operated in the same area as the artillery spotters but at altitudes around 2,000 feet, as they searched for enemy infantry concentrations. On seeing such a concentration, the crew would call down artillery fire on it. Then the plane was to descend to low altitude and fly over the threatened friendly troops, heading for the centre of the enemy concentration and discharging a series of red flares to warn of the danger.[21] The report from one such patrol on that day, again from No 3 Squadron AFC, ran:

> "Lt Roberts, Lt Wilson. Took off 4.30 [pm], down at 6.15. Area as far east as Chuignolles through Foucaucourt – Vermandoville [7 miles east of the start line] under observation. No sign of impending counter attack."[22]

Throughout the day eight RAF fighter squadrons delivered low-altitude bombing and strafing attacks on retiring enemy troops. These Sopwith Camels, Sopwith Dolphins and SE 5As were armed with two .303-in machine guns and four 25-pound bombs. Each squadron sent out pairs of fighters at 20-minute intervals, to comb the battle area looking for targets of opportunity. On that first morning these attacks, made on enemy troops forced out into the open as they pulled back, hastened the collapse of the German defences at some points.[23] Major Raymond Collishaw, commanding No 203 Squadron with Sopwith Camels, later wrote:

> "As in the case of the big German pushes earlier in the year there was a heavy ground mist but this time it favoured us and not the enemy. Despite this fog we were able to get off the ground about 5 o'clock and throughout the day flew a series of low-level bombing and strafing attacks on the Fourth army front against infantry, vehicles and other targets on the Roye road that leads to the south-east out of Amiens. I led four patrols during the day and although this low-level work was no more popular than it had been during the German advances in March and April, it was comforting to know that this time it was in support of an offensive of our own and that it was the enemy who was on the defensive. My logbook shows that I put in 11 hours 20 minutes in the air during the day, all at heights of 100 feet or less."[24]

Each squadron sent out pairs of fighters at 20-minute intervals, to comb the battle area looking for targets of opportunity

Lacking armour protection, the fighters were ill equipped for this hazardous task. Collishaw's unit escaped loss on 8 August, but others were not so fortunate. Hardest hit was No 201 Squadron, also with Camels, which lost seven aircraft that day with one pilot killed and five taken prisoner.[25]

Six squadrons of RAF fighters, with about 110 aircraft, flew offensive patrols over the battle area to drive away enemy aircraft. Throughout the day, these fighters were involved in several skirmishes. One of the largest of these involved six Camels of No 65 Squadron, two SE 5As of No 41 Squadron and a Bristol Fighter of No 48 Squadron. Captain James White, leading the Camels, later reported:

> "About 12.25 p.m. I was attacked by 8 E.A. and climbed west and met Capt Brookes [and his flight]. I led the combined formation to attack the EA. During the fight which ensued I got on the tail of one EA and after firing a short burst it turned on its back and fell out of control. I got on the tail of another EA and chased it west. The remaining Camels all gathered behind this EA and it was forced to land behind our lines."[26]

A further important task assigned to both sides' fighters was the destruction of enemy observation balloons. Each balloon carried a couple of observers linked to the ground by a telephone cable, and would call down accurate artillery fire on enemy troops and other targets. Filled with potentially explosive hydrogen gas, lacking onboard defensive weapons and sitting stationary in space at altitudes between 3,000 and 4,000 feet, the balloons might seem an easy prey. Yet as many a fighter pilot discovered, this was not the case.

Hydrogen in an enclosed container – such as a balloon envelope – is not inflammable. Like petrol, it becomes explosive only if mixed with air in the correct ratio. To set a balloon ablaze a fighter pilot had first to puncture the envelope to allow the hydrogen to escape and mix with the surrounding air. To ignite the mixture the attacking pilot had to concentrate his fire on the same part of the balloon, often closing to within 50 yards before breaking off the attack. If the balloon was wet or the air was damp, getting the hydrogen-air mixture to ignite often proved frustratingly difficult.

Light machine guns and anti-aircraft guns were positioned beside the balloon winch to deter attacking fighters. Lookouts were continually on watch for approaching hostile planes. If an enemy aircraft closed on the balloon, on a warning from the ground the observers jumped from their basket and descended by parachute. Meanwhile the ground crew winched down the balloon as rapidly as possible, presenting the attacker with a difficult descending target.

Once the Allied offensive began, German balloon units in front of the advance had to pull back to avoid capture. During these moves the balloons, flying close hauled just above the ground, made enticing if not easy targets. At 10 am Lieutenant Norman Mawle of No 84 Squadron, flying an SE 5A, came upon a pair of observation balloons in the process of moving back. The report of the action stated:

> "While on a ground strafing expedition Lt Mawle sighted two enemy balloons, each being towed by a team of horses, east of Harbonniers… He dived on the first, but did not succeed in shooting it down. Heedless of machine guns being fired from the ground, he turned and dived on the second, which was approximately at a height of 25 feet. He fired into it causing it to burst into flames. He immediately made a climbing turn and dived on the first balloon but, however, was unsuccessful."[27]

Mawle was hit in one wrist and his stomach but succeeded in regaining his base. In the course of the day, SE 5A pilots claimed the destruction of five more German balloons.[28] A German pilot attacked one RAF balloon, but although his rounds punctured the envelope they failed to ignite the gas.[29]

THE BOMBERS STRIKE

The RAF plan called for the day-bomber units operating de Havilland 4s and DH 9s to attack the German airfields at Moislains, St Christ and Bouvincourt to disrupt air operations on the first day of the offensive. In each case cloud hindered and in some cases prevented the attackers from finding their targets.

Ten DH 4s of No 57 Squadron, flying in to two "V" formations each of five aircraft, attacked the airfield at Moislains at 8.10 am. Five of the planes carried two 112-pound bombs each; the other five carried twelve 25-pounders each. The two formations crossed the front line at 7,000 feet and on reaching the target area they separated. Each DH 4 descended individually to between 1,000 and 2,000 feet to deliver their bombs.[30] Lieutenant Andrew MacGregor, piloting one of the bombers, later wrote:

> "To achieve success, surprise is vital. On this occasion we had arrived over the German aerodrome and, coming down through the light clouds, had carried out the attack before the people on the ground understood what was happening. The attack was very successful, two sheds being destroyed with the aircraft inside them, as well as two fighters on the tarmac outside. Re-organising the formations at a distance from the objective, all aeroplanes flew to the lines at a low height."[31]

As the attackers withdraw, several Fokker D.VIIs engaged the bombers and shot down one. MacGregor's observer fired at a Fokker and was credited with sending it down out of control. Another DH 4 crew also claimed the destruction of an enemy fighter.[32]

No 205 Squadron's DH 4s set out to attack the airfield at Bouvincourt: one flight attacked the target but the results were not observed. The other flight failed to locate the target and instead bombed the railway station at Chaulnes.[33]

The force sent to deliver the initial attack on St Christ airfield, comprising fourteen DH 9s of No 27 Squadron, failed to find the airfield and instead bombed targets of opportunity near Peronne. Later in the day eight DH 9s of No 98 Squadron found the airfield and bombed it, causing some damage.[34]

THE AIR ATTACK SHIFTS TO THE BRIDGES

During the late morning, RAF crews returning from operations spoke of severe congestion on roads leading to the bridges over the River Somme as German troops began to pull back. For example Lieutenants Hellet and Blair, each flying an SE 5A of No 48 Squadron, returned from a reconnaissance patrol over enemy territory at 11 am to report:

> "General line of our tanks Guillaucourt – Caix. General enemy movement Eastward. EKB [enemy kite balloon] being towed E towards Harbonnieres. Caix being evacuated. Train going east from Rosieres. Artillery retiring at [map ref]."[35]

At 1.pm the crew of a Bristol Fighter of No 48 Squadron returned from a reconnaissance patrol over another part of the front at 2,000 feet, and filed a report similar in tone:

> "Corbie – Bray Road, from [map ref] to Bray congested with mixed traffic moving East. From [map ref] to Proyart road full of horsed transport moving East. Amiens – St Quentin Road between Proyart and Estrees seen to be congested with mixed traffic, general trend easterly…"[36]

If the Somme bridges could be broken, the German troops' escape would be problematical. Accordingly Major General John Salmond, the RAF commander, cancelled his planned programme of attacks by the day bombers and ordered that the Somme bridges were to be bombed "as long as weather and light permits". Fighters were to join in the attacks, each carrying their usual load of four 25-pound bombs.[37]

The bridge at Brie, an essential artery, was allocated to the DH 4s of 205 Squadron and the DH 9s of No 107 Squadron; each plane carried two 112-pound bombs. The Sopwith Camels of No 54 Squadron, each carrying four 25-pound bombs, supported the attack. Descending below 1,000 feet so pilots could deliver their bombs "by eye", the bombers aimed fifty-six 112-pounders at the bridge without inflicting any serious damage. The Camels' 25-pounders caused some casualties against German troops on their way to the bridge. The same units repeated their attack on the bridge during the afternoon, again without success. One DH 9 and one Camel were lost.[38]

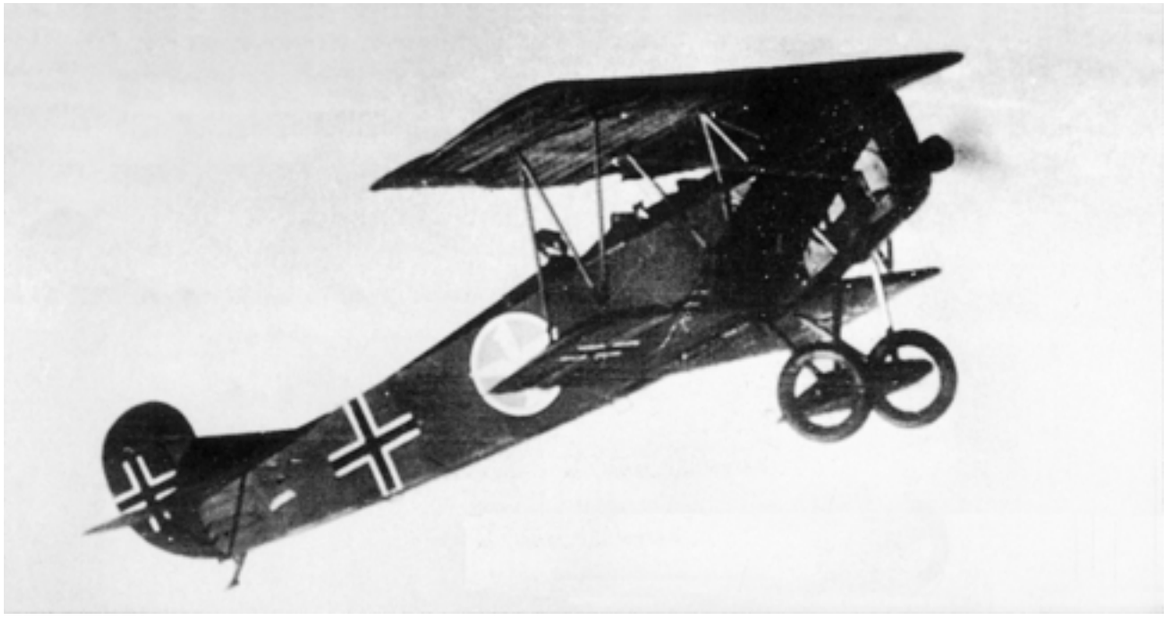
The bridge at Bethencourt twice came under attack from DH 9s of No 49 Squadron assisted by SE 5As of No 32 Squadron, but emerged unscathed. In these actions three DH 9s were lost and two more suffered severe damage.[39]

The DH 9s of No 27 Squadron delivered unsuccessful attacks on the bridges at Voyennes, Pithon and Offoy, supported by Camels of No 73 Squadron. There the raiders came under attack from enemy fighters, which shot down two DH 9s and two Camels.[40]

The bridges at Peronne came under attack from the DH 9s of No 98 Squadron, the SE 5A's of No 1 Squadron and the Camels of No 43 Squadron, but without success. One DH 9 and three Camels were lost during the engagement.[41]

OTHER TARGETS

No 22 Squadron sent fifteen Bristol F2B Fighters to escort the DH 4s of No 18 Squadron attacking the important Somain rail junction, through which German reinforcements would need to pass in order to reach the battle area from points to the north. German fighters attempted to engage these bombers, but on each occasion the escorting Bristol Fighters drove them away and the force suffered no losses.[42]



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THE DEFENCE STIFFENS

From the afternoon of the first day, German air reinforcements began arriving in the area. The most significant of these was Jagdgeschwader 1 equipped with the newest version of the Fokker D.VII. Oberleutnant Hermann Goering commanded the unit, but he was on leave at the time and played no part in the battle. Leutnant Lothar von Richthofen, (brother to Manfred, the top scoring German pilot of the conflict, who had been killed a few months earlier) held temporary charge of the unit.[43] A skilful air fighter himself, Lothar von Richthofen had been credited with 32 aerial victories to date.

Jagdgeschwader 1 moved to its new base at Ennemain close to the new battle area from Laon, some 60 miles to the southeast, bringing only 21 fighters out of its established strength of 52. Knowing that a hard fight was in the offing, von Richthofen had decided to leave his novice pilots behind even though this greatly reduced the effective strength of his Staffel. Later he wrote on the unit's state that day:

> "I was flying with Lowenhardt and the best men from our two Staffeln. In my Staffel, things were very shaky. There was actually only one [other] pilot who was any good. It was the same with Lowenhardt's Staffel. The best had fallen; the new pilots were good for very little."[44]

Leutnant Erich Lowenhardt, top scorer in the Geschwader at that time, was credited with 49 victories.

Lieutenant Ernst Udet, credited with 44 victories up to that morning, led other fighters of JG 1 to the new base. He later wrote:

> "The further we went the more evidence we saw of the desperate character of the fighting that was taking place below. Near Fontaine le Cappy, I discovered an enemy infantry co-operation machine, flying low over our trenches. Detaching myself from the flight, I dived at him, and opened fire. After about twenty rounds, the 'plane was struck in a vital part, and crashed near the trenches. The time was in the afternoon, and our petrol would not last much beyond [half an hour]. Our supplies were getting low, [because] we took-off with half-filled tanks. Of late it had been very difficult to get sufficient petrol for ordinary pur-poses, let alone for a longish cross-country flight, such as we were now engaged upon. It was imperative that we should land and refuel."

"Below us lay a small aerodrome, and we dropped on to it like starlings on to a field of corn. Machine stood by machine, until the whole 'drome was covered. The flight commanders reported to the com-mandant of the aerodrome, a charming man, who would have been delighted to help us, had he not required the petrol for his own machines …Eventually we managed to persuade the commandant to provide the necessary 'schnapps' for our machines. There would be just enough to last us for ten minutes' flying, just enough to take us to our destination."[45]

LOSSES

During the first day of the offensive the RAF suffered relatively heavy losses – 42 aircraft destroyed and 52 damaged beyond repair – about 13 per cent of the sorties flown. The heaviest losses were suffered by the fighter and bomber units making low altitude attacks on ground targets, amounting to 23 per cent of their sorties.[46] Many of these planes fell to ground fire. Of the 77 aircrew aboard these planes 31 were killed, 13 were wounded and 33 were taken prisoner.

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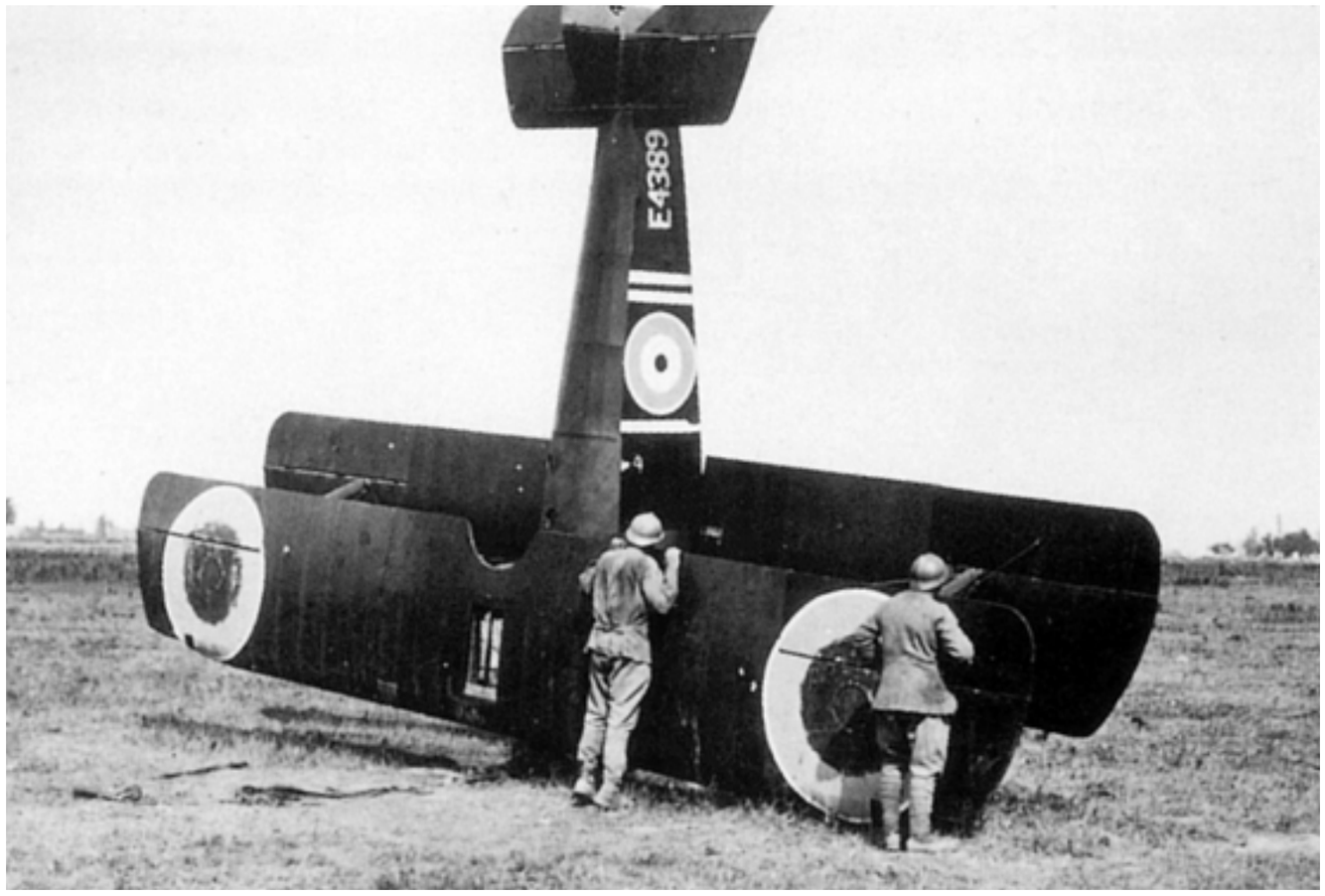

German losses during these actions were far less, around ten aircraft. Yet, while the RAF could easily replace the pilots and planes it lost, by this stage of the war any gaps in the German ranks were difficult to fill.

By nightfall on the first day, the leading tank and infantry units had advanced seven miles. By the standards of that conflict, British and Commonwealth troop losses had been light at around 9,000 killed, wounded, missing and taken prisoner. German records give their losses during the day at 28,000 of all ranks, including 15,000 taken prisoner.[47]

During the night of 8th/9th, RAF night bomber units maintained the attack on bridges over the River Somme, still without success. Up to dawn on the 9th a total of 162 sorties had been flown against eleven bridges.

THE FOLLOWING DAYS

On the second day of the offensive, 9 August, German resistance in the air stiffened further with the arrival of more units from other parts of the front. The pattern of operations by the RAF continued much as on the previous day, though two fighter squadrons switched from ground strafing to flying offensive patrols over the battle area. The Somme bridges remained the main target for the day bombers, with 173 sorties flown against these and 33 flown against other (mainly rail) targets. One bomb hit the bridge at Brie, but the damage was not serious and the structure continued in use.[48]

No 8 Squadron, the unit assigned to assist the tank units, successfully reported the positions of the leading tanks, as well as those that had broken down and needed recovery. The attempt to use aircraft to locate and knock out enemy anti-tank guns ahead of the tank advance was a failure, however. During the first two days of the offensive, the squadron found and attacked only one such position.

Total RAF losses on the second day were 45 aircraft shot down or damaged beyond repair.[49]

On the third day (10 August) the RAF continued with this general pattern of operations, having received a reinforcement of five squadrons with about ninety fighters to replace aircraft lost.[50]

By this time small numbers of German assault planes, some fitted with protective armour, were operating at low altitude over the battle area. On the evening of the 10th German low flying ground attack planes, assisted by ground artillery, halted an Australian advance along the Amiens – Brie road. To protect British ground forces from these low flying planes, further RAF fighters were switched from ground staffing to low altitude counter-air patrols.[51]

On the 10th the Somme bridges remained the main targets for the day bombers, though there was some reduction in emphasis: 105 sorties were flown against the bridges, compared with 93 against all other targets. Following the losses incurred during the previous two days the bombers now delivered their attacks from higher altitudes, around 10,000 feet, to remain beyond the reach of effective ground fire.[52] This further reduced their chances of hitting those small targets, however.

On the final day of the offensive (the 11th), the entire RAF fighter force was employed on counter-air patrols and these planes delivered no attacks on ground targets. The bombers moved their attack away from the Somme bridges (25 sorties) and concentrated on other targets, mainly rail facilities (93 sorties).[53]

On the afternoon of the 11th, the Allied ground offensive ended. The troops had broken into the German defensive line and advanced up to 12 miles in places, but there had been no breakthrough. With the arrival of large German troop reinforcements, the law of diminishing returns took effect. In contrast to the long battles of attrition that had proved so costly in the past, the Allied commanders had decided this would be a “bite and hold” operation.

Throughout the battle there had been considerable air activity. The outnumbered German fighter units gave a good account of themselves, but suffered heavy casualties in proportion to their numbers. The Jagdgeschwader 1, for example, was reduced to 11 fighters and had to withdraw from the battle to reform.

On the evening of the 11 August, German night bombers achieved a rare success for this type of mission. Ten twin-engined bombers attacked two mechanical transport depots near Calais and set both ablaze. About a hundred vehicles, and huge quantities of spare parts, were lost.

During the Amiens offensive in 1918 the RAF employed a greater concentration of aircraft than ever before, in its efforts to support the ground forces. In this section we shall consider which aspects of air power proved effective, and which did not.

First, let us look at those aspects of air power that provided major assistance to the ground forces. Prior to the offensive, the RAF and the French Air Force successfully prevented German reconnaissance planes from photographing or otherwise observing the preparations. During the two nights leading up to the attack, aircraft flying up and down the front line successfully masked the sounds of tanks moving to their attack positions. Taken together, these moves prevented the defenders gaining an inkling of what was afoot. Only when the bombardment opened was there a clear indication that the Allies were attacking at that point on the front. Surprise is the most important single ingredient for a successful land attack, and it is impossible to exaggerate its importance on this occasion.

Also prior to the offensive, the systematic Allied photography of the German defences allowed the gunners to pre-register targets for engagement once the preparatory bombardment started. Those targets were hit even though the mist on the first morning prevented visual observation.

When the mist cleared on the first day, artillery fire designated from the air inflicted considerable damage and helped to unhinge the defences. Reports from aircraft on contact patrols and counter-attack patrols were invaluable in providing commanders with information on the course of the battle and the locations of the leading troops. That made possible the effective deployment of reserves, the effective use of artillery, etc.

The vigorous patrolling by the Allied fighters over the battle area made life difficult for German aircraft flying contact or artillery patrols. During their forays over the battle area German two-seaters flew in units of three or five planes for mutual protection, often with single-seat fighters providing top cover.

Once German troops were forced to leave their trenches and began to withdraw, the strafing and bombing attacks by low flying fighters added greatly to the confusion. Apart from the casualties caused, these operations delayed the re-establishment of an effective defensive line. The squadrons involved in these attacks suffered serious losses from ground fire, however.

Now let us look at those aspects of air power which failed to make any major contribution to the land battle. Despite the large number of sorties flown, the RAF day bombers inflicted little physical damage of any importance. Initially the day bombers

attacked airfield and rail targets. One airfield attack inflicted moderate damage, the rest were failures. There is no evidence that any bomber attack on a rail target caused any serious delay in the inflow of German reinforcements. From the first afternoon, the day bombers switched their attacks to the Somme bridges. They scored hits on one or maybe two of the structures, but no bridge was rendered unusable.

The main reasons for the RAF bombers' failure to inflict significant damage were the inaccuracy of the bombing and the use of light bombs with feeble explosive power. The de Havilland 4 and DH 9 bombers involved in the attacks each carried two 112-pound bombs or twelve 25-pounders. The sights used for high altitude bombing were rudimentary, while during low level attacks the bombs were usually released "by eye". Given the limited weight and accuracy of the attacks, bridges and railway installations were not suitable as targets since the chances of success were minimal. Several decades would pass before there was a full appreciation of the limited destructive power of high explosive bombs, when these failed to score direct hits.

As mentioned above, the attempt to use aircraft to locate and knock out enemy anti-tank guns ahead of the tank advance was also a failure. During the first two days of the offensive, only one such position was attacked. In the course of its low flying operations over the battle area to assist the tanks, No 8 Squadron lost half of its eighteen planes for the most part to ground fire.

From the early afternoon of the first day, once the panic withdrawal by German troops ended, the effectiveness of the low altitude bombing and strafing attacks by RAF fighters rapidly diminished.

After the war Wing Commander (later Marshal of the RAF Sir) John Slessor conducted a detailed study of air operations during the Amiens battle. His candid and perceptive comments on the use of air power during the battle appeared in the 1936 book "Air Power and Armies". They are appropriate to round off this study:

> "In the event, the RAF made two contributions of great importance to the success of the initial attack on August 8th. First, the complete surprise achieved was largely due to the high degree of air superiority prevailing… Secondly the action of the low-flying fighters on the 8th was a factor of first-class importance in the overwhelming success of the initial break-in. But apart from those two factors it is impossible to assert with any confidence that the result of the battle after about 1400 hours on the 8th [the first day of the offensive] would have been materially different, or that the ultimate line reached and held by our forward troops on the 11th [the last day] would have been materially short of where in fact it was, if not a bomb had been dropped or a round fired by aircraft against ground objectives."
>
> "If this is so it is a damaging admission, in view of the fact that this battle saw the greatest concentration of air strength in any battle of the War…"[54]

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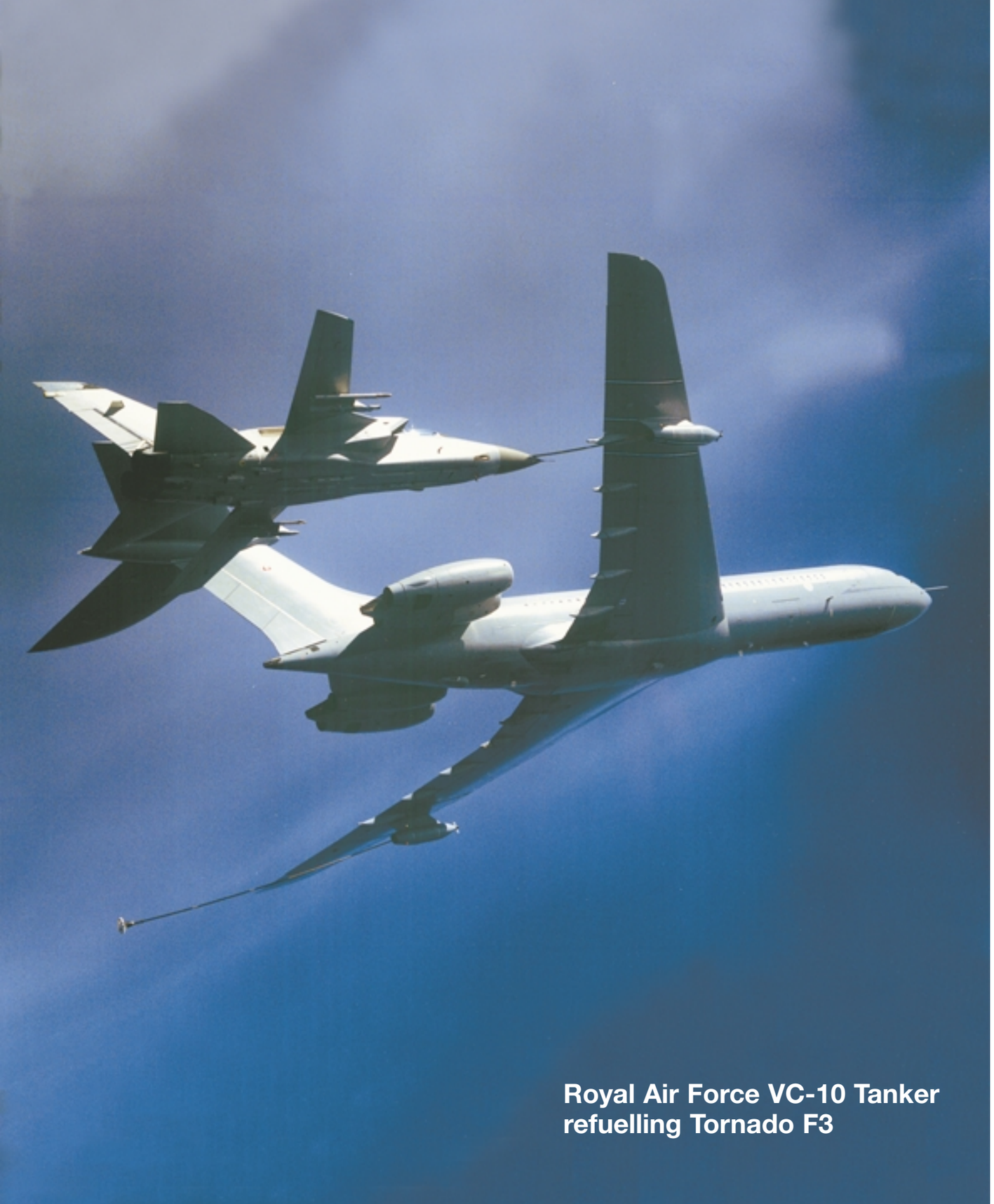

Royal Air Force VC-10 Tanker
refuelling Tornado F3