

Spitfire and Hurricane

The defence of the homeland during the Battle of Britain was dominated by the partnership between RAF Spitfires and Hurricanes, both single seat monoplanes carrying four pairs of Browning machine guns that were only a few months apart in terms of entering service.

The Hurricane was a robust aircraft and a stable gun platform, well able to absorb a huge amount of battle damage that would have downed the Spitfire or its German adversary the Me109. It was designed by Sir Sydney Camm and was the latest in the long line of Hawker aircraft all characterised by their rugged, workmanlike construction. It outnumbered the Spitfire roughly two to one during the Battle and is credited with shooting down 656 enemy fighters and bombers against 529 for Spitfires.

For its time it was an extremely advanced aircraft – a metal and fabric-skinned monoplane with retractable undercarriage, enclosed cockpit and eight gun armament. The first Hurricanes entered service in December 1937 and by the time of “Aldertag” in August 1940, the day when Goering threw everything he had at the RAF, its airfields and radar stations, 28 of the 55 fighter squadrons were equipped with the Hurricane.

The Spitfire, built by Reginald J Mitchell, was also the last word in a long line of development at Supermarine, but from a different design approach. Its classic elliptical wing was the result of speed trials in the 30’s resulting in the company winning outright the Schneider Trophy in their S6B racer in 1931. During that time light alloys were designed to reduce weight, aerodynamic qualities were built in alongside more powerful engines that were fed with special fuels. The result was a quantum leap in the development of monoplane aircraft design and engine technology which was shared by both aircraft.

Undoubtedly one of the most important military aircraft of all time, Mk1 Spitfires entered RAF service (with 19(F) Squadron) in August 1938. Its fragile, almost dainty appearance belied a superior performance and hard-hitting firepower that made it a formidable opponent in aerial combat. This and other factors, including a scheme whereby communities could club together and raise money for “their” Spitfire (£5000 was stated at the time as the cost per airframe, although the actual cost was more like double that) was one reason why the Spitfire came to epitomize the Battle in the hearts of the people of towns and cities up and down the UK.

After the Battle of Britain Spitfires fought in every operational theatre of the War and remained in RAF front-line service up to 1954. At the end of its development the Spitfire carried an engine producing more than twice the power of the original, its maximum take-off weight and rate of climb had more than doubled, its firepower had increased by a factor of five and its maximum speed had been increased by a third; all this in essentially the same airframe.

Conceivably Britain could have lost the Battle without the Spitfire as, of the two aircraft, it was the one that could take on whatever the Luftwaffe could throw at the RAF and its

modern design allowed it to be readily developed to keep up with new threats. By the end of the war Supermarine had produced 22 variants.

Other types which took part in the Battle of Britain included the Boulton Paul Defiant, Bristol Blenheim, Gloster Gladiator and Fairey Fulmar.

The Defiant had already seen service in the fight for France but was outgunned and outpaced during the Battle of Britain, and instead achieved success as a night interceptor. It was a two-crew fighter with its four-gun armament in a turret basically facing rearwards, which made it an easy target in daylight from below or head-on. July 19 1940 is known as day of “the slaughter of the innocents” after 141 Sqn Defiants from RAF West Malling in Kent suffered a mauling which included six aircraft lost and 10 aircrew killed, including the only Newfoundland national to earn the Battle of Britain clasp.

More tragedy occurred in August when 264 Sqn from RAF Hornchurch lost 14 aircrew. The decision was taken that the Defiant would no longer operate as a Battle of Britain day fighter.

Questions:

- 1) Name some of the differences between the Hurricane and the Spitfire.
- 2) Which were there more of in the Battle of Britain? Hurricanes or Spitfires?
- 3) Why do people generally associate the Spitfire as the iconic plane of the Battle of Britain.
- 4) Which one would you have wanted to fly in WW 2? Why?

The Lancaster Bomber

Probably the most famous Allied bomber of the Second World War, the Avro Lancaster had impressive flying characteristics and operational performance. What is surprising is that such a fine aircraft should have resulted from Avro's desperate attempts to remedy the defects of its earlier unsuccessful Manchester bomber. The prototype Lancaster, which flew in January 1941, was a converted Manchester airframe with an enlarged wing centre section and four 1145 hp Rolls-Royce Merlin Xs. The Merlins replaced two 1,760 hp Rolls-Royce Vulture engines, which had proved to be very unreliable. The modifications were an immediate success and such was the speed of development in wartime the first production Lancaster was flown in October 1941.

RAF No. 44 Squadron was the first to be fully equipped with Lancasters, notching up another first when it flew them operationally over Heligoland in March 1942. The Lancaster could carry a huge bomb load. It was the RAF's only heavy bomber capable of carrying the 12,000 lb "Tallboy" and 22,000 lb "Grand Slam" bombs. The aircraft won a place for itself in history, with the daring and precise bombing raids on the Ruhr Dams, in May 1943 and with the sinking of the German battleship Tirpitz, in November 1944.

Thousands of Canadian airmen and ground crew served with RCAF and RAF Lancaster squadrons in England, during the war. By late 1944, the Canadian No. 6 Group of Bomber Command operated thirteen squadrons of Lancasters in the war against Germany. At home, thousands more Canadians worked at Victory Aircraft in Malton (Toronto) to produce 430 Lancaster Mk. Xs, between 1943 and 1945.

After WW II, about 230 Lancasters served with the RCAF in several roles including, Arctic reconnaissance, maritime patrol and as a bomber. The Lancaster was ceremonially retired from the RCAF at Downsview (Toronto) in April 1964. In total 7,377 Lancasters rolled off the production lines in Britain and Canada, during WW II. Today, 17 Lancasters survive around the world, but only two are in flying condition.

Questions

- 1) Explain what made the Lancaster such a great bomber.
- 2) Where were these planes built?
- 3) Name the various roles it was used in.

Canadians in the Battle of Britain

The airmen who Churchill dubbed “the few” comprised 2,353 pilots and air crew from Great Britain and 574 from overseas. All flew at least one authorized operational sortie with an eligible unit of the Royal Air Force or Fleet Air Arm from July 10 to October 31 and were awarded the Battle of Britain clasp to the 1939-45 Star.

Participants included Poles, New Zealanders, Canadians, Czechs, Australians, Belgians, South Africans, French, Irish, Americans as well as a Jamaican, a Southern Rhodesian and a flyer from the Palestinian Protectorate.

Five hundred and forty-four lost their lives.

More than 100 Canadians are deemed to have participated in the Battle of Britain, and 23 lost their lives. A Royal Canadian Air Force squadron fought during the Battle; No. 1 (Canadian) Squadron, whose pilots were from both a regular force unit and an auxiliary unit, became operational on August 17, 1940. It was known as “Canadian” to distinguish itself from the RAF’s No. 1 Squadron but in February 1941 it was designated 401 Squadron.

Three members of No. 1 (Canadian) Squadron received the Distinguished Flying Cross for their efforts during the Battle of Britain: the commanding officer, Squadron Leader Ernie McNab; his second-in-command, Flight Lieutenant Gordon Roy McGregor; and Flight Officer “Dal” Russel.

Canadians also fought in the RAF’s 242 “All-Canadian” Squadron, which was heavily, although not exclusively, Canadian. It was led by RAF Squadron Leader Douglas Bader during the Battle of Britain. (S/L Bader has gone down in Air Force history for losing both legs in a flying accident in 1931; he successfully re-enrolled in the RAF at the outbreak of hostilities and serving until 1946 – including being shot down, taken as a prisoner of war and even escaping from captivity once.)

Many more flew with other RAF squadrons – as well as Bomber and Coastal Commands providing support to operations to prevent the German invasion. An untold number served as ground crew, keeping the fighters flying.

“Ground crews who serviced No. 1 (Canadian) Squadron’s Hurricanes, sometimes under fire and routinely under pressure, received belated recognition in June 1942,” says Halliday, “when Flight Sergeant John R. Burdes was awarded a British Empire Medal and Flight Sergeant Cecil M. Gale was mentioned in dispatches.

“The citation to Gale’s award read, in part: ‘Working under trying conditions, he has maintained the squadron aircraft in a capable manner. Owing to the intense operational activity during the latter part of August and September, the flight maintenance crew was called upon to work to the limit. Flt. Sgt. Gale carried out his duties, often working from very early morning until late into the night, with a result that sufficient aircraft for flight use were available at all times.’”

Replacing experienced pilots throughout the Battle had been a significant challenge, especially in the early days of the Battle. Later in the Battle replacements became less of an issue, but the pilots became exhausted and replacements were less experienced.

The last 10 days of August, according to the Official History of the RCAF, “had cost Fighter Command 231 pilots or almost one-quarter of [Fighter Command’s] initial strength, and 60 per cent of those casualties were experienced flyers who could only be replaced by inexperienced graduates of Operational Training Units and as time wore on less and less experienced pilots were taking to the air. ...as pilots gained practical experience they were likely to be killed, wounded, or mentally exhausted by the strain, or else promoted into other squadrons.”

The Battle of Britain would not have been won without the contribution of another Canadian: Max Aitkin, Lord Beaverbrook.

Churchill appointed Lord Beaverbrook, a newspaper tycoon, Minister of Aircraft Production in May 1940. In a series of moves and innovations that upset the senior leadership at the Air Ministry, Beaverbrook dramatically increased the production of fighters for the war effort. “He rode roughshod over all the happy dilatory routines of peace,” says Stokesbury. “Factory managers and senior air force officers alike came to hate him, but without him, or someone equally acerbic, it is hard to see how the British would have lasted through the summer. He provided a steadily increasing flow of aircraft, so that in spite of losses of well over 100 per cent of strength, the RAF still ended the battle stronger than it went into it.”

In the month before Beaverbrook’s appointment, 256 fighters were produced. In the critical month of September, as RAF losses reached their height, Beaverbrook’s system produced 465 fighters.

And now, with the Nazi’s plan to invade Britain in tatters, another key Canadian contribution to the war in the air would begin to show its effect.

“As the Battle of Britain ended, the first young pilots, observers and gunners were emerging from the schools of the [British Commonwealth] Air Training Plan in Canada,” says Leslie Roberts. “Soon their tide would be in full flood.”

Questions

- 1) Name the squadrons Canadians fought in.
- 2) Why is Douglas Bader such a remarkable person?

- 3) How many Canadians participated in the battle?

- 4) Explain how the battle was a drain on experienced pilots.

- 5) What role did Beaverbrook play in the war? What was he like to work for? Do you feel people like him are necessary for industry in times of war? Defend your answer, a simple yes or no will not be acceptable.