

points of interest

# SUPERMARINE SPITFIRE



## THE FAMOUS ELLIPTICAL WING FIGHTER

By MCpl Rene Paquet  
430 ETAH Valcartier

**T**he Mk V was the first to see extensive service over the desert of North Africa, the waters of the Mediterranean and the vast Indian Ocean off the North coast of Australia. The Mk V was built using

an Mk I and/or Mk II fuselage and the new Merlin 45 engine. Outclassed by later models, the Mk V still proved to be a worthy opponent when flown by pilots like Malan, Tuck, Johnson, Caldwell, Duke and Beurling.

The Spitfire was R.J. Mitchell's project and the first British all-metal low wing monoplane semi-monocoque aircraft. This construction was demanding to build. Structurally and aerodynamically very efficient, it carried more military equipment and bigger engines than designed for.

The fuselage was built as one unit, however the tail-section, which included the vertical stabilizer, was detachable from the rest of the fuselage. Only the rudder and elevators were covered with fabric. Protective armor was fitted behind the pilot's seat. The windshield had an armour glass outside, but later models had their armour moved inside.

The elliptical wings were no coincidence. They were designed based on knowledge of aerodynamics. The wings' main spars were mounted to the forward frame and fuselage. The wings were designed with detachable tips, which provided the advantage of reduced drag, especially around the wing tips. This provided very good for high-altitude performance.

The split-flaps were pneumatically operated and retracted by the use of a spring and airflow. When taking off from an aircraft carrier, wooden wedges were placed between the flaps and the wings. Once airborne the pilot cycled the flaps to drop the wedges.

A hand pump hydraulically operated the undercarriage, but later an engine-driven pump was used. If the hydraulic system failed, a carbon dioxide bottle provided pressure to operate the main landing gears one time. A warning horn sounded if the main landing gears were not locked down. The tail wheel used a large shock absorber to handle hard landings.

The Rolls-Royce Merlin 45 was a V-12 liquid cooled float-type carburetor engine with

a single-speed supercharger. It was fitted to the airframe with tubular mounts. An electric starter or a Coffman cartridge-starter normally cranked the engine, but for emergencies it could be done by hand. The Spitfire two-bladed propeller was later replaced by a variable pitch three-bladed DeHavilland propeller with two settings.

The early armaments were eight Browning 7.7 mm machine guns, manufactured by Colt in the USA. Later the Mk V used four Browning 7.7 mm machine guns with 350 rounds each and two Hispano-Suiza 20 mm cannons with 120 rounds each.

### The battle for Malta

For those who fought and died on the island of Malta between 1940 and 1943, it is a story of death and destruction, of courage and determination. It is a story which is well known and cannot be explained in such limited space.

According to historian Alan Moorehead, it was a siege of annihilation. One after another, all the other great sieges were eclipsed, England and Odessa, Sebastopol and Tobruk. Malta became the most bombed place on earth.

Malta was not a place for beginners, all pilots were carefully chosen, and among their ranks was George "Screwball" Beurling who became Malta's highest scoring ace with 23 and one-third victories.



George "Screwball" Beurling

Born in Montreal, QC in 1921, George Beurling went to Great Britain and joined the RAF in September 1940. After his training he became sergeant and flew the Spitfire Mk V. Beurling claimed his first two victories off the French coast in May 1942.

The following month Beurling went to Malta. In July he shot down 15 aircraft including three Bf 109s in one sortie. He was commissioned a

month later. On October 14 Beurling downed a Ju 88 and two Bf 109s, but was wounded by shrapnel in the heels. Later he was awarded the Distinguished Service Order and sent to England for treatment and rehabilitation.

Beurling dedicated himself to improving his skills, especially in deflection shooting, which proved to be vital to survival in the deadly skies of Malta. Beurling was a complex maverick character. He didn't smoke or drink and was not given to swearing. In fact, his prime expletive to anything or anyone unusual was "screwball"; hence the nickname.

He was a talented fighter pilot, but his refusal to accept authority made him many enemies among his superiors and only his distinguished combat record saved him from a court martial. In April 1944, he returned to Canada, but more disciplinary problems forced him to resign his commission and he retired that same year. Beurling had difficulties with the demands of civilian life and for three years he went from job to job.

In 1948 he accepted an offer to fly with the air force formed by the new state of Israel. He was to ferry light transport, but on May 20, after taking off from Rome, his aircraft blew up and crashed, killing him and his co-pilot. Sabotage was suspected, but never proven.

At the end of the war Beurling's victories stood at 31 with one shared destroyed and nine damaged, all but two of which were scored while flying the Spitfire Mk V. This made him by far the most successful pilot on this type of aircraft.

The Spitfire was one of the most elegant and beautiful aircraft that ever flew. Remembering these legendary aircraft, we honour the thousands of men who paid the ultimate price one can pay. ■

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