PROFILE

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SUPERMARINE SEAFIRES (MERLINS)



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Hooked Spitfire Mk. VB named Bondowoso (military serial BL676/MB328). Note this first converted Spitfire, to Seafire Mk. IB standard, carries a 30-gallon slipper tank under the fuselage and is fitted with a tropical filter.

(Photo: Imperial War Museum, ref. MH 4185)

Supermarine Seafires (Merlins)

by Len Bachelor

THE British Royal Navy's Fleet Air Arm saw in the Hawker Hurricane and Supermarine Spitfire an opportunity to supplement and replace their existing fighter aircraft, many or rather most of which were obsolete.

Already the Hurricane had proved that it was adaptable for carrier work, and so plans went ahead to convert similarly the Spitfire.

As the Spitfire Mk. V* was in quantity production at that time for the Royal Air Force, this variant was chosen for the first conversion trials. The conversion consisted of the installation of an arrester hook attached to a retractable "V"-frame to the underside of the fuselage, which was suitably strengthened. The result was a "hooked" Spitfire. The first aircraft to be converted was a Castle Bromwich-built F.Mk. VB (BL676) in January 1942. Prior to this, however, the Fleet Air Arm had carried out tests with Spitfires loaned from the R.A.F. in order to determine the extent of their adaptability. One such aircraft was an F.Mk. IA (Supermarine Type No. 338), with the military serial K9906. This was eventually transferred to Royal Navy charge in May 1943.

The initial batch of conversions comprised 48 aircraft. The work was contracted to Air Service Training Ltd. (A.S.T.) of Hamble near Southampton, Hampshire, in mid-1942. After conversion the aircraft did not immediately carry their re-allocated Fleet Air Arm serials which for the first batch were in the MB range. There was also an absence of the words "Royal Navy" above the serial, although this was not uncommon, even with genuine Seafires. The reason for this appears to be that much of the work was often carried out by repair centres primarily involved with R.A.F. aircraft, and, as such, they received the same treatment where painting the aircraft was concerned.

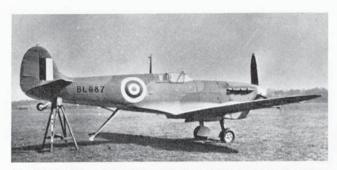
Following the initial batch of conversions, a further order for the conversion of 118 aircraft to Mk. IB standard was placed. The work in this instance was carried out at R.A.F. Maintenance Units. Because of the pressure these Maintenance Units were under—with a large number of R.A.F. aircraft to repair—the Seafire conversions apparently took second place. The result of this was that some of the later Seafire Mk. IIC aircraft were appearing before all the earlier Mk. I conversions were completed.

Many of the Spitfires chosen for conversion were already "war weary", having seen service with a number of R.A.F. squadrons. For example, W3312 which became NX883 had previously served with Nos. 74, 92 and 417 Squadrons and had suffered damage in two flying accidents before conversion in February 1943! After maritime transformation, it was allocated to Royal Naval Air Station (R.N.A.S.) Lee-on-Solent, near Portsmouth. Seafire conversion NX897 had previously served with Nos. 65, 123, 165, 167 and 306 Squadrons, R.A.F., when serialled BL373. Some of the aircraft had previously been presented to the R.A.F. and still bore the name of or given to the aircraft by the donor.

SEAFIRE Mk. I TRIALS

The Seafire Mk. F.IB* (Supermarine Type 340) as the first conversion aircraft were known, was equipped with "B" wing armament consisting of four 0·303-inch Browning machine-guns (350 rounds per gun) and two 20-mm. Hispano cannon Mk. 2 No. 5 (60 rounds per gun). These were replaced in September 1944 by the

^{*}Curiously enough, the Royal Navy reversed the "F. Mk. I" R.A.F. standard of nomenclature, with the result that subsequently most authors have omitted "Mk." altogether.—Editor.



Hooked Spitfire Mk. VB BL687/MB329 resting on trestle, clearly showing the arrester hook in lowered position.

(Photo: Real Photographs, Liverpool)



Supermarine-built Seafire Mk. IB. MB307 taking off with R.A.T.O.G. Note revised fuselage and fin markings.

(Photo: Flight)



Hooked Spitfire BL238 making a heavy landing on the Training carrier H.M.S. Ravager. Note port undercarriage leg has already collapsed. Aircraft still retains the "sky" fuselage band. (Photo: C. Vale via M. Garbett)

Mk. 2 No. 10 cannon; this modification was also applicable to Marks II and III. There was no provision for the carriage of bombs or of folding wings. A cine camera was situated in the wing root. The balloon-type hood, which improved pilot vision, was introduced in August 1942. Catapult spools for assisted take-off were installed.

The initial carrier trials were carried out by Lieutenant Commander Bramwell, D.S.O., D.S.C.—the Commanding Officer of the service trials unit—late in 1941 on board H.M.S. *Illustrious*. Almost immediately, it became apparent that not only did the long nose of the Seafire require the pilot to make an unorthodox approach, but also that the undercarriage was relatively delicate by F.A.A. standards and not ideally suited to repeated heavy deck landings.

On September 11, 1942, Lieutenant E. Brown undertook the first deck landing trials on one of the small escort carriers (built in the United States) which were

now becoming available. H.M.S. *Biter* was the scene of these trials carried out in the River Clyde in Scotland. The flight deck of H.M.S. *Biter* was only 430 feet as opposed to the 730 feet available on H.M.S. *Illustrious*.

Taking off from the shore base of R.N.A.S. Machrihanish, Lieutenant Brown reported: "I picked her up and started to think about my approach. I flew round the ship, turned on to my approach path, and came in. As I closed the stern I swung the nose to starboard with the rudder and counteracted the swing by putting on slight opposite bank. In this way I made the Seafire crab in sideways, so that I had a view of the deck over the leading-edge of the wing. I sank lower toward the stern. I was over the rounddown at a speed very close to the stall. Quickly I took off the bank and kicked off the rudder as she sank on the deck. She made a good three-point touchdown and caught a wire." However, this first landing had been made unintentionally, without the aid of a batsman, and with the ship 25 degrees out of wind with a "G" flag flying. In plain language that meant "Go home!" Despite these adverse conditions (not to mention a cross wind and the arrester wires being in the down position), the Captain signalled "Trials completely successful." But, a second landing was not nearly so successful as after tearing its hook off, the Seafire was swung round on the deck in order to avoid going off the bows; it finished up hard against the island of H.M.S. Biter.

Experience showed that if the Seafire deck-landed on its main wheels instead of making a "fair" threepoint landing, it would bounce alarmingly, miss the arrester wires and then either go into the crash barrier or over the side.

The Seafire Mk. IB could be powered by either a Rolls-Royce Merlin 45 or 46 and could carry a 30-gallon long-range jettisonable tank.

When engine boost was increased to 16 lb./sq. in., it became necessary to strengthen the engine mountings for both the Merlin 45 and 46.

The next version of the Seafire to appear was the Mk. IIC (Supermarine Type 357). This was basically similar to the R.A.F.'s Spitfire Mk. VC, but as it was not a conversion type, it became, therefore, the first "real" Seafire for the F.A.A. The Mk. IIC had additional strengthening around the catapult spool points and provision for R.A.T.O.G. (Rocket Assisted Take Off Gear). Tests using R.A.T.O.G. were first carried out on MB141/G in February 1943, and then on MB125. The principle was to strap a container holding two rocket charges to the upper surface of the wing, at the wing root trailing-edge. Weight of the gear was 66 lb.

The charge was ignited electrically and the boost, which increased normal acceleration nearly fourfold, lasted for four seconds—getting the Seafire airborne in a distance of about 200 feet. Once airborne, the empty rocket containers could be jettisoned in such a way that they fell free from the aircraft.

In service, however, the Seafire had little need for the use of R.A.T.O.G. as it could get airborne with an into-wind deck speed of only 5 m.p.h. Apart from this, there was another consideration. Unless the ignition of the rocket charges were simultaneous, the result of an asymmetric malfunction could be disastrous, resulting in the aircraft violently swinging to one side. In consequence, the use of R.A.T.O.G. was not favoured by most F.A.A. pilots.

Likewise, the deck catapult launch was seldom required to get a Seafire airborne in view of the fighter's excellent take-off capabilities. Unassisted take-offs could be made at the rate of one every 90 seconds from the deck of a carrier; much quicker than would have been possible from catapult launchings. A fast recovery time could also be achieved with the Seafire. The elapsed time between touchdowns was as brief as 40 seconds, and this could not be beaten by any of the other carrier-borne aircraft.

The Seafire Mk. IIC appeared in two main versions. Supermarine built the Mk. F. IIC, while Westland Aircraft produced the Mk. L. IIC for low-altitude operations. A further version did exist, the low-altitude reconnaissance Mk. LR. IIC which had both vertical and oblique F. 24 cameras installed.

The prototype Seafire Mk. II has been quoted as being serialled L1004, a converted R.A.F. Spitfire Mk. F.I. It had no armament and was fitted with a Merlin 32 and a 4-blade propeller. However, production aircraft were powered by either Rolls-Royce Merlin 45 and 46 (for the Mk. F. IIC) with a 3-blade propeller or the Merlin 32 (Mks. L. and LR. IIC) with a 4-blade propeller.

As the suffix indicates, all Mk. IICs had "C" wing armament capability, with provision for four 20-mm. Hispano cannon (120 rounds per cannon); although a Seafire thus armed was a very rare sight because the extra weight penalty was a prohibitive factor as far as carrier take-offs were concerned. Normally the Mk. IICs possessed the two-cannon "B" wing armament arrangement. Additionally, one 250-lb bomb could be carried under the fuselage.

Deliveries of the Mk. IIC started in September 1942 and by the time the last of this variant appeared, some



Another mishap aboard H.M.S. Ravager with the pilot extricating himself from hooked Spitfire F. Mk. VB. BL818. Note signs of repair to rear fuselage section and that the engine has six exhaust manifolds. (Photo: C. Vale via M. Garbett)

Seafire Mk. III in flight.



(Photo: Real Photographs)



Seafire Mk. F. IIC. MB156 "6G-O" of No. 885 Squadron. (Photo: Imperial War Museum, ref. A 14219)

402 Mk. IICs had been built—262 by Supermarine and 140 by Westland, 30 of which were originally destined to be Mk. III standard, but were produced without folding wings.

In March 1943, modifications were carried out on the Seafire Mk. IB and Mk. IIC in order to increase the loading on the arrester hook from 7,000 to 10,500 pounds. In the following August, strengthening of the relevant deck arrester "A" frame and fittings began. This was a 60-man-hour task for each Seafire.

Other modifications carried out concurrently (from May 1943) were an improved type of rear view mirror and the fitting of additional armour plating under the pilot's seat. Such "mods" were normally required to be carried out A.S.A.P. ("as soon as possible") or "at not later than the next major inspection," according to the rating of the modification.

Many of the Mk. IICs were delivered direct from the factory to No. 15 Maintenance Unit at Wroughton and then on to Air Service Training (A.S.T.)—for the installation of operational equipment, before reaching F.A.A. Stations. Ferrying incidents did occur and not all of the aircraft got this far; similarly, MB154 was destroyed on October 31, 1942 in a flying accident while still at No. 15 M.U.

THE SEAFIRE Mk. III APPEARS

The third and last Merlin-powered version of the Seafire to be produced was the Mk. III (Supermarine Type 358), and the first to possess wing folding capabilities which greatly improved its handling aboard the carriers, especially the smaller U.S.-built escort carriers.

Another Mk. F. IIC of No. 885 Squadron "6F-O" taking-off from a carrier deck. (Photo: C. H. Wood via M. Garbett)



A converted Mk. IIC (MA970) was used as the Mk. III prototype. Wing folding on this and all subsequent Mk. IIIs was manual and was accomplished by two folds. The first was immediately outboard of the wheel wells when the wing was hinged upwards and past the vertical position. The second fold was achieved by folding the wing tip outwards and downwards. To support the folded wing—which gave the Seafire a distinct praying mantis appearance—a jury strut was placed between the horizontal and vertical upper surfaces of the wing. In the folded configuration, the wing span of the Seafire was reduced from 36 ft. 10 ins. (in the case of the standard wing) to 13 ft. 6 ins. The folding mechanism increased the weight of the aircraft by 125 lb and decreased the torsional rigidity of the wing by 10 per cent.

Armament of the Mk. III was the same as that for the Mk. IIC—the universal or "C" wing, but the bomb load was now increased to either one 500-lb bomb under the fuselage centre-section, or two 250-lb bombs under the wings. In practice, however, aircraft never flew with the two 250-lb bombs under the wings as this could have caused wing buckling. As an alternative, six 60-lb rocket projectiles could be carried.

The range of the Mk. III could be increased to around 750 miles by the fitting of a 30-gal. flush-fitting drop tank beneath the centre-section. It was found necessary to introduce a lock for the 30-gal. tank in order to avoid inadvertent jettisoning of the tank or bombs. After October 1944 the "mod" was introduced on to the production line.

Production of the Mk. III began in April 1943 and ceased with the appearance of RX353. By that time Westland had built 870 aircraft and Cunliffe-Owen another 350.

Like the Mk. IIC, the Mk. III appeared in three versions: F. (Fighter), of which 100 were built; L. (Low-altitude fighter) and LR. (Low-altitude Reconnaissance). Like the Mk. LR. IIC, the Mk. LR. III had provision for one each vertical and oblique cameras in the rear fuselage.

Reference to some of the modifications introduced on the earlier Seafire marks has already been made. There were some further "mods." introduced, applicable to all marks, which were carried out "in the field". One concerned the strengthening of the forward cannon mounting. Another, introduced in March 1944, assisted the pilot while landing in semi darkness by providing exhaust shields which prevented dazzle.

In December 1944, a further improvement to the hook retaining the snap gear was authorised. It had been found that damage to the fuselage and the snap gear had been caused by the impact load when the arrester hook locked in the snap gear.

With the introduction of the Rolls-Royce Griffon-powered Seafire Mk. XV, the Merlin-engine marks began to disappear. Even so, it was not until early 1947 that the last Seafire Mk. IIIs used by the F.A.A. training establishments were replaced by "tired" Mk. XVs; two such training squadrons were Nos. 759 and 760. No. 760 Squadron (No. 2 Naval Air Fighter School) was operating from Lee-on-Solent with NF596 (individual letter D), NF502 (W) and PP929 (S) among its equipment; and on December 27, 1945, with Course No. 47 only partially completed, a move was made to R.N.A.S., at Henstridge, in Dorset. No. 759 Squadron



Seafire Mk. IIIs of No. 899 Squadron aboard H.M.S. Khedive. Note wing tips folding down to facilitate deck parking. (Photo: L. J. Kelly via M. Garbett)

(No. 1 Naval Air Fighter School), based at Yeovilton in Somerset, was still using its Mk. IIIs in early 1946.

Some Seafires were allocated for instructional purposes to training establishments, and to a number of Air Training Corps Squadrons. For example, MB364 eventually ended its "working life" at the Royal Navy Engineering College, Plymouth, being burnt in 1957. An ignominious fate.

As with aircraft destined for the R.A.F., many Seafires were delivered to Royal Naval Air Stations by members of the Air Transport Auxiliary. One pilot of No. 15 Ferry Pool at Hamble, Hampshire, was Mrs. Jackie Moggridge whose many ferry flights included the following Seafires:

10.11.43 LR745. Colerne to Christchurch. 22.12.43 NM977. A.S.T. Hamble to Lee-on-Solent.

19. 4.44 NF492. Colerne to Lee-on-Solent.7. 5.44 LR645. Lee-on-Solent to Hawarden.

8. 5.44 LR710. Lee-on-Solent to Hawarden.

15.10.43 LR791. Lyneham to Wroughton.

SEAFIRES IN SERVICE

First deliveries of the Seafire took place when 12 Mk. IICs were delivered to No. 807 Squadron in June 1942. The second delivery to a squadron occurred in September 1942 when No. 801 Squadron received its first Seafires.

The baptism of fire for the Seafire came when Nos. 801 and 807 Squadrons (embarked on H.M.S. Furious) participated in "Operation Torch", the code name allotted for the Allied landings in North Africa on November 8, 1942. H.M.S. Furious was part of "Force H" which comprised of the British group of Fleet and escort carriers which gave initial air support to the American landings. The Seafires and other Fleet Air Arm aircraft flew with U.S.A. star markings for this operation, but these were immediately removed after the withdrawal of the British aircraft. During this action

the first enemy aircraft in the form of a Dewoitine D.520 was shot down near Oran by Sub-Lieutenant G. C. Baldwin (for which he received the D.S.C.), while flying Seafire Mk. IIC serial MA986. Other F.A.A. Squadrons flying Seafires engaged in "Torch" were No. 885 Squadron, embarked on H.M.S. Formidable and No. 880 Squadron on H.M.S. Argus.

In late 1942, No. 884 Squadron was based at R.A.F. Turnhouse in Scotland, and had been given the task of interception of a Junkers Ju 88 "Met." prowler which regularly flew along the coast near Edinburgh. This task was something quite new for the pilots and they waited day after day for the intruder to come their way, but no interceptions were accomplished.

Re-equipping Squadrons with Seafires went steadily ahead throughout 1942 and 1943 and gradually the Hawker Sea Hurricane disappeared from front-line use.

In July 1943, Seafires from No. 885 Squadron operating from H.M.S. Formidable and Nos. 807, 819 and 880 Squadrons operating from H.M.S. Indomitable and again as part of "Force H", provided cover for the landings on Sicily.

Seafire Mk. IICs of Nos. 807 and 808 Squadrons warming-up aboard H.M.S. Hunter, February 1944. "A" is Squadron Commander's aircraft and has pennant forward of cockpit. (Photo: via M. Garbett)



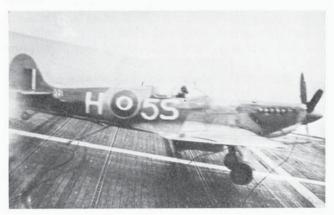




"Prangs galore" aboard H.M.S. Ravager. Two views of Seafire Mk. III LR817 "5H-P" catching deck wire and going over the side.

These "prangs galo:e!" photographs—more will be found on subsequent pages—could suggest mechanical mayhem unlimited "every hour on the hour". This was not so. But a carrier in combat trim offers the intimate close-up of incident rarely possible to record on the vast expanse of an airfield.—Editor.

Two views of Seafire Mk. III "5S-H" losing its Rolls-Royce Merlin.





The following month, on September 9, 1943, the landings on the Italian mainland in the Gulf of Salerno took place, and one of the biggest involvements of the Seafire. Code-named "Operation Avalanche", some 100 Seafires from 11 F.A.A. Squadrons were in action flying from the escort carriers H.M.S. Hunter, Stalker, Unicorn, Attacker and Battler who were operating as "Force V". Two Mk. L. IICs from No. 880 Squadron on H.M.S. Stalker were MA978 and MA999. The Seafires provided continuous beach-head cover for the troops and, in the initial stages of the operation, Seafires provided almost the sole aerial protection.

Unfortunately during the Salerno landings wind strength was virtually nil and this gave the many inexperienced pilots involved, considerable difficulty when landing back on the carriers. At the best the escort carriers were capable of making approximately 17 knots and the combined lack of experience on the part of the pilots and of a good landing wind, resulted in a startling number of flight deck accidents.

Aircraft came in at dangerously high speeds resulting in arrester hooks being torn off, main undercarriage legs collapsing, aircraft bouncing and going over the side, or hitting the island or ploughing into the deck aircraft park.

It had been intended that the Seafires would only be in operation for the first day, after which land-based fighters would be operating from a captured airstrip. But progress was slow and it was in fact four days before this was achieved and the withdrawal of the Seafires could be effected. By that time the Seafires were down to less than 50 per cent of their original total strength.

Despite its failings as far as flight deck accidents were concerned, the Seafires had put up an impressive record of operations. No fewer than 265 sorties were flown on the first day and the average patrol strength over the beach-head was 20 Seafires.

Twenty-six Seafires did not return with the carriers, but operated instead from an airstrip at Paestum, some 30 miles from Salerno, as from the afternoon of September 12. They remained there until September 15 when they again returned to F.A.A. control and their carriers. This was one of the few occasions when the Seafire was flown operationally from a shore base. Ten aircraft were lost during the seven days of action.

An aftermath of the Salerno landings was that in November 1943, Lieutenant E. Brown was given the task of investigating the low wind speed characteristics of the Seafire.

Three aircraft were supplied for the tests which were to continue "until something broke". On take-off with the first aircraft from R.N.A.S. Abbotsinch, the throttle jammed and a "dead-stick" landing was made at Ayr.

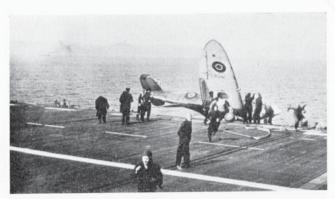
Lieutenant Brown then flew out to H.M.S. *Ravager* for the tests. Ten landings were made, each being at a lower windspeed until the deceleration rate reached 2.05G, at which point the aircraft tipped on its nose.

The second aircraft was used for testing the arrester wires at different heights and the last landings were made without the aid of a batsman.

In April 1944, Seafires of No. 801 and 880 Squadrons were operating from H.M.S. *Furious* and providing air cover for attacks on the German Navy's *Tirpitz*. Further attacks were made in July 1944, by Nos. 880



Seafire Mk. III, "O", having lost its tailwheel, scrapes the starboard wing along deck. Note fuselage fracture line through the roundel.



LR684 Seafire Mk. IIC hangs over the side.

and 894 Squadrons, the latter operating from H.M.S. *Indefatigable*, and again in the last week of August, when Nos. 880 and 801 Squadrons from H.M.S. *Furious* and Nos. 887 and 894 Squadrons from H.M.S. *Indefatigable* took part.

D-Day, June 6, 1944, when the Allies landed in Normandy, was the next occasion when the Seafire operated in some strength. Aircraft from Nos. 808, 885, 886 and 897 Squadrons became part of the Air Spotting Pool of the 2nd Tactical Air Force (No. 34 P.R. Wing), and as such were under R.A.F. control. This was because, once again, they were operating from a shore base. Their task was to locate targets inland for the gunners on board the ships giving coastal support. All the Seafire operations were flown out from R.N.A.S. Lee-on-Solent. The Seafires were returned to F.A.A. control in July 1944.

In late May and early June 1944, eight Seafires from each of Nos. 807, 809 and 879 Squadrons came under Desert Air Force control for approximately a month. The Seafires operated from Orvieto, Italy and were known as "D" Fighter Wing.

"Operation Dragoon"—the landings in Southern France—began on August 15, 1944. The Seafires were again in action, operating from the escort carriers H.M.S. Hunter (No. 807 Squadron), Attacker (No. 879 Squadron), Stalker (No. 809 Squadron) and Khedive (No. 899 Squadron). The Seafires from H.M.S. Stalker carried out some 337 sorties in 10 days.

The last area in which Seafires saw action during 1944 was in the Aegean Sea during the months of September and October, when H.M.S. *Stalker* and the other carriers mentioned in "*Operation Dragoon*" carried out operations against enemy positions.

Another occasion during which Seafires had flown operationally from a shore base was during the first half of 1944, when Nos. 887 and 894 Squadrons flew as fighter escort and on sweep missions from Culmhead, in Somerset.

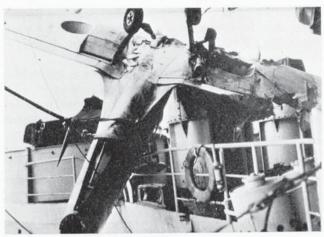
ACTION IN THE PACIFIC

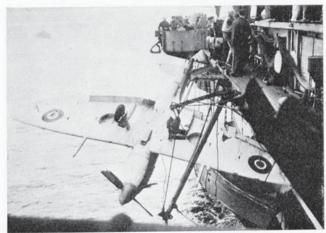
Carrier operations now moved to the Pacific, where the course of the war was to be determined by air power at sea. However, the Merlin-powered Seafire did not operate to the same extent as it had in the European theatres of the war. Range was now an even greater problem with the Seafire which, on average, could only remain airborne for approximately two hours. In consequence, many of the F.A.A. squadrons were reequipped with the heavier American carrier aircraft capable of much extended range.

While Seafires were flying with 30- and 45-gal. long-range tanks, a noteworthy improvisation increased their range still further. Some ex-U.S.A.A.F. Curtiss P-40 long-range tanks were acquired and fitted to the Seafires on H.M.S. *Implacable*. These tanks had an 89-gal. capacity and were connected to the fuel system

Two further examples of Seafires "over the side". The first has lost its entire tail section and the hook has been torn off; the second aircraft seems to have got off relatively lightly.

(All photos: C. Vale via M. Garbett)







Another landing sequence, this time aboard H.M.S. Hunter working-up in Irish Sea, early 1944. Seafire Mk. III LR717 "H-J", of No. 807 Squadron loses its engine. Note hook has momentarily swung back into the normal retracted position—in the first photograph—due to the braking force of impact. (Photos: G. E. Thomas via M. Garbett)



Colour illustrations

- Supermarine Seafire Mk. F. IB allotted to Royal Naval Air Station Arbroath, Scotland, in April 1942, after conversion by Air Service Training Ltd. at Hamble, Hampshire. Originally a Castle Bromwich-built Spitfire F. Mk. VB (serial BL676), as a navalized Mk. IB it received a new-issue serial, MB328.
- 2 An operational Seafire Mk. IIC built by Vickers-Armstrongs (Supermarine), MB193 (coded 7-K) served in Home waters aboard H.M.S. *Indomitable*.
- 3 Supermarine-built Mk. IIC (MB307) with strapped-on Rocket Assisted Take Off Gear (R.A.T.O.G.) initially tested on another Mk. IIC (MB141) in February 1943.
- 4 An R.N.A.S. Yeovilton, Somerset, shore-based Seafire Mk. IB (PA103) of No. 760 Training Squadron (code AC) in 1943.
- 5 Period 1945, a Seafire Mk. III (code 2-C) which served aboard H.M.S. *Indefatigable*.

of the aircraft by a direct feed. The advantage of this was that fuel flow snags were easily located whereas on the flush-fitting tanks this often became a difficult operation.

H.M.S. *Implacable*, with Nos. 801 and 880 Squadrons aboard, and H.M.S. *Indefatigable*, with Nos. 887 and 894 Squadrons, were now both part of the British Pacific Fleet, and it fell to Nos. 887 and 894 to be the last to retain the Seafire Mk. III in front-line service—re-equipping not taking place until March 1946.

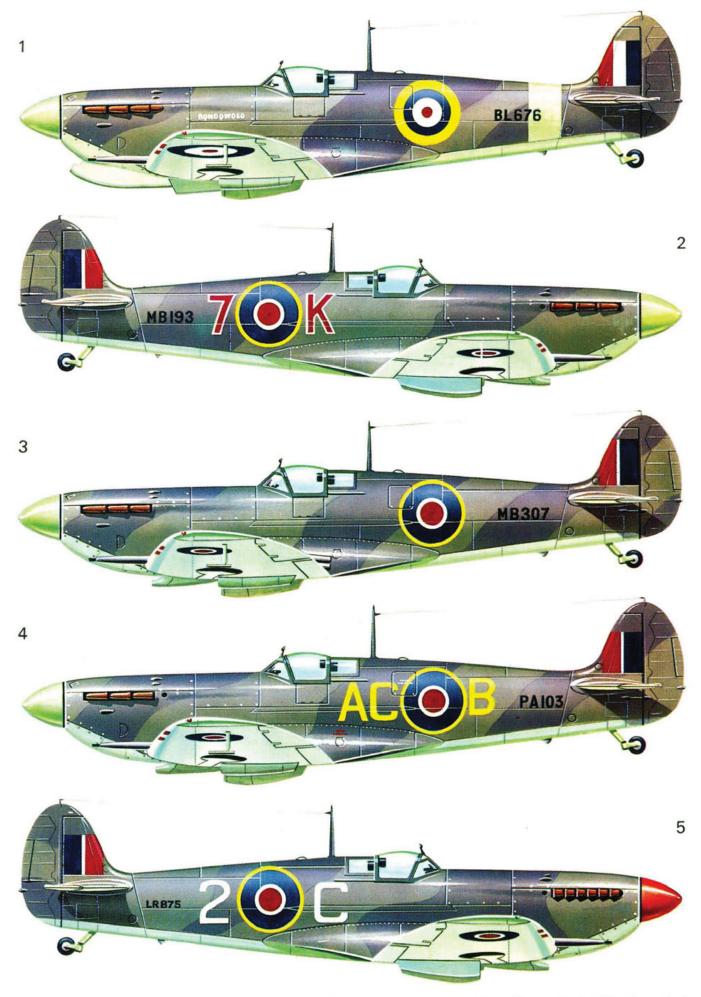
Meanwhile Nos. 807 and 809 Squadrons were embarked on H.M.S. *Hunter* and *Stalker* which were now operating as part of the East Indies Fleet. These Squadrons participated in the landings at Rangoon on May 2, 1945 when they provided air cover for the landing forces. In the event, however, the landings were unopposed. Following this, No. 807 Squadron was engaged in "*Force*" fighter cover in the Andaman Islands, while No. 809 Squadron's Seafires were in action against ground targets in Sumatra during June 1945.

Once again light winds resulted in returning Seafires being involved in a number of flight deck accidents, ironically creating greater losses than suffered as a result of enemy action.

Meanwhile, returning to Nos. 887 and 894 Squadrons, their Seafires scored a number of victories while operating off the Sakishima Islands in the months of April and May 1945.

The final operations in the Pacific were against the Japanese home islands, and it was on August 15, 1945 that the Seafires of Nos. 887 and 894 Squadrons were engaged in the last combat of the war involving fighter aircraft. Twelve Japanese Zero fighters were intercepted and in the ensuing battle eight were shot down for the loss of one Seafire.

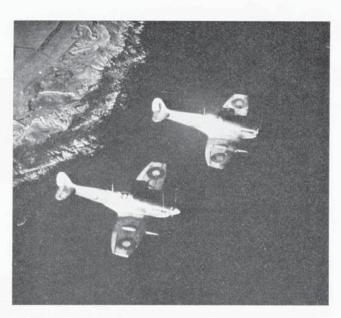
By the time hostilities had ceased Seafires had been credited with 39 confirmed enemy "kills" in all theatres of operations. This number is in fact small when compared with R.A.F. squadron victories and even those



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Seafire Mk. III PP984, "D5-P" of No. 807 Squadron, from H.M.S. Hunter, makes a splash-down in the Irish Sea, early 1944. (Photo: G. F. Thomas via M. Garbett)



Two Seafire Mk. IBs of No. 808 Squadron, R.N.A.S. Ayr, crossing the coastline. Nearest aircraft is MB312 "3D". Period, May 1944. (Photo: G. T. Cooper via M. Garbett)

of individual pilots, but it should be appreciated that the prime task of the F.A.A. pilot was to intercept, break-up and drive-off enemy aircraft (thus protecting the shipping), rather than to seek out and destroy them.

Protection of the carriers was even more essential when the Kamikaze attacks were launched, in view of the dedication of the Japanese pilots in their mission—to sink ships. The F.A.A. pilots, however, had to rely primarily on visual interception with no directional aids whatsoever. As it was, the Kamikazes would often attack from sea-level, where radar was of no real help.

The area around the carriers was divided up into quadrants, which were then patrolled by aircraft retained for air defence. It is considered that approximately 30 per cent of the incoming raiders were turned away by the defensive fighter screen.

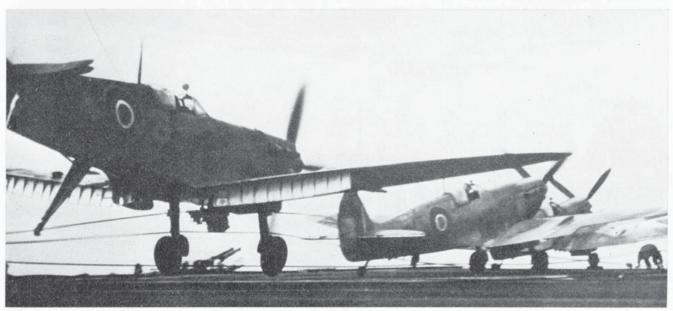
The highest scoring F.A.A. Seafire pilot was Sub-Lieutenant R. H. Reynolds of No. 894 Squadron with $3\frac{1}{2}$ enemy aircraft to his credit, two of these being destroyed in one day—on April 1, 1945.

HANDLING THE SEAFIRE

In flight and combat, the Seafire could give a good account of itself. The Mk. IB was considered by many pilots to be the best of the Merlin-powered Seafire variants, especially before the strengthening of the catapult spool points was carried out, which increased the weight and cut down performance. No. 801 Squadron, in fact, retained its Mk. IBs until the Spring of 1944. The fastest Seafire was the Mk. L. III.

Above 20,000 feet the Seafire became "sloppy" on the controls, but in a climb it was superior to its

A normal landing by "A-S", a Mk. IIC Seafire of No. 879 Squadron. H.M.S. Stalker, September 1944. Pilot Lt. Hallas. (Photo: D. M. Jarman via M. Garbett)





A Seafire Mk. III, NN344 "K-O" of No. 899 Squadron on board H.M.S. Khedive. Pilot (centre) H. Salisbury.
(Photo: L. J. Kelly via M. Garbett)



"Kelly's Eye". Pilot L. J. Kelly standing by his own aircraft on board H.M.S. Khedive—No. 899 Squadron. (Photo: L. J. Kelly via M. Garbett)

opponents and a pilot could extricate himself from trouble by pulling back on the "stick."

For take-off from a carrier, engine boost was frequently set at 10 or 11 lb.

One factor, little known, was the amount of drag experienced by pilots of Westland-built Seafires with pop rivets, as opposed to the Cunliffe-Owen variety which had flush riveting. The difference was quite noticeable to the extent that the handling qualities on landing were affected. A distinct preference therefore existed for Cunliffe-Owen Seafires!

As indicated earlier, the Seafire suffered from two distinct drawbacks, one being the unsuitability of the undercarriage for deck landings and the second its short range, particularly in the Far East.

MAINTENANCE

The Seafire was decidedly unpopular with ground crews when it came to the question of maintenance, especially when they had been used to servicing the American-built carrier aircraft which had very much easier means of access. Apart from the accessibility aspect, distortion of panels was a frequent occurrence because of the strain imposed on the Seafire in heavy deck landings.

With the Mk. IB and IIC there was also the fact that these "fixed-wing" fighters could not be struck below decks on the armoured Fleet carriers except H.M.S. *Indomitable*, through absence of wing folding mechanism.

Corrosion on the other hand does not appear to have imposed any particular problems, even with aircraft permanently above decks, although it is felt that one factor to be considered was the short life span of the carrier-based Seafires.

The life of the Merlin engines was very much shorter than the 500 hours given between changes. The hard use received in the carrier take-off and landings frequently resulted in a new engine being installed after 200 hours.

TEST AIRCRAFT

Several Seafires were subjected to tests at Rolls-Royce but none was employed as a flying test bed. During May 1943, Seafires NM943, NM944 and NM947 were fitted with Merlin 32 engines in place of their Merlin 46, while LR647 and LR649 gave up their Merlin 50 engines for the Merlin 32. Rotol propeller experiments were carried out on LR694 fitted with a Merlin 50 driving a 3-blade unit. Another Seafire used by Rotol was NM938 during a period September 21, 1946 to January 18, 1947. It established the use of super fine pitch, which effectively reduced the "float" distance for carrier landings. A total of 18½ hours of tests were recorded by this Seafire.

No. 899 Squadron in the Aegean Sea—H.M.S. Khedive, September 1944. Foam is being sprayed on the aircraft. (Photo: G. Dennison via J. D. Brown)

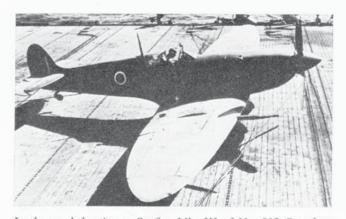


Collision between two Seafires of No. 899 Squadron, aboard H.M.S. Khedive in the Aegean Sea, May 1944. Foam is being sprayed on "K-S".

(Photo: Fleet Air Arm Museum, Yeovilton)







In the crash barrier, a Seafire Mk. III of No. 807 Squadron aboard H.M.S. Hunter in the Aegean Sea.

(Photo: Fleet Air Arm Museum)



A Seafire Mk. L. III of No. 807 Squadron tethered down to one of the out-riggers on H.M.S. Hunter in the Aegean Sea, October 1944. (Photo: G. E. Thomas via M. Garbett)

Propeller vibration tests were carried out by LR693 at Heston.

Other tests were carried out at Royal Aircraft Establishment Farnborough with MB125 and MB141, although MB141 was also tested at Heston using R.A.T.O.G. Also tested at the R.A.E. were MA989 and NX958.

A. & A.E.E. at Boscombe Down had PP975, a Mk. L. III which in January 1945 was tested by the Polish fighter ace Jan. Zurakowski.

One Seafire Mk. L. IIC is known to have reached the United States in 1943. After ship transportation it was reassembled and test flown by Mr. C. Clarkson of the British Air Mission to the U.S.A. according to the late Mike Lithgow in his book, *Mach One*. It was also flown by another British pilot, Lieutenant Commander D. B. Law. The Seafire was then sent to the test centre of the U.S. Navy at Patuxent River with other British naval aircraft for comparison tests with current U.S. Navy carrier aircraft.

SEAFIRES IN FOREIGN SERVICE

Unlike the Spitfire, the Seafire did not see such widespread foreign service. In fact the Merlin Seafire was sold to only two countries, France and the Republic of Ireland. Forty-eight Seafire Mk. IIIs were supplied to the French Navy after the war. Deliveries were completed by mid-1946 and at least some of the aircraft were flown from R.N.A.S. Lee-on-Solent to their new parent air station of BAN (Base de l'Aéronautique navale) d'Hyères, situated in Provence near the famous Côte d'Azur.

In due course, the Seafire IIIs travelled the comparatively short distance westwards to the important Mediterranean naval port of Toulon. They then embarked on the carrier *Arromanches* (formerly H.M.S. *Colossus*; and now, in the 1970s, relegated as a training carrier, a "porte-avion école"), and flew as No. 1 Flottille (designated 1.F.). The former Royal Navy serials are not known but some Aéronavale carrier-borne Seafire IIIs of 1.F. included "1.F.3.", "1.F.8.", "1.F.10."; also '11., '18., '22. and '23.

By January 1949, the Seafire IIIs were declared unfit for further carrier duties and were replaced from BAN d'Hyères by examples of the definitive, Griffonpowered Seafire Mk. XV.

The Irish Air Corps received 12 Mk. III Seafires in 1947. They were not capable of being used on carriers and in fact their arrester hooks had been removed before delivery. They were known as the Supermarine Type 506 and equipped No. 1 Fighter Squadron. The "land" Seafires were based about 15 miles north of Dublin's international airport, at the Air Corps' main fighter station of Baile Mhie Ghormain (Gormanston) in the county of Meath. They replaced the ageing Hawker Hurricane Mk. IIs which had been the primary arm for defending the country's wartime neutrality.

The Irish Seafires served for the next seven years, the last operational Mk. III (No. 155, ex-PR237, built by Westland Aircraft Ltd.) being withdrawn on June 19, 1954. Those others remaining—excluding the five listed below which previously had been involved in major crashes—were ultimately "reduced-to-produce" at the Baldonnel (west of Dublin) headquarters maintenance base.

The 12 Irish Air Corps' Seafire Mk. IIIs were identified as follows:

Ex-F.A.A.	I.A.C.	Ex-F.A.A.	I.A.C.	Ex-F.A.A.
PR302	150	RX210	154*	Unknown
PR315	151*	PP941	155	PR237
PP950	152*	PP929	156	PP936
PP948	153	PP924	157	RX168
	PR302 PR315 PP950	PR302 150 PR315 151* PP950 152*	PR302 150 RX210 PR315 151* PP941 PP950 152* PP929	PR302 150 RX210 154* PR315 151* PP941 155 PP950 152* PP929 156

^{*}Crashed and struck-off-charge.

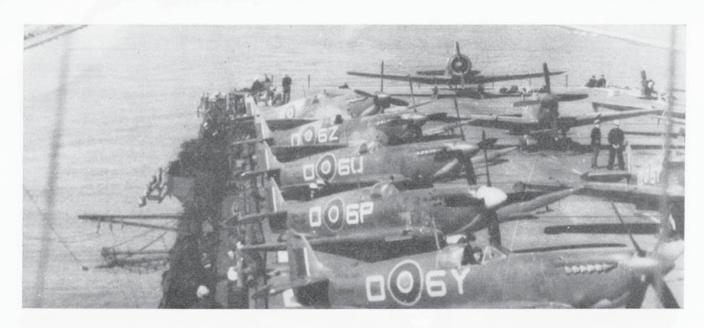
CONSTRUCTION

Fuselage. Front section: Engine mountings consisted of a tubular steel frame work and a "U"-shape-built frame which provided support for the engine rear feet. A centre cross member gave additional strengthening.

Centre section: Monococque fuselage was built mainly of Alclad with frames, longerons and intercostals. There were fifteen frames and five longerons—two bottom, two datum and one top, which were extended so that they could pick up the attachments on the rear section and also connect with the four engine bearers at the front.

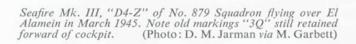
The wing attachment fittings and engine bearer pick-up points were connected to the front frame, which was also the fireproof bulkhead.

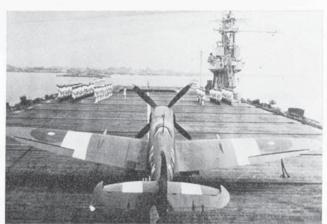
The catapult spools were carried by double frames introduced for that purpose. The deck arrester hook

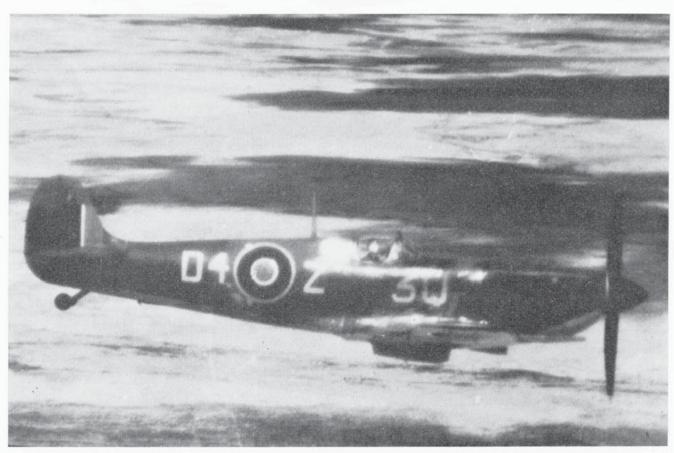


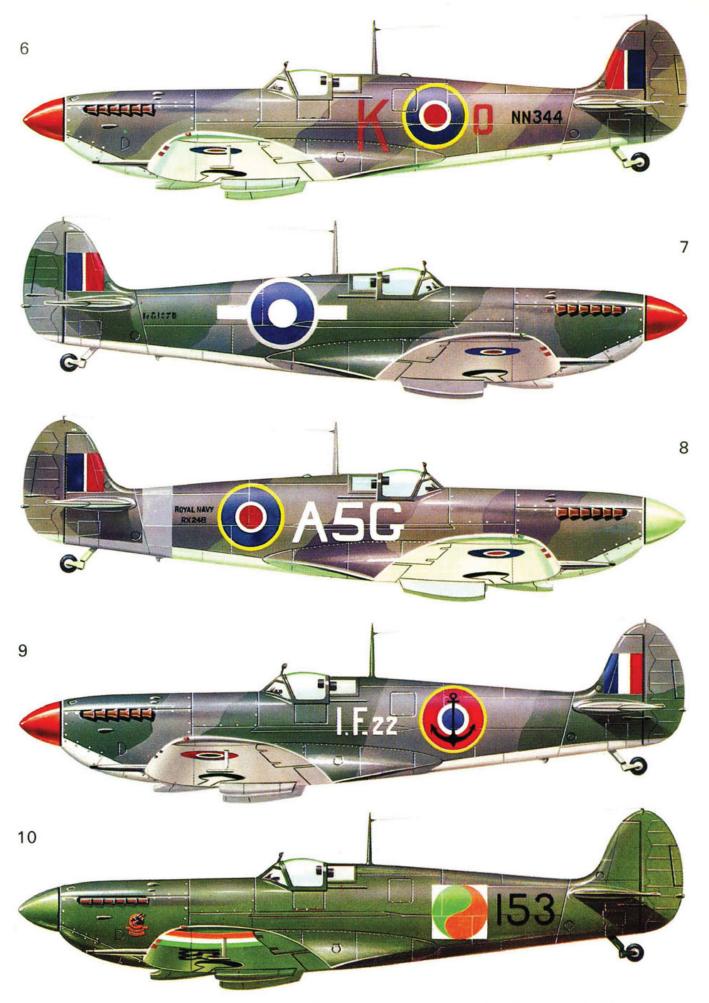
H.M.S. Stalker on route through the Suez Canal, circa late 1944 or early 1945, with No. 809 Squadron aboard. Seafire "6Y-D", NF491, is a Mk. L. III. Note North American Harvard trainer at the rear—not standard carrier equipment. (Photo: D. D. James via M. Garbett)

Seafire Mk. III, "D4-M" of No. 879 Squadron tethered down on the deck of H.M.S. Stalker. Photograph clearly shows S.E.A.C. marking and bands. (Photo: via M. Garbett)









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Colour illustrations

- 6 A Seafire Mk. L. III of No. 899 Squadron, Fleet Air Arm, operating from H.M.S. Khedive. Note the uneven size of the code letters of this Mk. III (NN344) which was constructed by Cunliffe-Owen Aircraft Ltd.
- 7 Another Seafire Mk. III, this time in the distinctive blue and white South-west Pacific Area markings of the British Pacific Fleet.
- 8 Shore-based at R.N.A.S. Donibristle, Scotland, in September 1946, this Seafire Mk. III (RX248) belonged to an F.A.A. training squadron. Note painted-out band around the rear fuselage.
- 9 In French Aéronavale colours, 1946-7, a Seafire Mk. III which served aboard the carrier *Arromanches* (formerly H.M.S. *Colossus*) with 1 *Flottille*—No. 1 Squadron.
- 10 Also operational in the late 1940s were 12 "land" or denavalized Mk. III Seafires which formed No. 1 Fighter Squadron, Irish Air Corps, at Gormanston, north of Dublin.

was attached to the bottom longerons which were specially strengthened. The hook was hinged to both sides of the fuselage and kept in a lowered position by a spring jack.

Tail section: This was a detachable unit consisting of longerons, frames, ribs and intercostals.

Wings. Main planes each comprised of a leading-edge "D"-spar, an auxiliary rear spar and various types of plate ribs. Leading edge, including front spar, was built as a unit and known as the "D"-spar of the main plane. The torsion box absorbed landing shock and cannon recoil. Plate web was bolted on to the spar.

The centre-section was built integral with the front fuselage frame. Stiffening members were situated at



Re-arming at Trincomalee, June 1945. Seafires of No. 807 Squadron. (Photo: L. L. Bechford via M. Garbett)

certain positions such as wheel wells and gun bays. Wing tips detachable. Ailerons metal covered with split trailing edge flaps; these were attached to the secondary spar.

Wing folding was introduced on the Seafire Mk. III. Undercarriage. This retracted outwards and upwards. It consisted of Vickers oleo-pneumatic shock-absorbing legs, with the wheel housing being at a point aft of the "D"-spar in the main plane. Tailwheel was of fixed type.

Tailplane. Built in two halves, port and starboard, and considered as a single spar unit of stressed-skin construction. The rear spar acted mainly as a former. Elevators were fabric covered, built as one unit. The rudder had a trimming tab set in the trailing-edge.

PAINT SCHEMES AND MARKINGS

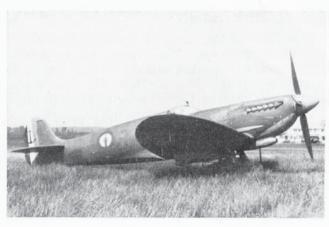
The camouflage pattern followed that used on R.A.F. aircraft. This was not surprising since the early Seafires had started life as Spitfires and maintenance was often carried out by units normally working on Spitfires. The temperate sea camouflage scheme of dark slate grey and extra dark sea green for the upper surfaces with Sky type "S" undersurfaces, was introduced as urgent in July 1942. Code letters/unit markings were

No. 807 Squadron at Trincomalee, June 1945. Seafire Mk. III, "D5-P", is the central aircraft.

(Photo: G. E. Thomas via M. Garbett)









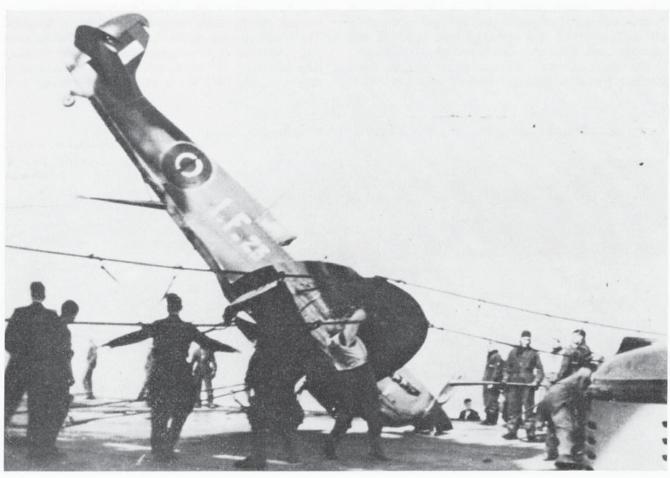
Top left:
Two Seafire Mk. IIIs at R.N.A.S. Lee-on-Solent, undergoing overhaul before delivery to France's Aéronavale.

(Photo: via L. J. Bachelor, Air-Britain)

Top right:
Another view of a French Navy Seafire Mk. III. Note smaller fuselage roundel and rudder markings.

(Photo: R. Carson Seeley)

Left and below: Two views of Seafire Mk. IIIs of No. 1 Flottille, aboard the French Navy carrier Arromanches, circa 1948. (Photos: via R. B. Jones)





Take-off of "D5-S", a Mk. III Seafire of No. 807 Squadron, Trincomalee, in June 1945. Note weathering of code letters. Note also the Royal Navy Corsairs, and an Avenger and Hellcat plus an R.A.F. Consolidated Liberator in background.

(Photo: G. E. Thomas via M. Garbett)

not, however, always standardized in pattern, position or size. Peculiar to the F.A.A. was the use of a diagonal bar through the centre of the "O" to differentiate between letters and numeral.

Code letters initially consisted of a figure letter combination followed by the individual aircraft letter, but in single squadron carriers it was practice to use only the ship's identification letter followed by the aircraft's individual letter. For example, H.M.S. *Hunter* carried the code "H" and H.M.S. *Khedive* carried code "K."

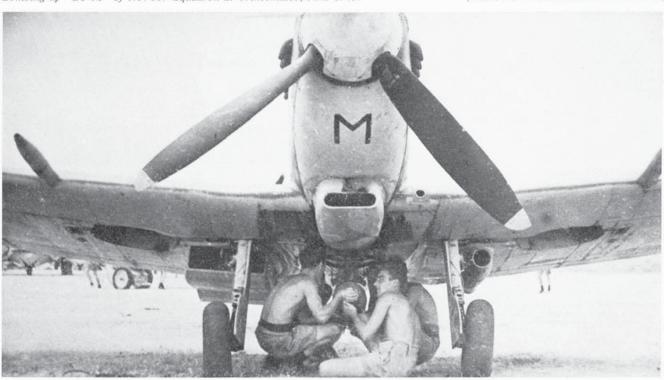
Normally the C.O. flew the aircraft with code "A", and the Flight Commanders using the next letters. It was not normal for a F.A.A. pilot to fly his "own" aircraft, as was the standard procedure in the R.A.F. It was not so practical aboard the carriers.

Another feature was the introduction on the flying surfaces of a white band 18 inches wide on aircraft in the Pacific. The bands were not painted on the rudder, elevators or ailcrons for obvious reasons. The S.E.A.C. roundels which were also introduced about this time consisted of a light blue centre and dark blue outer circle. The omission of the red centre from the national marking was to avoid any confusion with Japanese aircraft, as in the past Allied aircraft had been fired upon by "friendly" guns.

Series Editor: CHARLES W. CAIN

Bombing-up "D5-M" of No. 807 Squadron at Trincomalee, June 1945.

(Photo: G. E. Thomas via M. Garbett)





Seafire Mk. III, "2B-Y", of a training squadron ashore. (Photo: E. Hunt via M. Garbett)



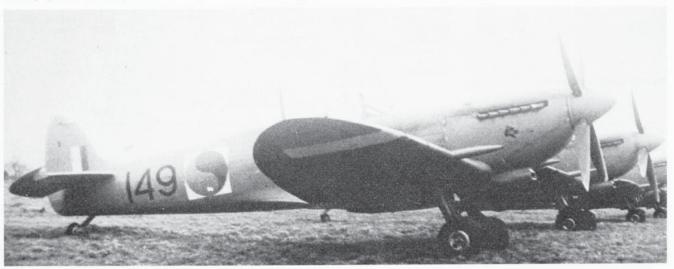
A Seafire Mk. III, RX347, "3A-Y" of a training squadron in the United Kingdom. Upper wing roundels show that this photo was taken after March 1945. (Photo: E. Hunt via M. Garbett)

Squadron	Mark	Period	Main Shore Bases	Carriers	Areas	
801	IB IIC III	9/42 /43 44/45	Stretton, Hatston Skaebrae Schofields	FURIOUS Home Fleet	11/42 4 & 8/44 12/44	N. Africa "Torch" Tirpitz strikes Norway
Mk. IB.		ft:		IMPLACABLE British Pacific Fleet (24 aircraft)		Pacific
805	111	7/45- 2/46	Machrihanish (25 aircraft)			
HMS. BAT Mk. L. IIC. HMS. HUI	LR642 (8- TTLER Salerr (H-J) NTER NN300 (D5-	-M) no 9/43	Machrihanish Stretton Dekheila	FURIOUS Home Fleet INDOMITABLE Home Fleet BATTLER Home Fleet HUNTER Home Fleet HUNTER East Indies Fleet	11/42 5/43 7/43 8/43 9/43 6/44-3/45 8/44 9 & 10/44	N. Africa "Torch" Sicily Italy Salerno Orvieto Mediterranean S. France Aegean Sea Ceylon Burma
Representa	IB III ative aircra A) Ayr 10/4		Stretton Burscough Ballyhalbert Lee-on-Solent	BATTLER Home Fleet HUNTER Home Fleet	6/43-8/43 9/43 /44 6 & 7/44	Mediterranean Salerno Mediterranean No. 34 (P.R.) Wing
809	IIC III	4/43- 4/44 4/44- 1/46	Stretton Andover Burscough Long Kesh Gibraltar	UNICORN Home Fleet STALKER	8/43 9/43 12/44	Atlantic Mediterranean Salerno Mediterranean

Squadron	Mark	Period	Main Shore Bases	Carriers	Areas	
Representa Mk. L. III. (6Y-D)	tive aircraft: NF491		Blida Dekheila Katukurunda	Home Fleet	6 & 7/44 8/44 9 & 10/44	Orvieto S. France Aegean Sea
HMS. STA	LKER		Trincomalee Nutts Corner	STALKER East Indies Fleet	3/45-9/45	Ceylon Burma
816	IB (6 aircraft	only)		TRACKER		N. Atlantic
833	IIC III	6/43- 8/43 (6 aircraft only)	Gibraltar	STALKER Home Fleet		Mediterranean
Representa L. Mk. III.	tive aircraft: LR631					
834	IIC		Machrihanish	HUNTER		
	110	(6 aircraft only) 4/43- /44	Khormaksar Cevlon	Home Fleet	8/43	Med. Convoys
				BATTLER	9/43	Salerno
				East Indies		Indian Ocean
				Fleet	10/43-6/44	
842	IIC	7/43- 3/44	Lee-on-Solent	FENCER Home Fleet		
Representa	tive aircraft:		Azores	Home Fleet	7/43-10/43	Convoys
Mk.IB. P	A100 (D)					
879	IIC III	(6 aircraft only)	Stretton Andover	ATTACKER Home Fleet		
	111		Machrihanish	Tiome riect	8/43	Convoys
			Bursclough		9/43 6 & 7/44	Salerno Orvieto
Mk. L. IIC.	tive aircraft: MB317		Long Kesh Blida		8/44	S. France
Mk. L. III			Dekheila		9 & 10/44	Aegean Sea
				ATTACKER East Indies		
				Fleet	6/45-8/45	Indian Ocean
880	IB	8/42-12/42	Stretton	ARGUS	11/42-2/43 11/42	N. Africa "Torch"
	IIC III	2/43- 7/43 11/44- 9/45	Hatston Machrihanish	Home Fleet	11/42	N. Airica Torcii
			Gibraltar	INDOMITABLE		
			Skaebrao Grimsetter	Home Fleet	/43	Mediterranean
			Schofields	STALKER	7/43	Sicily
Representa	tive aircraft:			Home Fleet		
Mk. L. IIC.	MB253				9/34	Salerno Med. Convoys
Mk. LR. III.	NN621			FURIOUS		ivied. Convoys
				Home Fleet	/44	Norway
					4,7 & 8/44	Tirpitz Strikes
				IMPLACABLE	0.45	
				Home Fleet	3/45	
884 Representa Mk. L. IIC.	IIC tive aircraft: MB122	11/42- 8/43	Hatston Turnhouse Machrihanish	ARGUS Home Fleet	6/43	Training
885	IΒ Ղ	9/43 to	Hatston	FORMIDABLE	11/42	N. Africa
	IIC S	11/43	Lee on Colent	Home Fleet (5 aircraft only)	7/43	"Torch" Sicily
	III	2/44- 7/45	Lee-on-Solent	(5 aircraft offiy)	6 & 7/44	No. 34 (P.R.)
Representa	tive aircraft:					Wing

Line-up of Irish Air Corps' Mk. III Seafires. Note absence of the arrester hooks.

(Photo: via L. J. Bachelor, Air-Britain)





Graveyard at Dublin Airport containing I.A.C. Seafire No. 152. Note the last three of its previous F.A.A. serial stencilled on fuselage where mainplane was attached. (Photo: G. Skillen, Air-Britain)



Forced landing of an Irish Air Corps Seafire, No. 147. (Photo: Irish Free Press, via P. R. Arnold)

Squadron	Mark	Period	Main Shore Bases	Carriers	Areas	
886	IIC III	3/43- /44 1/44- 7/44	Turnhouse Lee-on-Solent	ATTACKER Home Fleet	4/43–10/43 9/43	Salerno
Represent L Mk. III.	ative aircra NF521	ft:			6 & 7/44	Mediterranean No. 34 (P.R.) Wing
887	IB \	5/42 to	St. Merryn	UNICORN Home Fleet	3/43	
	IIC III	12/43 1/44- /44 /45- 3/46	Culmhead Ballyhalbert Eglington	nome rieet	7/43 9/43	Mediter anean Salerno
		6.15	Skaebrae	INDEFATIGABLE		
			Katukurunda Sydney Schofields	Home Fleet	7 & 10/44	Tirpitz strikes Norway
Mk. IIC.	ative aircra NN917 _R866	ft:		INDEFATIGABLE East Indies Fleet	11/44–8/45	
889	Ш	4/44-11/44	Colombo	ATHELING East Indies Fleet		Ceylon
894	IIC III	3/43- 3/46 7/44- 3/45	Machrihanish Henstridge Ballyhalbert	ILLUSTRIOUS Home Fleet INDEFATIGABLE	6/43	Mediterranean
			Culmhead	Home Fleet	7 & 8/44	Tirpitz
	ative aircraf	ft:	Eglinton			strikes
Mk. IIC.			Grimsetter	IMPLACABLE	10/44	Atlantic
Mk. L. III.	PK254		Skaebrae Lee-on-Solent Katukurunda Schofields	Home Fleet INDEFATIGABLE British Pacific Fleet	10/44 11/44–7/45	Atlantic





Two views of the last known remaining example of a Seafire Mk. III, PP972. First photo shows it at Gavres, France, in 1966. A rare and even more dejected relic sharing the graveyard with the Seafire is an M. Bloch MB174 two-motor attack-bomber. Second photo shows the aircraft being hoisted aboard a lorry in January 1970 prior to attempts to restore it. (Photos: L. J. Bachelor, Air-Britain)

Squadron	Mark	Period	Main Shore Bases	Carriers	Ar	eas	
895	IIC	4/43- 6/43	Stretton				
897	IB IIC III	8/42- 9/42 4/43- /44 /44	Stretton Andover Dale Lee-on-Solent	UNICORN Home Fleet		7/43 9/43 6 & 7/44	Mediterranean Sicily Salerno No. 34 (P.R.) Wing
Represent L. Mk. III.	NF575 (C	1/43 Ift: -V) HMS. CHASER -O) HMS. KHEDIVE	Machrihanish Gibraltar Ballyhalbert Sydenham Long Kesh Peterhead	INDOMITABLE Home Fleet HUNTER Home Fleet KHEDIVE Home Fleet CHASER British Pacific Fleet		7/43 9/43 8/44 9 & 10/44 7/45–8/45	Sicily Salerno S. France Aegean Sea Pacific
				Training Squadrons 715 718 719 741 748 759 760 761	Henstridge St. Merryn St. Merryn Dale Yeovilton Yeovilton Henstridge		Representative aircraft BM 591 W. 3846 (S5-G) NX884 X 4827 PA 103 (AC-B) BL 383

SERIAL ALLOCATION

Order 213 aircraft. Westland Aircraft Ltd. Deliveries from Jan.

LR631-667, LR680-712, LR725-764, all Mk. IIC. LR765-820, LR835-881, all Mk. III.

Known conversions to L. IIC, or Mk. LF. IIC as it should be strictly quoted, but was never used as such: LR646, LR684.

Order 200 aircraft. Vickers-Armstrong (Supermarine).

Deliveries June 1942:

MA970-999, MB113-159, MB179-222, MB235-264, MB267-281, MB293-326, all Mk. IIC.

Order 48 aircraft. Air Service Training. Spitfire Mk. V conversions: MB328 (BL676), MB329 (BL687), MB330 (BL694), MB332 (AB416), MB333 (AB410), MB330 (BL678), MB334 (AB413) MB335 (AB408), MB340 (AB415), MB339 (BL679), MB340 (AB379), MB343 (AB409), MB336 (AB376), MB337 (AB261), MB338 MB340 (BL689), MB341 (AB414), (AB409), MB344 (AR344), MB345 MB345 MB346 (AR446), MB347 (AR443), MB348 (AR459), AR442), MB350 (AB404), MB351 (AB405), MB352 (AR445), MB352 MB349 (AR442), (AB406), MB353 (AB407), MB354 (AB492), MB355 (AB408) MB356 (EP148), MB357 (AR457), MB358 (AR458), MB359 MB359 MB362 (EP142), (EP141), MB360 (AR460), MB361 (AR461), MB364 (EP146), MB365 (EP293), MB368 (EP294), MB363 (EP144), (EP291), MB367 (EP147). MB366 MB369 (EP295) (EP291), (EP299), MB372 (EP301), MB373 MB370 (EP296). MB371 (EP302), MB374 (EP304), MB375 (EP308), all Mk. IB.

Order 200 aircraft. Westland Aircraft Ltd. Deliveries from Jan.

NF418-455 order as Mk. III but built as Mk. IIC fixed wings.

NF480-526, NF531-570, NF575-607, NF624-665, all built as Mk. III.

Known conversions to Mk. L. III, NM930, NM941, NM944 converted on May 8, 1943, NF575.

Order 60 aircraft. Vickers-Armstrong (Supermarine). Con-

versions direct from production line: NM910-949, NM963-982, built as Mk. IIC. Cancelled R.A.F. serials include EN686-695, EN710-759, NM916 crashed 22.2.43.

Order 200 aircraft. Westland Aircraft Ltd. Deliveries from Apr.

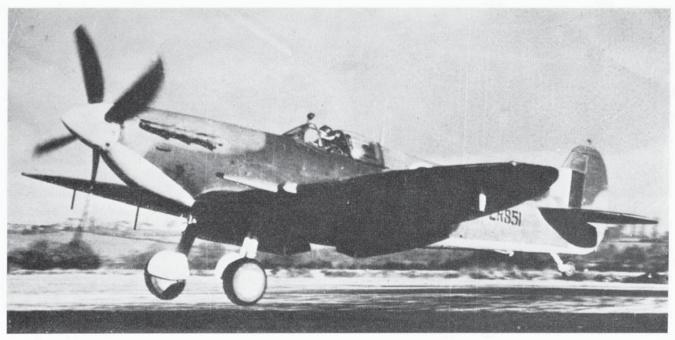
NM984-999, NN112-157, NN169-214, NN227-270, NN283-330, mainly built as Mk. III but a small number of Mk. IIC hybrids.

Order 250 aircraft. Cunliffe-Owen Aircraft Ltd.

NN333–367, NN379–418, NN431–476, NN488–528, NN542–586, NN599–641, all built as Mk. III.

Order 118 aircraft from Air Service Training. Spitfire Mk. V conversions

NX879 (BL635), NX880 (BL260), NX881 (BL521), NX882 (AD421), NX883 (W3212), NX884 (AD517), NX885 (BL726), NX886 (BM596), NX887 (AB933), NX888 (BL931), NX889 (AB902), NX890 (BM625), NX891 (BL593), NX892 (AB908), NX893 (BL546), NX894 (BL529), NX895 (BL301), NX896 (BL750), NX897 (BL373), NX898 (BL958), NX899 (AD387), NX900 (BM625), NX901 (BM377), NX902 (AD358), NX899 (AD387), NX902 (AD358), NX899 (AD387), NX902 (AD358), NX803 NX903 (BL495), NX904 (AD579), NX905 (EN825), NX906 (BL493) NX907 (BL414), NX908 (BL986), NX909 (EN890), NX910 (BL420), NX911 (BL983), NX912 (BL597), NX913 (BL846), NX914 (AD580), NX915 (AD569), NX916 (BL675), NX917 (AB968), NX918 (AB919), NX919 (AD365), NX920 (BL855), NX921 (BL894), NX922 (AD566),



Seafire F. Mk. III, LR851 of No. 808 Squadron, August 1944. This Seafire was built by Westland Aircraft Ltd.
(Photo: G. T. Cooper via M. Garbett)

NX923 (BM420), NX924 (BM580), NX925 (EN839), NX926 (AD294), NX927 (BL254), NX928 (BM631), NX940 (BM634), NX941 (BL522), NX942 (EN763), NX943 (AB118), NX944 (BL539), NX945 (BM559), NX946 (AA750), NX947 (AD510), NX948 (AB817), NX949 (NX950 (BM314), NX951 (AB928), NX952 (EN851), NX953 (EN912), NX954 (BL736), NX955 (BL321) NX956 (AD271), NX957 (AD354), NX958 (BL570), NX959 (BL639), NX960 (BL901), NX961 (BM367), NX962 (EN864), NX963 (AB809), NX964 (AB967), NX965 (BM646),), NX967 (BL757), NX980 (W3372), NX981 NX982 NX983 (BL930), NX984 (NX985), NX988 (BM541), NX989 (BL994) NX986 (BL434), NX987 (PA100 (BL527), PA101 (BM570), PA102 (AD397), PA103 (EN769), PA104 (BM626), PA105 (AD393), PA106 (EN764), PA107 (AD394),), PA109 (AD364), PA110 (BL695), PA111 (BL492), PA108 (), PA113 (BL770), PA114 (EN780), PA115 (BL586), PA112 PA116 (BL928), PA117 (EP166), PA118 (), PA119 PA120 (BL296), PA121 (BL524), PA122 (EN910), PA123 (BL861), PA124 (BL457), PA125 (BL730), PA126 (), PA127 (BL904), , PA129 (BL566), mainly built as Mk. IB although PA128 (NX882 and NX887 classed as Mk. IC. Blank spaces indicate as yet untraced original R.A.F. serials.

Order 250 aircraft. Westland Aircraft Ltd.

PP921–957, PP969–999, PR115–156, PR170–215, PR228–271, PR285–334, all built as Mk. III.

Order 300 aircraft. Westland Aircraft Ltd., but only 160 aircraft built:

RX156-194, RX210-256, RX268-313, RX326-353 all built as Mk. III.

Summary of production of Seafires:

Cunliffe-Owen 250 Supermarine 260 Westland 1023 Spitfire conversions 166

SPECIFICATION

All marks:

Span 36 ft. 10 ins. Wing area 242 sq. ft. Span 32 ft. 2 ins. Iow altitude versions. Length 29 ft. 11 ins. Height 11 ft. 2 ins. Morris radiator. Serck oil cooler. Oil tank capacity 5.8 Imp. gals, later increased to 8-5 gals. Fuel. Two main tanks forward of cockpit. Upper 48 gals. Lower 37 gals. Provision for 30 gal drop tank.

Mk. IB.

Rolls-Royce Merlin 45 (1,470 h.p.) or Merlin 46 (1,415 h.p.). Three-blade de Havilland constant-speed propeller (or Rotol on later types).

Armament.

 $2\times20\text{-mm}$ Hispano cannon. $4\times0\cdot303\text{-in.}$ machine-guns. "B" wing.

Weights:

Empty 5,000 lb; loaded 6,700 lb. Max. speed. 365 m.p.h. at 16,000 ft. Cruising speed 215 m.p.h. Climb to 20,000 ft. in 7-6 mins. Range 492 miles, 770 miles with drop tank. Service ceiling 36,400 ft.

Mk. IIC

Rolls-Royce Merlin 45 and 46. Four-blade Rotol constant speed propeller.

Weights:

Empty 5,300 lb; loaded 7,000 lb.

Mk. L. IIC.

Rolls-Royce Merlin 32 (1,640 hp. Four-blade propeller) Rolls-Royce Merlin 55M (1,585 hp. Three-blade propeller) Max. speed 333 m.p.h. at 5,000 ft. Cruising speed 282 m.p.h. at 5,000 ft. Climb to 5,000 ft. in 1-7 mins. Range 493 miles, 750 miles with drop tank. Service ceiling 32,000 ft.

Mk. LR. IIC.

Rolls-Royce Merlin 32.

Armament.

All Mk. II aircraft. Universal Wing, provision for 8×0.303 -in. machineguns or 2×20 -mm. Hispano cannon. 4×0.303 -in. machine-guns or 4×20 -mm, Hispano cannon, Provision for single 250-lb, bomb.

Mk. F. III.

Rolls-Royce Merlin 55 (1,470 h.p.). Four-blade constant speed propeller.

Weights:

Empty 5,400 lb., loaded 7,100 lb. Max. speed. 352 m.p.h. at 12,250 ft. Cruising speed 218 m.p.h. at 20,000 ft. Climb to 20,000 ft. in 8-1 mins. Range 465 miles, 725 miles with drop tank. Service ceiling 36,000 ft.

Mk. L. III.

Rolls-Royce Merlin 32 (1,645 h.p.) and 55M (1,585 h.p.).

Mk. LR. III.

Both with four-blade constant speed propellers.

Weights:

Empty 5,400 lb., loaded 7,200 lb. Provision for single 500-lb. bomb or two 250-lb. bombs or 6×60 -lb. rocket projectiles.

Armament.

For all versions of Mk. III Universal Wing. 2 × F. 24 cameras carried in the Mk. LR. III.

ACKNOWLEDGEMENTS

The author wishes to record at least some of names of those whose expert help and advice has made this Profile possible. In particular, J. D. (David) Brown who has so generously supplied valuable material from his own personal records resulting from many years patient researching on the Fleet Air Arm. Also, to M.o.D. Air Historical Branch's Mr Turner who helped with information relating to the transfer of aircraft from the R.A.F. to the F.A.A.; and, not least, to Mrs J. Moggridge for providing A.T.A. ferry details from her wartime log book.

To his fellow Air-Britain Information Specialists, and other members, the author wishes to pay tribute to their enthusiastic support for the Seafire Profile project. Thanks then to Mike Garbett (for so many photographs); to James Goss and Ted Hooten (squadrons' equipment and dispositions); Chris Shores (air aces) and Dave Birch (Rolls-Royce aero-engines); Graham Skillen and Graham Trant (Irish Air Corps); and Bruce Robertson, through his own book, "Spitfire, Story of a Famous Fighter" (Harleyford).

Finally, to R. C. B. (Bob) Jones of I.P.M.S., the author's

thanks for advising on Seafire paint schemes.

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208	McDonnell-Douglas F-4 Phantom variants	224	Supermarine Walrus & Seagull variants
209	de Havilland Mosquito Mark IV variants	225	Messerschmitt Me 163 Komet
210	Mitsubishi G4M 'Betty' and Ohka Bomb	226	Republic F-105 Thunderchief variants
211	Junkers Ju 87D variants	227	Airspeed Oxford variants
212	Fairey Swordfish	228	Fieseler Fi 156 Storch variants
213	Kawanishi N1K Shiden 'George'	229	Vickers-Armstrong Warwick variants
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217	Brewster Buffalo variants	233	Kawanishi 4-Motor Flying-Boats
218	Bristol Blenheim Mark IV	234	Heinkel He 177 Der Grief
219	Heinkel He 219 Uhu	235	Martin Maryland & Marauder
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The life history of a German World War II submarine, described in detail by the world's leading authority on U-boat warfare, Dr. Jürgen Rohwer, Head of Modern Historical Section, Bibliothek für Zeitgeschichte, Stuttgart.

9. USS Charles Ausburne

DD 570, Fletcher Class destroyer, of Admiral Arleigh (31-knot) Burke's famous Squadron. This fighting destroyer saw operational service from World War II until the Vietnam War: by Lieutenant-Commander W. H. Cracknell, USN, author of Warship Profile Hornet

10. HMS Illustrious

Aircraft Carrier, 1939-1942. The history of this ship will appear as two Profiles during the same month: From design stage to her major refit in America. This phase includes her attack on Taranto (the first carrier-borne attack in history, to be copied later by the Japanese at Pearl Harbour) and her terrible punishment suffered off Malta at the hands of the Luftwaffe: by Lieutenant David Lyon, R.N.R., M.A., author of Warship Profile Cossack.

11. HMS Illustrious

Aircraft Carrier, 1942-1946. Following the US refit, through the Madagascar landings to her final recall after her active service in the Pacific theatre of war: by J. D. Brown, a former Royal Naval aviator, author of Aircraft Profile 224, Supermarine, Walrus & Seagull variants and 'Carrier Operations of World War Two'.

12. IJN Yamato

Battleship. This ship, the world's largest warship of the time, saw continuous action until she was finally sunk in April, 1945: by a Japanese author yet to be commissioned.

13. HMS Exeter

8-inch-gun Cruiser, 1928-1942. Her life includes the Battle of the River Plate against Admiral Graf Spee, (Warship Profile No. 4) and the Battle of the Java Sea: by Robin Tonks, M.A., Assistant Director of Studies and Head of History Department, Britannia Royal Naval College, Dartmouth.

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