

# PROFILE

# 212

## FAIREY SWORDFISH MKS. I-IV



Front Cover:  
*Silver-finished Fairey Swordfish of No. 820  
Squadron ranged for take-off on the flight-  
deck of H.M.S. Ark Royal prior to the  
outbreak of the second world war.*



*The sole remaining flying example of the Stringbag is LS326, based at R.N.A.S. Yeovilton. The aircraft is a popular performer at air displays up and down the country, and has recently had an engine re-fit which will give this veteran an extra 500 hours of flying time.*

## The Fairey Swordfish Mk. I-IV

by Ian G. Stott

OVERSHADOWED by the widely publicized exploits of home-based and comparatively well-equipped Royal Air Force units, and already obsolescent at the outbreak of hostilities in 1939, the Fairey Swordfish succeeded, nevertheless, in establishing a record of wartime service unsurpassed by any other single type of carrier-borne aircraft.

Of somewhat antiquated appearance, the Swordfish became universally known as the "Stringbag" soon after entering service. The appellation was in no sense derogatory for, despite its lack of speed and awkward configuration, the Swordfish possessed such exceptional handling qualities that it won the unqualified respect and lasting affection of the many pilots who came to fly the aircraft.

A tolerant and reliable machine, the Stringbag, with its low approach speed and positive controls, was uniquely suited to the exacting task of deck-landing. Pilots were quick to discover that the aircraft was quite phenomenally manoeuvrable and, in combat, it proved a most effective and stable weapons platform.

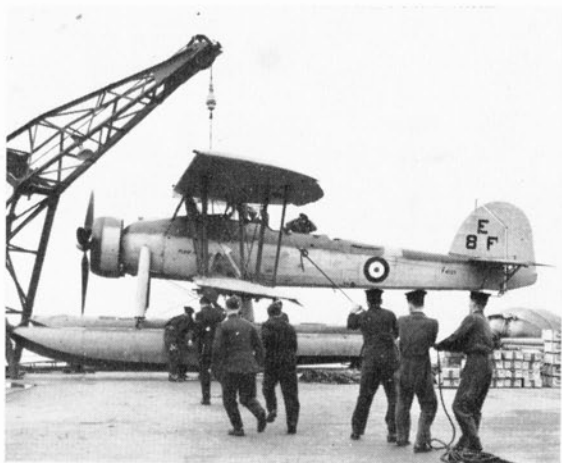
The Swordfish had the distinction of being one of the very few biplanes to remain in first-line service throughout the second world war—indeed, it even outlived its intended replacement, the Fairey Alba-

core, which had been phased out of operational service and relegated to the training rôle by November 1943.

As the war progressed and action followed action, it became increasingly apparent that the Swordfish was rapidly attaining a legendary reputation in a wide variety of rôles, but principally as a result of its many successful strikes against Axis naval units. Incredible though it may seem, the ancient Stringbag was ultimately responsible for the destruction of a greater tonnage of hostile shipping than any other type of Allied aircraft. Small wonder, therefore, that in the concluding years of conflict, aircrew and ground staff alike in the remaining Swordfish squadrons should display an almost savage pride in the operation of these sturdy and truly remarkable veterans.

### THE ORIGINS OF THE SWORDFISH

In 1933 the Fairey Aviation Co. Ltd., with its long tradition of design and construction of naval aircraft, produced as a private venture a new three-seat Torpedo-Reconnaissance biplane, powered by a 635 h.p. Bristol Pegasus IIM radial engine. Designated T.S.R.I, it was built as an alternative to the Fairey S.9/30, which had been designed to meet an Air



*Swordfish I P4199 "E8F" shortly after being hoisted aboard Ark Royal in the early stages of World War II.*

Ministry Specification (S.9/30) for a Fleet torpedo spotter reconnaissance aircraft. The two machines bore a strong resemblance, but the S.9/30 employed an in-line 525 h.p. Kestrel engine and had a fin and rudder of lower aspect ratio.

The T.S.R.I (c/n F1875) was first flown from Fairey's Great West Aerodrome (now the site of Heathrow Airport, London) on March 21, 1933, with Flight Lieutenant C. S. Staniland at the controls. The uncowed Pegasus engine was replaced by an Armstrong Siddeley Tiger radial, with Townsend ring, in the summer of 1933, but the original powerplant was later re-installed.

Investigation into the behaviour of the aircraft in various flight regimes proceeded satisfactorily until, on September 11, whilst undertaking a series of spinning tests, the T.S.R.I entered a flat spin from which it was unable to recover. Staniland had considerable difficulty in extricating himself from the pilot's cockpit due to the high *g*-forces encountered and was actually thrown into the rear compartment on his first attempt at scrambling clear. He jumped a second time—from the opposite side of the fuselage—and succeeded in parachuting to safety.

The T.S.R.I, which had shown considerable promise before its unfortunate accident, was followed in 1934 by the T.S.R.II (c/n F2038) developed to meet the new and more advanced Air Ministry Specification S.15/33 for a triple-rôle naval aircraft. The T.S.R.II was powered by a 655-690 h.p. Pegasus III M3 engine and differed from its forerunner in the provision of an additional bay in the rear fuselage to counteract any tendency to spin, while the upper wings were swept back to compensate for the increased body length. Other design changes included a revised, wide-chord fin and rudder and the provision of anti-spin strakes on the rear fuselage.

The T.S.R.II (serial No. K4190) made its maiden flight on April 17, 1934, piloted by Chris Staniland. As an integral part of the ensuing flight development programme, the aircraft was transferred to Fairey's Hamble works, where it had its land undercarriage replaced by twin floats, and was first flown in this form on November 10. With water handling trials successfully completed, catapult and recovery tests were then conducted aboard H.M.S. *Repulse*.

*Swordfish forerunner—the Pegasus-engined T.S.R.I c/n F1875, at Fairey's Great West Aerodrome in 1933.*



K4190 later reverted to its wheeled undercarriage prior to delivery to the Aeroplane and Armament Experimental Establishment at Martlesham Heath, for Service trials. The rigorous evaluation of the aircraft at Martlesham proved extremely satisfactory and an order was placed for a pre-production batch of three Swordfish (the name given to the T.S.R.II on its acceptance by the Air Ministry).

The first pre-production Swordfish (K5660, c/n F2142) was flown on December 31, 1935, and the first to be delivered to the Service was K5661 (c/n F2143), which arrived at the T.T.U. Gosport on February 19, 1936. The last of the pre-production batch (K5662, c/n F2144) emerged as a floatplane and was delivered to the M.A.E.E. Felixstowe for Service trials on water.

All three aircraft (built to Spec. S.38/34) were powered by the Pegasus IIIM3, but utilized a three-bladed Fairey-Reed fixed-pitch metal propeller in place of the two-blade Watts or Fairey-Reed on the prototype.

### INTO SERVICE

The initial production contract placed was for 68 aircraft and the first of these began to come off the line at Fairey's Hayes works early in 1936. The production aircraft was styled the Mk. I, and the first squadron to equip with the new biplane was No. 825, who exchanged their Fairey Seals for the Swordfish in July, 1936.

By the end of the year, the Swordfish had superseded



*A Swordfish III NF374 "NH-M" of No. 119 Squadron, with a full load of bombs and flares on its wing racks, on anti-shipping patrol near the Dutch coast.*

the Blackburn Baffin in Nos. 811 and 812 Squadrons and had also replaced the Seal in No. 823. By 1938, the Swordfish had ousted from service the Blackburn Shark in Nos. 810, 820 and 821 Squadrons, and thus became, for a period of almost two years, the sole torpedo bomber in the Fleet Air Arm.

As production gained momentum and deliveries to the Service increased, further Squadrons were commissioned, a total of thirteen being operational by September, 1939. During the war, thirteen additional first-line Squadrons equipped with the Swordfish, so

*The first pre-production Swordfish, K5660, at Fairey's Great West Aerodrome.*





*T.S.R.II K4190, the Swordfish prototype, lands after an early test flight. The aircraft seen behind the torpedo bomber's undercarriage legs is a Fairey Hendon twin-engined bomber.*

that, collectively, twenty-six different Squadrons saw active service with this exceptional biplane. The last operational unit to receive the Stringbag was No. 860 Squadron, commissioned at R.N.A.S. Donibristle on June 15, 1943. This Squadron, made up of personnel from the Royal Netherlands Naval Air Service, subsequently joined No. 836 Squadron at R.N.A.S. Maydown to become the operational pool for Swordfish used aboard Merchant Aircraft Carriers (MACs).

In addition to its many operational activities, the Swordfish also gave sterling service in the training rôle. Over twenty second-line Squadrons employed the aircraft for tuition in a wide variety of tasks, such as deck landing techniques, weapons delivery, radar training and the instruction of Observers and T.A.G.s.

## SERIES PRODUCTION

Early in 1940, the Fairey Co. at Hayes was very heavily engaged in the manufacture for the Fleet Air Arm of not only the Swordfish, but of the new Albacore torpedo bomber.

In a move designed to lessen the considerable burden borne by the company, the Director of Air Material at the Admiralty proposed to Blackburn Aircraft Ltd. that Swordfish production should be transferred to this Yorkshire firm. At that time, manufacturing capacity at the Blackburn factories was at full stretch, but plans were formulated for the setting-up of an entirely new production and assembly facility to meet this additional commitment. An immediate start was

*Newly completed Mk. I aircraft awaiting delivery from the Sherburn factory, March 12, 1941.*





*Swordfish I L2781 sets off on training sortie in 1941 from H.M.S. Jackdaw, R.N.A.S. Crail.*

made on the construction of the new establishment at Sherburn-in-Elmet in Yorkshire and, less than a year later, the first Blackburn-built Swordfish was assembled and flown—a remarkable achievement by any standards.

The Sherburn factory was primarily responsible for the production of the fuselage for the Swordfish and for final assembly and testing of the completed aircraft. Under the prevailing “dispersal” scheme, the major sub-assemblies were manufactured in nearby Leeds by four sub-contractors, and these components were transported to Sherburn for final assembly. The firms involved were Appleyards (mainplanes and flaps); Greens (undercarriage); Hudswell, Clarke (ailerons, fin and rudder); Tates (centre section sub-

assemblies, pilot’s and observer’s floor assembly).

Initial deliveries from Blackburn were of the Swordfish I, but, in 1943, this variant was superseded by the Mk. II (which had metal undersurfaces to the lower wings, stressed for rocket projectile launching), and by the Mk. III, which carried an A.S.V. Mk. X radar in a radome mounted between the undercarriage legs.

The first Swordfish IIs produced retained the Pegasus IIM3 of the earlier mark, but the more powerful Pegasus 30 was later substituted and was also used to power the Mk. III.

The Swordfish IV, which saw only limited service, was a derivative of the Mk. II incorporating enclosed cockpits, for use in Canada.

*Fuselage frames under construction at the Sherburn factory in May 1944.*





*HS553, one of a number of Mk. II aircraft converted to Mk. IV standard—a version with enclosed cockpits for use in Canada.*



*Taxiing out at No. 8 Armament Training Camp, Evanton, in summer of 1938, a No. 810 Squadron Swordfish I K8860.*

The last Swordfish to be built, a Mk. III (NS204), was delivered from Sherburn by an A.T.A. pilot on August 18, 1944. Between them, Faireys and Blackburn had manufactured a total of 2,392 aircraft, 1,700 having emanated from Sherburn.

### IN ACTION

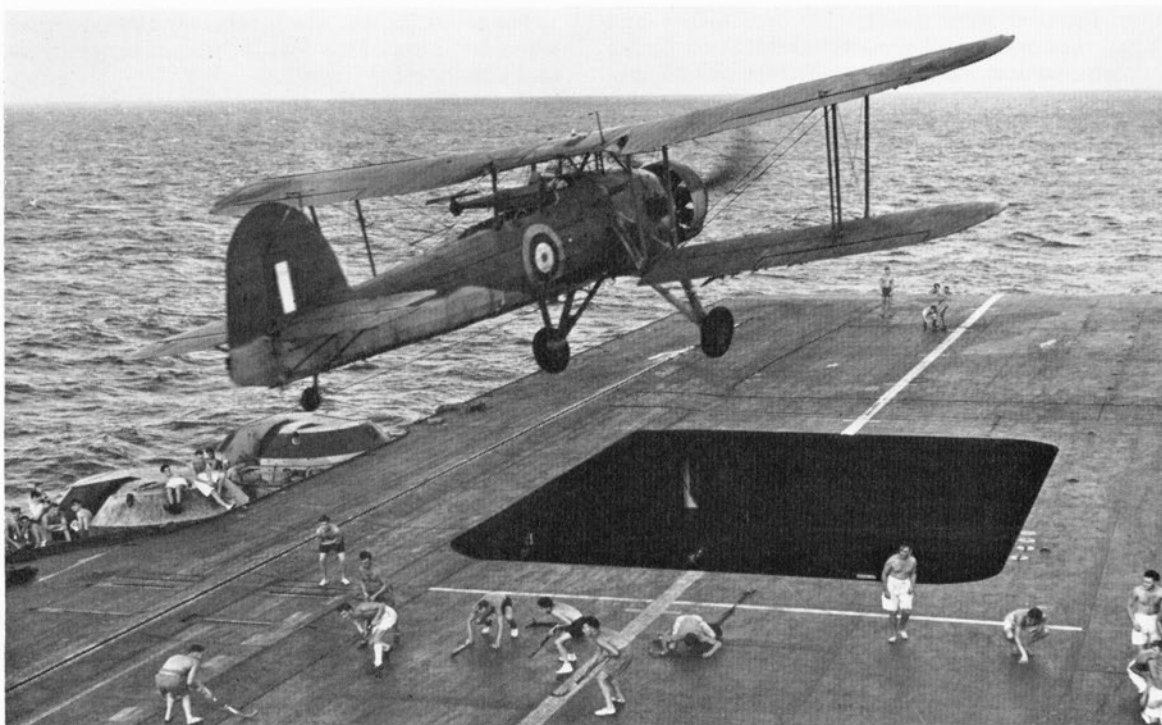
Employed in the first few months of the war on Fleet protection and convoy escort duties, it was not until the Spring of 1940 that the Swordfish became involved in actual battle.

On April 11, 1940, H.M.S. *Furious*, operating in Norwegian waters, flew off a number of torpedo-armed Swordfish of Nos. 816 and 818 Squadrons to attack German cruisers reportedly lying at Trondheim. In fact, only two destroyers were found at anchor and,

due to shoal water, only one hit was obtained. The attack was noteworthy, however, as it was the first strike of the war mounted by torpedo-carrying aircraft.

Two days later, on April 13, H.M.S. *Warspite*, screened by nine destroyers, launched her catapult Swordfish to reconnoitre ahead of the forces as it entered Ofot Fjord, leading to Narvik. The floatplane, piloted by P./O. F. C. Rice, with Lt.-Cdr. W. L. M. Brown as observer, and accompanied by an air gunner, proceeded to spot for the guns of *Warspite* and her escorts to such good effect that all German naval units present were destroyed. As a result of the attack, seven enemy destroyers—one of which was bombed by the Swordfish—were sunk or scuttled, without loss on the British side. In addition, the pilot of the Swordfish had sighted a submarine at anchor in Bjerkvik Fjord and immediately launched a dive-bombing attack,

*A limited number of Swordfish were modified in service to accommodate target-towing gear cable stowage in the position normally occupied by the observer. In this picture, a Swordfish I flies low over the flight deck of H.M.S. Indomitable prior to releasing a sleeve target.*



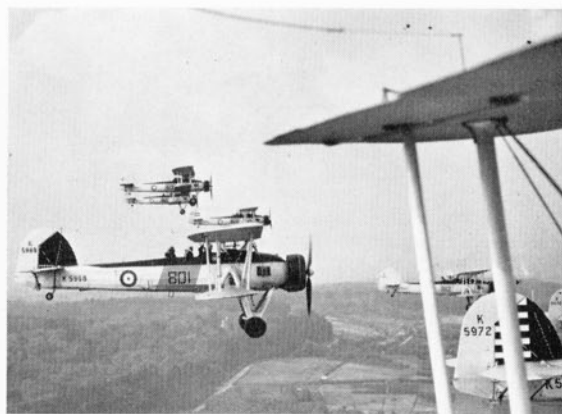




*Mk.II HS227 of No. 835 Squadron aboard the escort carrier H.M.S. Battler, in 1943.*

*L7652 "2", a Swordfish I of the T.T.U. Gosport, releases its 1,610-lb torpedo.*





*Swordfish of No. 823 Squadron from H.M.S. Glorious prepare to make a formation flypast at the Coronation Review in 1937. H.M. King George VI took the salute as Naval Air Squadrons flew over the Royal Yacht Victoria and Albert.*

scoring at least one direct hit. The submarine, the U-64, sank within a minute, the first U-boat to fall foul of a Fleet Air Arm aircraft in the second world war.

During the following fortnight, Swordfish were constantly attacking targets in the Narvik area, bombing ships and installations and enemy aircraft parked on frozen lakes, as well as undertaking anti-submarine patrols and photographic reconnaissance. In this period of operations, the crews of the two Swordfish squadrons encountered weather conditions that were daunting in the extreme, but never lacked the fortitude to press home their attacks, no matter how appalling the conditions.

On occasion, when visibility was reduced to a few yards and the cloud base hung only a few feet above ground level, pilots were compelled to land in snowdrifts or on frozen fjords. Always present was the very real danger of collision with the sheer cliffs surrounding these sea inlets and the difficulty of locating the carrier in fog or driving snow. One pilot, after carrying out a low-level bombing attack on German destroyers at Narvik, returned to *Furious* with his undercarriage badly damaged by flak. Although one of the first of the squadron to arrive over the carrier, he realized that his crippled aircraft might obstruct the flight deck, and continued to orbit the vessel for over an hour until all other Swordfish had safely landed-on.

Captain T. H. Troubridge, R.N., in command of *Furious* during the Norwegian campaign, had this to say of his charges: "It is difficult to speak without emotion of the pluck and endurance of the young officers and men who flew their aircraft to such good effect. All were firing their first shot in action—whether torpedo, bomb or machine-gun; many made their first night landing (on a carrier) on April 11 and, undeterred by the loss of several of their shipmates, their honour and courage remained throughout as dazzling as the snow-covered mountains over which they so triumphantly flew." Poetic words, perhaps, but nonetheless in clear tribute to both men and machines.

In April 1940 Stringbags of No. 812 Squadron, shore-based under the operational control of R.A.F. Coastal Command, were most successfully employed on mine-laying sorties to enemy-held Channel ports. A month later, the invasion of the Low Countries

necessitated urgent air reinforcement, and by the end of May, no fewer than four Swordfish squadrons were on temporary detachment to Coastal Command.

Much of the work was entirely new to the Naval aircrew, being somewhat remote from the Fleet tasks for which they had been trained. Flying from Detling, Thorney Island, North Coates and St. Eval, they were frequently engaged in daylight raids on strategic targets along the coasts of Belgium and Holland, where they were subjected to intense opposition from German fighters and anti-aircraft defences. At night they continued to drop mines in enemy harbours, and bombed oil installations, power stations and airfields. After the capitulation of France, they turned their attention to the invasion ports, spotted for the Naval bombardment of French and Belgian harbours, and carried out convoy and security patrols.

The mine-laying activities of the Swordfish units were particularly valuable at this time. Mine-laying was an exacting task, calling for the most precise navigation and flying skills. Extended range was required for these operations, and this was achieved by fitting the aircraft with overload fuel tanks, which nestled behind the pilot's back and the observer's neck. The third crew member, the telegraphist/air gunner, had to be left behind, and the observer, besides handling the rear-facing gun, had to navigate and operate his wireless in acute discomfort. One officer, it is said, had to fit himself with an abdominal belt before he could change the frequency of his transmitter!

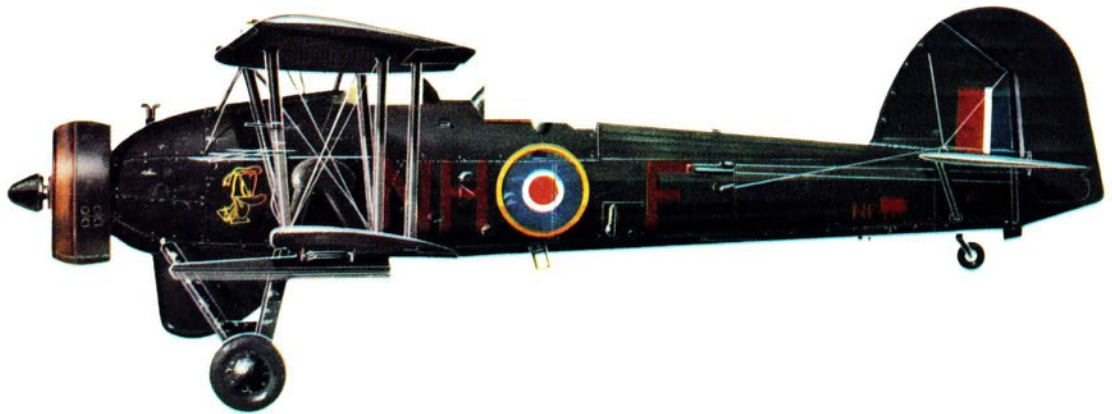
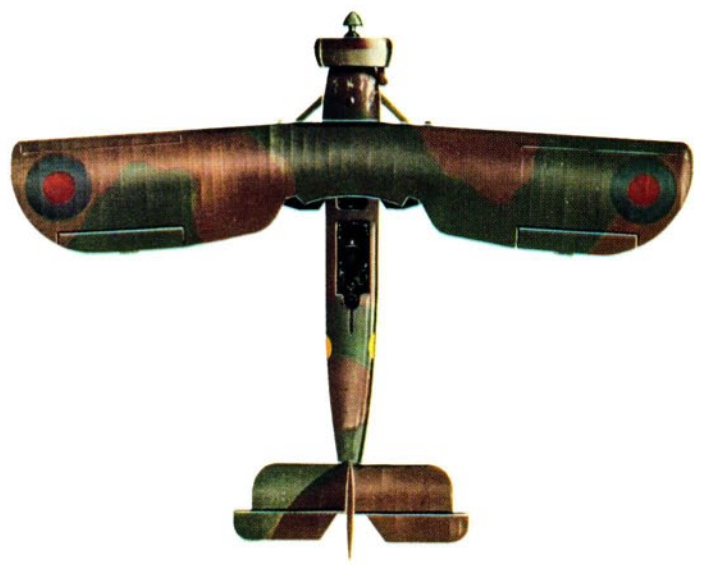
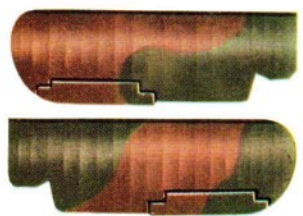
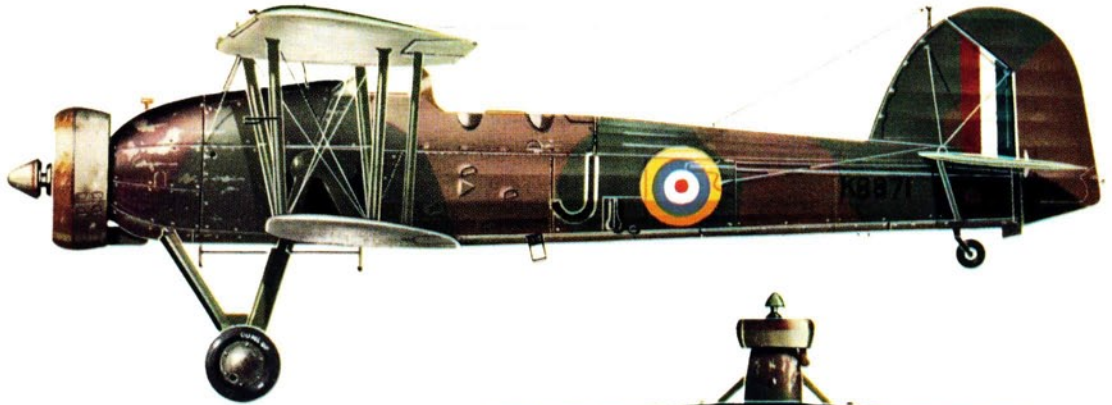
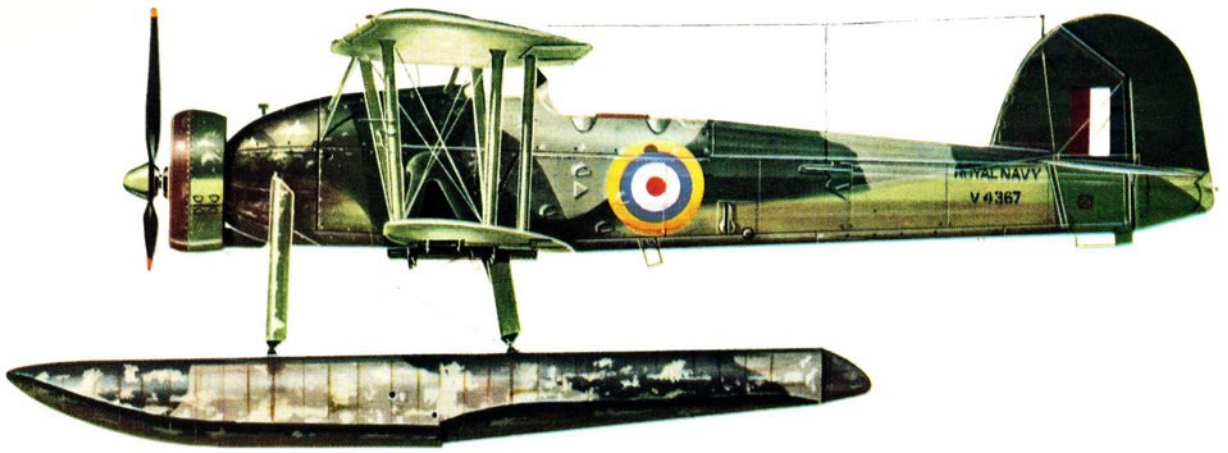
Although the R.A.F. were known to chaff the Swordfish crews "lodging" at south and east coast airfields over the apparent antiquity of their machines, they also recognized the value of the job they were doing, and were quick to avenge their losses. On one occasion, after a mine-laying Stringbag had been shot

*Top: Swordfish I, V4367 of Catapult Flight, H.M.S. Malaya, 1940.*

*Swordfish I, K8871 of No. 785 Training Squadron, 1941.*

*Upper surfaces of K8871 showing camouflage pattern to the left port lower wing and starboard lower wing.*

*Bottom: Swordfish III, NF410 of No. 119 Squadron, R.A.F. Coastal Command, 1945.*





*A busy deck scene in 1940 on H.M.S. Ark Royal, with No. 821 Squadron aircraft to the fore, and Skuas of No. 801 Squadron ranged aft.*



*Below: Swordfish II HS158 "B" of No. 816 Squadron being "struck down" aboard the escort carrier H.M.S. Tracker, while above, another squadron aircraft leaves the deck at the start of a rocket strike. Both pictures were taken in 1943.*



down, an R.A.F. squadron based at the station which sent out the Naval biplane obtained permission to raid the airfield from which the enemy fighters had come, and flattened most of the hangars.

When Italy joined the war in June 1940, nine Swordfish of No. 767 Squadron, a training unit then based at the Naval Air Station at Hyères in the south of France, had the distinction of being the first aircraft to drop bombs on Italian soil. On June 14 the striking force, led by Lt.-Cdr. G. C. Dickins, raided Genoa. Each Swordfish was carrying French bombs, secured with spun yarn, and fused before take-off.

The entire squadron of 24 aircraft left Hyères on June 18 for Bone in Algeria. At Bone the squadron split up. The training element returned to the U.K. via Casablanca and Gibraltar, while the operational echelon flew to Malta, where they were re-numbered No. 830 Squadron on June 22. Operations were recommenced from Hal Far on June 30, with a night raid on the oil tanks at Augusta in Sicily. Although the available Swordfish striking force in Malta never exceeded 27 aircraft, it succeeded in sinking an average of 50,000 tons of shipping every month for a period of nine months, the record being 98,000 tons in one month.

With the benefit of R.A.F. aerial reconnaissance, the Swordfish torpedo-bomber force would time their attacks to arrive over the enemy convoys in the dark, in order to elude the standing patrol of German fighters which encircled Malta by day. Some of the Swordfish on the squadron were of 1936 vintage, with no blind-flying instruments, which added to the hazards of night operations, but Fleet Air Arm losses were remarkably small by comparison with the number of sorties made.

With the fall of France in July, 1940, Swordfish played a leading rôle in the destruction of the French Fleet at Oran, to prevent its take-over by the enemy. Twelve aircraft from Nos. 810 and 820 Squadrons, operating in three waves from the *Ark Royal*, torpedoed and crippled the battle-cruiser *Dunkerque*. This attack demonstrated unequivocally that torpedo aircraft could make an effective strike on a capital ship in harbour and that, for the first time in history, the Navy had won a battle without firing a gun.

Shortly after the action at Oran, Swordfish were again in the news following a brilliant action in support of General Wavell in the Western Desert. A sub-flight of three Swordfish from No. 813 Squadron had been disembarked to Dekheila, while H.M.S. *Eagle* was undergoing maintenance in Alexandria harbour. After the flight had been ashore a few days, a call went out for torpedo aircraft to assist in the destruction of enemy naval units operating off the Libyan coast, and the three Swordfish were immediately sent to Desert Air Force H.Q. at Ma'aten Bagush.

Late one evening the pilots were called to the Operations Room to be told that a dusk reconnaissance over Bomba Bay (between Tobruk and Benghazi) had shown a submarine heading in from seaward. It was decided that the three aircraft should move up in the morning to the airfield at Sidi Barrani, refuel, and await the report of the reconnaissance at dawn. Early next day, August 22, Capt. Oliver Patch, R.M., led the three torpedo-armed aircraft to



*An R.A.F. Coastal Command Swordfish, bombed up, sets off on anti-shipping patrol.*

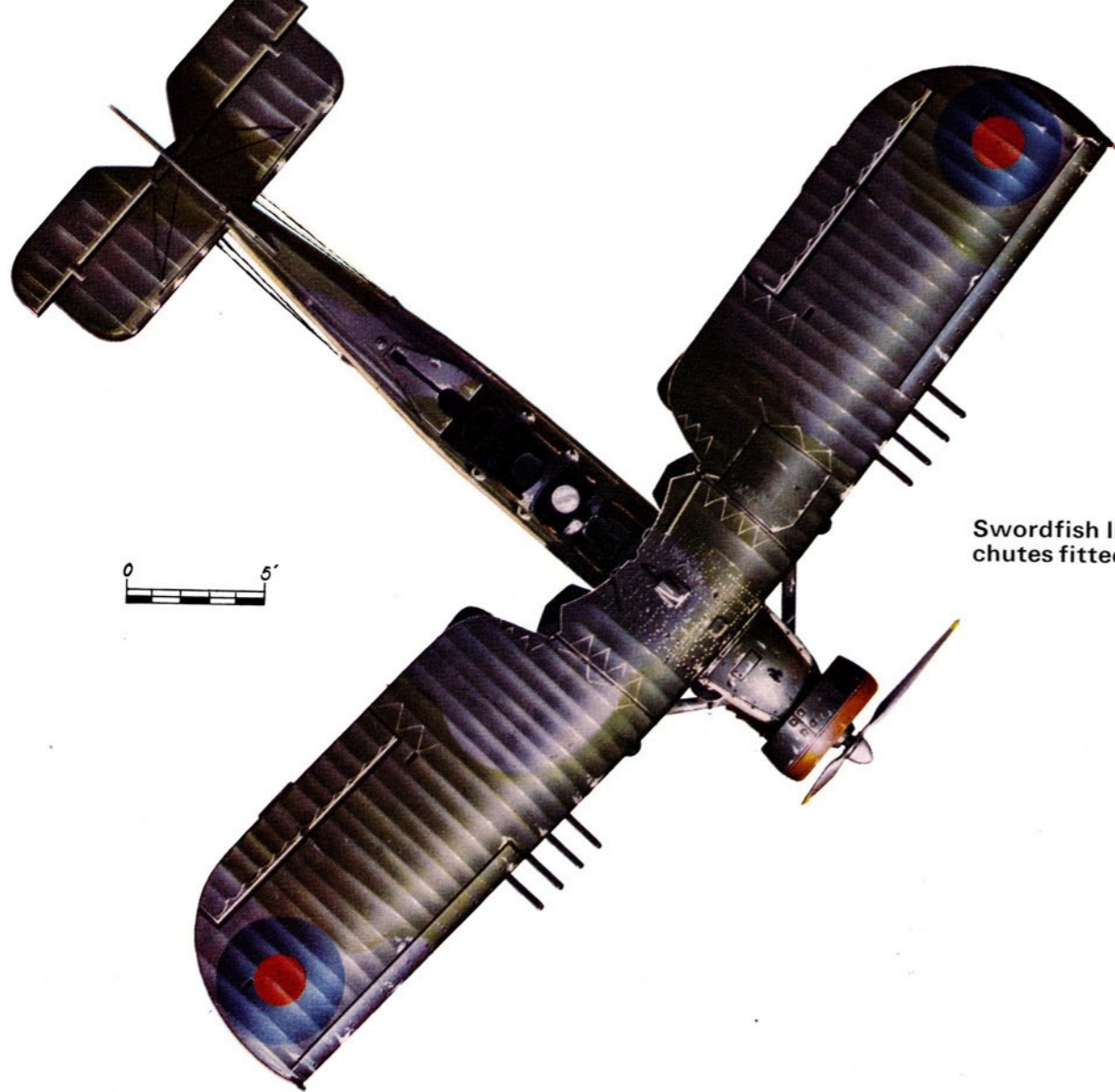
Sidi Barrani, arriving at the bomb-pocked airstrip an hour-and-a-half later. The crews were told that the submarine and its depôt ship were in the bay, and the sub-flight, after refuelling, took-off again and headed out to sea in tight formation.

The Stringbags, flying low, began their run-in to Bomba Bay at 12.30. On approaching the mouth of the bay, they immediately sighted a large submarine, dead ahead. It was making about two knots on the surface, and the crew's washing was hanging out to dry! The torpedo-bombers were now flying only 30 feet above the waves, and the submarine, having spotted the approaching aircraft, opened up ineffectively with its machine-guns. Capt. Patch lined up on the target and dropped his torpedo cleanly from a range of 300 yards. A few seconds later the Swordfish crews saw the torpedo hit the submarine amidships, and the vessel exploded. When the smoke had cleared, only a small part of the stern was still visible.

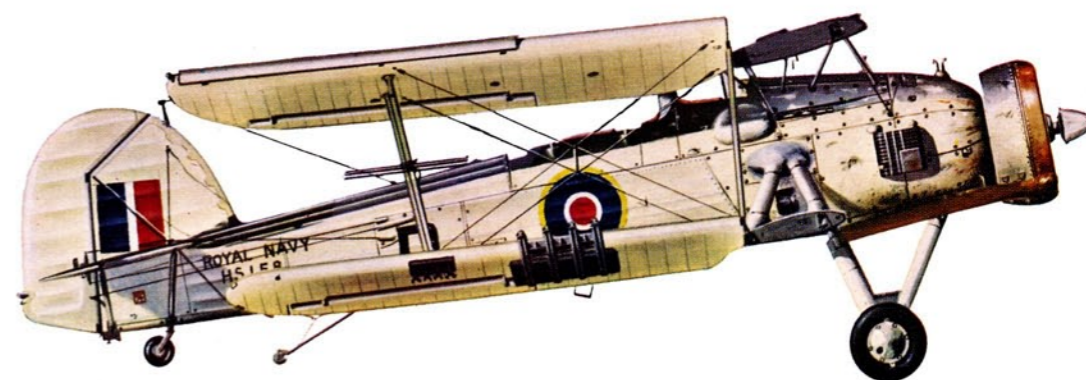
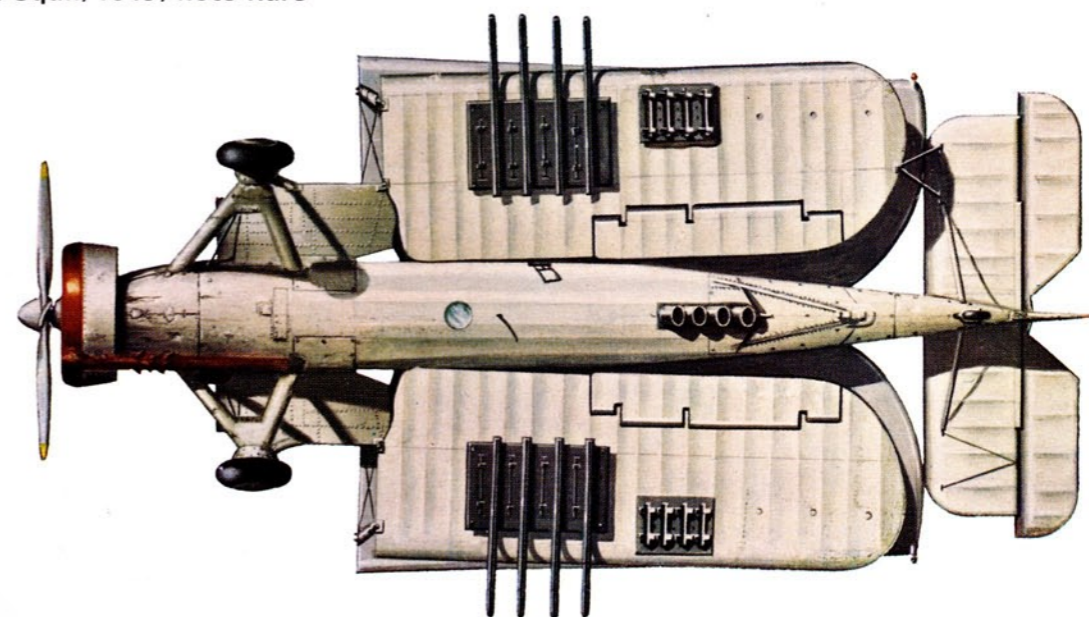
The leading Swordfish, having expended its torpedo, turned out to sea again. The other two aircraft flew on to their primary target in the bay, which they were surprised to find now consisted of a submarine and its depot ship, and a destroyer, moored abreast of each other, the destroyer in the centre. All three craft opened fire on the attacking torpedo-bombers, but the shooting was inaccurate, and both pilots closed in. Lt. J. W. G. Wellham dropped his torpedo on the starboard beam of the depot ship, while Lt. N. A. F. Cheesman manoeuvred his aircraft to a position 350 yards from the flank of the submarine. He could see his "tin fish" running the full distance until it hit the target squarely amidships, whereupon it immediately exploded and set fire to the neighbouring destroyer. Seconds later, Lt. Wellham's torpedo hit the depot ship below the bridge, and the whole vessel was soon blazing furiously.

Both Swordfish turned away towards the open sea, Lt. Cheesman executing a right-hand circuit around the Italian fighter airfield on the coast at Gazala. Suddenly there was an enormous explosion out in the bay as the magazine of the depot ship blew up, and all three vessels disappeared from view in clouds of smoke, flame and steam.

Not surprisingly, the Operations Staff at debriefing were sceptical over the crews' claim to have destroyed four ships with only three torpedoes, but all doubts



Swordfish II, HS158 of No. 816 Sqdn, 1943; note flare chutes fitted.





A typical scene at a Naval Air Station in 1941, as torpedoes are wheeled out to waiting "Stringbags" at the start of the day's task.

were dispelled when the reconnaissance Blenheim brought back the photographic evidence in confirmation. A few days after the attack, the Italian Radio admitted the loss of four warships to "an overwhelming force of torpedo bombers and motor torpedo boats"!

### The Triumph at Taranto

The attack mounted against the Italian Fleet at Taranto was undoubtedly the crowning achievement in the Swordfish's distinguished career, and remains a landmark in the annals of naval air warfare. The destruction of the Italian warships at Taranto was the logical outcome of the attack on the *Dunkerque* at Oran, and proved conclusively that naval aircraft, on their own, were capable of immobilizing an entire enemy fleet, and thus, to a considerable degree, altering the balance of power.

The attack had been long in preparation. In 1938, when war appeared unavoidable, the C.-in-C. Mediterranean had asked the commander of the carrier H.M.S. *Glorious* to draw up plans for an assault on the Italian Fleet in Taranto harbour, utilizing his T.B.R. squadrons. The strike plans then formulated proved of immense value in mounting the actual attack two years later.

When Italy joined forces with Germany in June 1940, her main fleet, consisting of six battleships—two of the new Littorio class and four of the recently reconstructed Cavour and Duilio class—about five cruisers and twenty destroyers, was based at Taranto. It was clear to the Rear-Admiral commanding Mediterranean Aircraft Carriers that an air attack on the

A Swordfish fitted experimentally with a Leigh Light under the port lower mainplane, for night operations. The object between the undercarriage struts is the battery.



harbour would be the only effective method of penetrating the Italian defences and in coming to grips with the enemy's battle fleet.

There were several requirements to ensure reasonable prospects of success in such a mission. Perhaps the most important of these was reliable and regular photographic reconnaissance, to show not only that the battleships were in harbour, but their actual dispositions. Secondly, an undetected approach by the force to the flying-off position was essential to maintain the element of surprise. Lastly, because of the nature of the defences at Taranto, it had been decided that a night attack would achieve the best results with a lower rate of loss than could be expected in daylight. As a result, strike crews would have to be brought to a new peak of efficiency in night-flying, and intensive training started immediately.

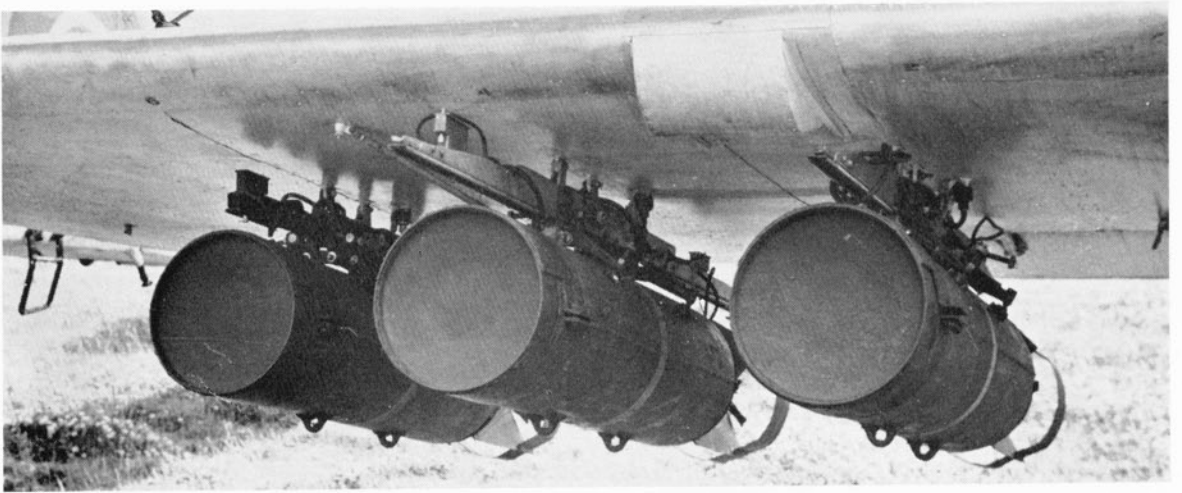
The assault was to have taken place on Trafalgar Day, October 21, but was postponed until November 11, 1940, to allow the Mediterranean Fleet to cover important warship reinforcements and convoy movements. Two days before the fleet was due to sail from Alexandria, *Eagle* developed a serious defect in her fuel system and had to be left behind, but five of her Swordfish, from Nos. 813 and 824 Squadrons, were transferred to *Illustrious*, together with eight crews.

Aerial reconnaissance on the morning of November 11 showed that five battleships were in the outer harbour, with three cruisers protected by nets. A sixth battleship was seen to enter the harbour later the same day.

At 18.00, when the Mediterranean Fleet was off the west of the Island of Zante, *Illustrious* was detached with her escort. By 20.00 the carrier had reached the position 170 miles from Taranto, from which it was intended to launch the attack, and the first striking force of 12 aircraft, drawn from Nos. 815, 819, 813 and 824 Squadrons, were ranged aft on the flight deck, the leading Swordfish being flown by Lt.-Cdr. K. Williamson. As the harbour was well protected by a balloon barrage and submarine nets, which restricted the number of suitable torpedo-dropping positions, only six aircraft were armed with torpedoes, while four carried bombs and the remaining two a mixture of bombs and flares. The torpedo-carriers were to attack the battleships anchored in the outer harbour and, as a diversion, the bombers were to deliver a synchronized attack on the cruisers and destroyers alongside the quay and in the inner harbour. No air gunners were carried, to enable the Stringbags to be fitted with internal overload fuel tanks.

Lt.-Cdr. Williamson's aircraft lifted off the deck at 20.35, and all twelve aircraft set course for Taranto at 20.57. Flying conditions were good, with the moon three-quarters full, but the squadron later became split up in cloud into two separate formations. At 22.56 the flare-droppers were detached from the formation, and one of these put down a line of flares over the harbour from 7,500 feet. This aircraft, followed by the standby flare-dropper, then dived down through the intensifying anti-aircraft barrage to bomb an oil storage depot, and set it ablaze.

As the flares lit up the harbour, the first sub-flight went in to attack, led by Lt.-Cdr. Williamson, but his



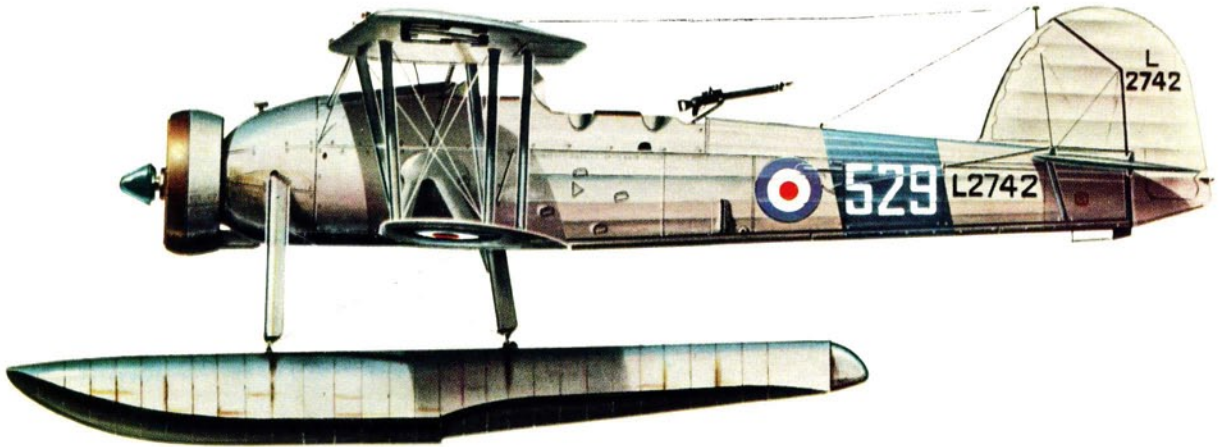
*Underwing stores for an old warrior—below, an R.A.F. armourer completes the loading of anti-shiping flares and 250-lb bombs. Above, depth charges on the wing racks of a Swordfish II.*



*NF410 "NH-F", a Swordfish III of No. 119 Squadron, in matt black finish and sporting a yellow "Donald Duck" mascot on the fuselage sides.*









Swordfish I of No. 820 Squadron on exercise. Note squadron badge on fin.

Swordfish was hit by flak, and was forced to ditch. The second aircraft came down to within 30 ft of the water half-way across the harbour, and attacked one of the Cavour-class battleships at a range of 700 yds, scoring a hit. The remaining aircraft in the sub-flight also attacked the same target, but was unable to observe results. The other sub-flight concentrated on the two Littorios, one of which received several hits. With the exception of the leader, the whole initial striking force returned safely to *Illustrious*.

While the first aircraft were on their way to Taranto, the second wave of Swordfish began flying-off at 21.23, led by Lt.-Cdr. J. W. Hale. In this second force, five aircraft were armed with torpedoes, two with bombs, and two with flares and bombs. One aircraft was damaged while taxiing on the flight deck, and had to be struck down for repairs, but was able to leave independently 20 minutes later. One Swordfish in the main force developed a defect some 20 minutes after take-off, and had to return to the carrier, but the remaining seven aircraft reached their objective, which was well illuminated by flares and flak, at 23.50. Repeating the tactics of the first attack, the flare-droppers lit up the harbour from the east and south-east, and then dive-bombed the oil depot. The torpedo-carriers all selected the two Littorios as their objectives, and swept in to drop their weapons, one pilot coming down so low that his landing wheels touched the water, sending up an enormous sheet of spray. He was lucky enough to be able to pull up, and complete the mission.

One Swordfish from one of *Eagle's* squadrons fell to the defences, but the other seven—including the delayed aircraft—had all landed on *Illustrious* by 02.50, and the task force headed south to rejoin the C.-in-C.

Air reconnaissance two days later revealed that the Italians had suffered a crippling blow, one Cavour and one Duilio-class battleship heavily damaged and



Pictured over the Solent in 1939 is Swordfish I L7672 "A4F" of No. 820 Squadron.

beached, and one Littorio battleship badly damaged; one Trento and one Bolzano-class cruiser severely damaged; two destroyers damaged and two auxiliary vessels sunk. To those involved in the action it seemed incredible that their losses had been no greater. "Only Swordfish," said one of them, "with their manoeuvrability and their capacity for turning and twisting, could have got through that fire." Capt. D. W. Boyd, commanding *Illustrious* declared: "It is impossible to praise too highly those who in these comparatively slow machines made studied and accurate attacks in the midst of intense anti-aircraft fire. It is hoped that this victory will be considered a suitable reward to those whose work and faith in the Fleet Air Arm has made it possible."

No. 815 Squadron was again involved in a major action on March 28, 1941, when operating from Crete, two of the unit's aircraft sharing in the disabling of the Italian cruiser *Pola* in the Battle of Matapan.

Early in May, six Swordfish of No. 814 Squadron from H.M.S. *Hermes* were based ashore at Shaibah to assist in the suppression of the Iraqi rebellion, and dive-bombing attacks were made on barracks, fuel storage tanks and bridges. The rifle and automatic fire of the Iraqi irregulars was so well placed that one aircraft was forced down near the barracks at Samawa. Seeing the plight of his colleague, Lt. J. H. Dundas made a difficult landing alongside the damaged Swordfish and with considerable daring and skill succeeded in taking-off again with the stranded crew, in spite of heavy small arms fire, the far from ideal ground surface and the double load.

Shortly after these events, Swordfish were engaged in the epic chase which ended in the destruction of the *Bismarck* some 200 miles from the safety of Brest.

When the German battleship was spotted on May 23 heading south-west between Greenland and Iceland, units of the Home Fleet, including the newly-commissioned carrier *Victorious*, steamed all-out to intercept and engage the enemy. On May 24 *Victorious*, which had been detached from the main force, came within striking distance, and nine Swordfish of No. 825 Squadron led by Lt.-Cdr. Eugene Esmonde, flew off into the late northern light at 22.00. In squally conditions the squadron made contact with their quarry, but only one torpedo hit was observed.

In worsening weather, *Bismarck* succeeded in

Top: Swordfish I, K5968 of No. 823 Squadron, 1937.

Swordfish I, L2742 of No. 701 Catapult Flight, Gibraltar, 1938.

Swordfish I, L9772 of No. 820 Squadron, 1939.

Bottom: Swordfish I, P4216 of No. 821 Squadron, 1940.



Beaching a Swordfish I floatplane at Calshot.

avoiding her adversaries, and it was not until the morning of May 26 that she was again sighted, this time by a Catalina of Coastal Command. As a result of the earlier torpedo damage, her speed had been reduced, and the *Ark Royal*, with Nos. 810 and 818 Squadrons embarked, was soon within range to mount another strike. Fifteen Swordfish led by Lt.-Cdr. T. P. Coode of No. 818 Squadron attacked the *Bismarck* at 20.53, obtaining three hits which damaged her steering, thus enabling the Fleet to deal her the death blow the next morning.

It was Lt.-Cdr. Esmonde's squadron, No. 825, which was later involved in the calamitous but gallant attack on the German battleships *Scharnhorst*, *Gneisenau* and *Prince Eugen* as they slipped through the English Channel from Brest on February 12, 1942.

Flying from Manston, Lt.-Cdr. Esmonde led his six Swordfish into the attack in line-astern, through a withering hail of fire. When the ship's guns paused, about fifteen Me.109s and Focke-Wulf 190s pounced on the hapless torpedo-carriers, one F.W.190's cannon shells ripping off the top mainplane of the leader's aircraft, which went straight down into the sea. In turn, every single Swordfish was shot down and of the eighteen original crew members, thirteen perished. The five survivors were decorated and a posthumous V.C. was bestowed upon Lt.-Cdr. Esmonde, the first member of the Fleet Air Arm to receive this honour.

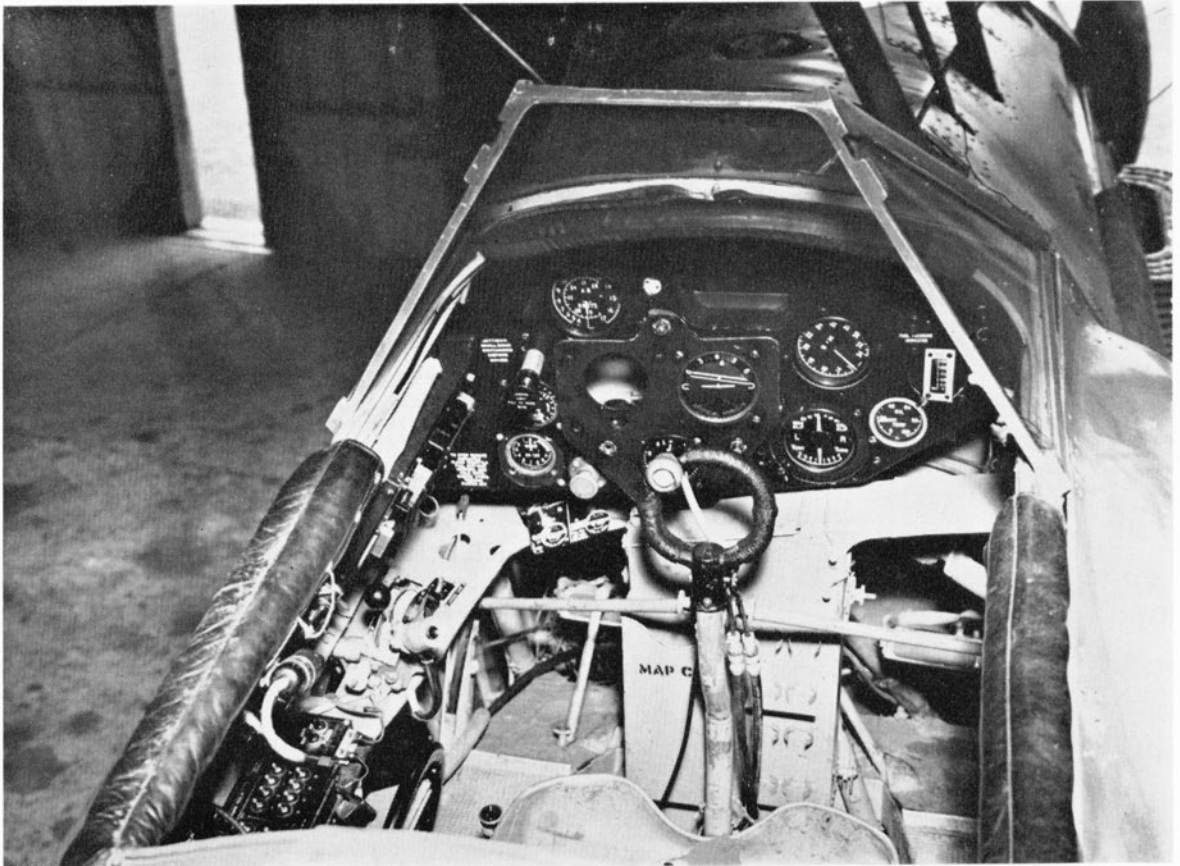
This tragic episode was to mark the end of the use of the Swordfish in the torpedo-bomber rôle. With A.S.V. radar antenna sprouting from its interplane struts and depth charges or rocket projectiles on its underwing racks, this exceptional old biplane went on instead to make a new name for itself as a submarine killer extraordinary, operating in the main from merchant aircraft carriers. As early as October 1941, Stringbags were flying operationally with A.S.V. radar, and it was on the night of December 21, 1941,

that a Swordfish of No. 812 Squadron, operating from Gibraltar, attacked and sank the first U-boat to be destroyed by an aircraft in the dark. Another milestone in anti-submarine warfare occurred on May 23, 1943, when a rocket-equipped Stringbag of No. 819 Squadron, from the escort carrier *Archer*, became the first aircraft to achieve success with the new weapon when it destroyed the *U-752* off the west coast of Ireland.

Displaced in the Fleet carriers from 1942 by the later generation of strike aircraft—Albacores, Avengers and Barracudas—submarine-hunting Swordfish continued to make a most valuable contribution to the winning of the Battle of the Atlantic, and performed outstandingly on escort duty with the Russian convoys. Often operating in the most appalling conditions, with the freezing level at 500 feet, they succeeded in keeping the U-boat packs at bay with well-judged depth charge attacks, and frequently guided the destroyer escort to positions from which to deal out further punishment to the undersea menace. On one such convoy Swordfish embarked in *Striker* and *Vindex* amassed the staggering total of over 1,000 hours in only ten days, while engaged on anti-submarine patrols.

Early in 1945, almost nine years after the type first entered service, Swordfish still equipped nine first-line squadrons—adequate testimony to the effectiveness of this sturdy thoroughbred in the many tasks it was called upon to perform.

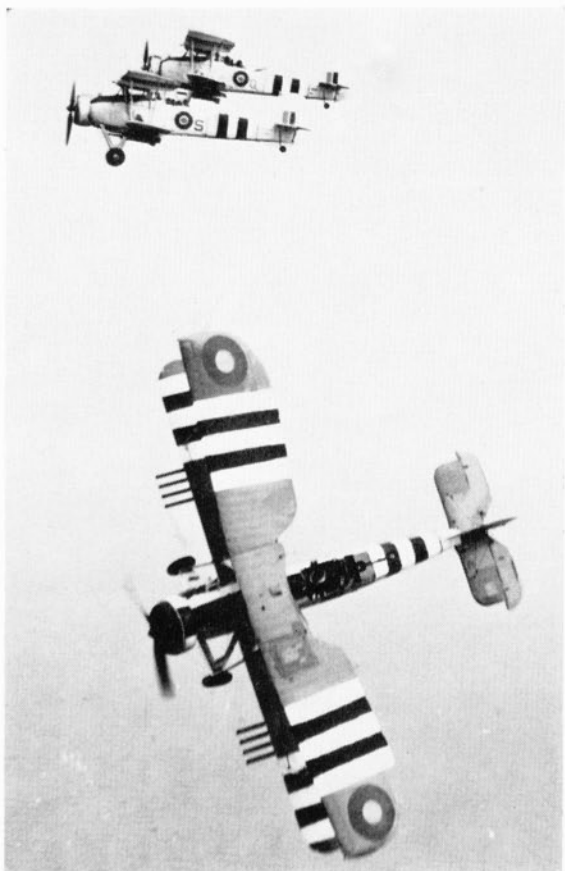
As the Allied armies advanced into Europe after the Normandy landings, Coastal Command Stringbags of No. 119 Squadron, operating from airstrips in Belgium, constantly attacked enemy coastal positions and harried German naval units in the Channel. One of the squadron's aircraft was in action against a midget submarine only four hours prior to the German surrender!



*The Swordfish cockpit.*

*A fine study of Swordfish I L2742 of No. 701 Catapult Flight, seen flying near Gibraltar in 1938. The spinner and rear fuselage band were coloured dark blue.*





*A trio of Swordfish II break echelon to begin a strike against enemy shipping off the Dutch coast. Note the prominent A.E.A.F. "invasion" stripes around wings and fuselage.*

*An evening study of No. 820 Squadron Swordfish landing on H.M.S. Courageous in 1937.*



The faithful old Stringbag was finally phased out of first-line service on May 21, 1945, when the last remaining operational squadron, No. 836, was disbanded. This unit had become the pool for all crews embarked in the Navy's 19 Merchant Aircraft Carriers. By the summer of 1946, the last few training squadrons had also been disbanded, leaving only a handful of Swordfish at various Naval Air Stations, performing sundry and decidedly unglamorous duties.

And so, largely unsung, the veteran of so many heroic actions, the rugged, reliable old Stringbag was put out to grass. A few examples of this legendary torpedo biplane still exist, and these are listed separately.

## POSTSCRIPT

From the tower the duty controller watched the elderly Swordfish rumble round the perimeter track, its wheels splashing through the innumerable pools of water which had collected after the night's heavy rain. The unrelenting gale shrieked through its struts and wires, and roared around its body, chilling its cowering occupants to the very marrow.

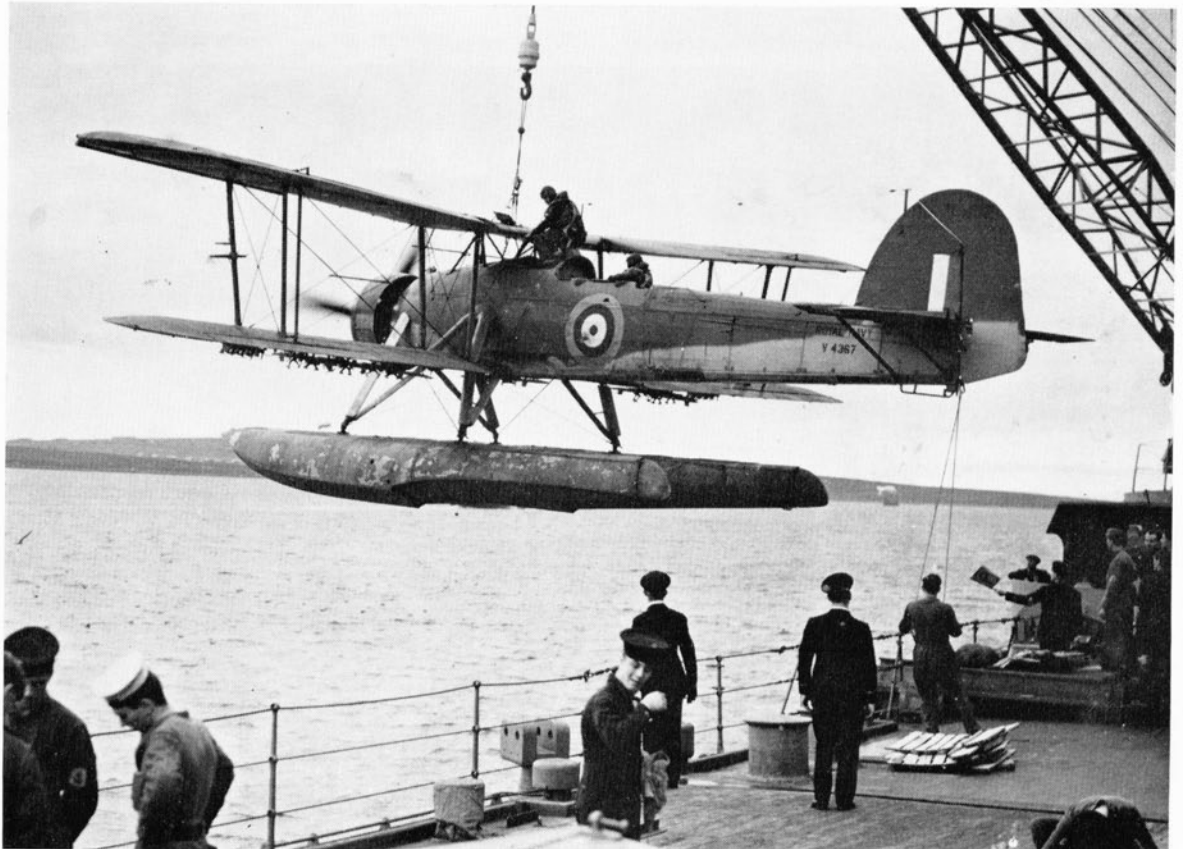
There were six of them huddled in the cramped cockpits—the pilot, whose cheeks were already smarting from the cruel assault of the wind and, in the rear bays, a C.P.O. and four ratings. All five passengers clutched suitcases or duffel bags in numb fingers, for it was their good fortune to be starting a 48-hour leave, albeit somewhat delayed. The previous day's steamer to Thurso had been cancelled and there was no prospect of a new sailing in these storm conditions.

The Stringbag, having gained the runway, turned into wind. The old biplane's wings rocked and



*Swordfish III NF389 was given the serial of Mk. II LS423 in 1959, for its appearance in the film Sink the Bismarck. It is currently retained as a non-flying exhibit at Lee-on-Solent.*

*After a reconnaissance flight, Swordfish I floatplane V4367 is hoisted aboard the cruiser H.M.S. Malaya, at anchor in Scapa Flow.*



groaned in the full blast of the violent westerly. A green Aldis winked from the glass-topped tower, and the Pegasus bellowed back a challenge to the elements, thrusting the fabric-covered machine down the black ribbon of tarmac. The tail came up at once and with a final shudder, it left the ground, battling forward against the fearsome headwinds.

Staying low, the Swordfish swung round over the white spume breaking at the foot of Marwick Head, and took up a southerly heading over the pewter grey cauldron that was the sea. The pilot wiped a film of fine spray from his goggles with the back of his gauntlet, and huddled down even lower out of the wicked slipstream. The Stringbag was straining to veer away to port in the force of the gale, and it became necessary to fly with one set of wings low, and to keep kicking off the incipient drift. They were at 500 feet now, with Stromness appearing under the port wing tip, standing guard over the deserted channel that led to Scapa. Hailstones suddenly began to drum and rattle on fabric and perspex, and the aircraft made an extended three-sixty degrees turn to the right until the squall line had swept through ahead.

There on the left, towering over them as they struggled by, was the awesome stack of the Old Man of Hoy, and then the coastline began to recede and fade under the lowering cloudbase.

Out and on they flew, over the storm-tossed Pentland Firth, with the wind seeming to rise to new heights of ferocity. Peering through eyes that were now slits, the pilot could just make out the rounded

outline of Dunnet Head, and made a slight course correction to bring them around to the east of the promontory, at the same time stealing a quick glance over his shoulder at his bedraggled cargo. Down they dropped over the jagged coast, and inland over the flat, treeless terrain.

Easing back the throttle, the pilot allowed the Stringbag to drop even closer to the earth and searched the horizon for the Castletown runway that lay out ahead. There it was! Turn through about ten degrees and line up. Plenty of power on again and motor it in. The tattered windsock on the boundary blew out stiffly and horizontally as the Swordfish felt for the tarmac, bounced, bounced again, and stopped.

Shakily, the five passengers climbed down to the ground and shouted their thanks to their pilot who, with a quick wave of the hand, pointed the aeroplane into the wind and took-off for the return journey.

As the five made for the shelter of the distant Nissen hut, each in turn paid silent tribute to the skill of the pilots of the Orkney "liberty boats" and, perhaps most of all, to the almost unbelievable capabilities of the Fairey Swordfish.

**Series Editor: CHARLES W. CAIN**

### **Bibliography**

*Ministry of Information (H.M.S.O.) booklet, Fleet Air Arm, 1943; British Naval Aircraft, 1912-1958, by Owen Thetford (Putnam).*

*Preserved in flying condition for some years after the war was Mk. III NF389, one of 320 of this Mk. produced by Blackburns.*





The last Swordfish to be built, a Mk. III NS204, leaves the Blackburn factory at Sherburn on August 18, 1944.

## TECHNICAL DATA—SWORDFISH II AND III

**Manufacturers:** The Fairey Aviation Co. Ltd., Hayes, Middlesex; Blackburn Aircraft Co. Ltd., Sherburn-in-Elmet, Yorkshire.

**Dimensions:** Span, 45 ft. 6 in. (17 ft. 3 in. folded). Length, 35 ft. 8 in. (40 ft. 6 in. with floats). Height, 12 ft. 4 in. (14 ft. 7 in. on floats). Wing area, 607 sq ft.

**Weights:** Empty, 4,700 lb. (5,300 with floats). Loaded, 7,510 lb. (Torpedo-bomber).

**Power Plant:** One 9-cylinder air-cooled Bristol Pegasus 30 radial engine, developing 750 h.p. at 4,750 ft.

**Performance:** Maximum speed (Torpedo-bomber) 138 m.p.h. at 5,000 ft. (128 m.p.h. with floats); (Reconnaissance) 144 m.p.h. at 5,000 ft. (134 m.p.h. with floats). Range, 546 miles with normal fuel load and one 1,610 lb. torpedo. Maximum range for reconnaissance with no bomb load and overload fuel, 1,030 miles. Service ceiling, 10,700 ft.

**Armament:** One fixed, synchronized Vickers .303 machine-gun mounted on top decking, firing forward through airscrew, and one .303 Lewis or Vickers machine-gun mounted aft on Fairey high-speed flexible mounting. Provision for one 18-in. 1,610 lb. torpedo or one 1,500 lb. sea mine on crotches or racks under fuselage, or 1,500 lb. of bombs on underwing and under-fuselage racks. The Mk. II and III could also carry eight 60-lb. rocket projectiles on underwing rails, instead of bombs or torpedo.

## REMAINING SWORDFISH

Serial	Location	Remarks
V6105	Fleet Air Arm Museum, Yeovilton	Carrying the spurious serial V6105 and coded "H" (to represent the aircraft flown by Lt.-Cdr. Esmonde in the attack on the <i>Scharnhorst</i> ). Actually a Mk. II HS608, it was refurbished for display in the museum after serving as an instructional airframe (A2001) at the R.N.E.C., Manadon.
LS326	R.N.A.S. Yeovilton	Only remaining airworthy example, ex-G-AJVH. Returned to Royal Navy and repainted as LS326, coded "5A", in 1959.
NF370	Imperial War Museum	Engine parts from this aircraft utilized to give LS326 extended life of 500 hours.
NF389	R.N.A.S. Lee-on-Solent	Retained as non-flying exhibit.
NS122	National Museum of Canada, Ottawa	Non-flying exhibit.

## NAVAL AIR SQUADRONS EQUIPPED WITH SWORDFISH AIRCRAFT

First-Line				Second-Line			
No. 810	No. 818	No. 825	No. 837	No. 700*	No. 747	No. 764	No. 778
No. 811	No. 819	No. 829	No. 838	No. 707	No. 750	No. 766	No. 781
No. 812	No. 820	No. 830	No. 840	No. 731	No. 751	No. 767	No. 785
No. 813	No. 821	No. 833	No. 842	No. 733	No. 752	No. 768	No. 794
No. 814	No. 822	No. 834	No. 860	No. 737	No. 754	No. 769	No. 796
No. 815	No. 823	No. 835		No. 741	No. 763	No. 774	
No. 816	No. 824	No. 836					

The Swordfish III also equipped Nos. 119 and 202 Squadrons, R.A.F. Coastal Command.

\*Formed out of Nos. 701, 702, 705, 711, 712, 713, 714, 715, 716, 718 and 720 Catapult Flights.



## SUMMARY OF SWORDFISH PRODUCTION

Serial Nos.	No. of Aircraft	Remarks	Serial Nos.	No. of Aircraft	Remarks
K4190	1	T.S.R.II. Became proto-type Swordfish.	HS208-HS231	24 (Mk. II)	
K5660-K5662	3	Pre-production.	HS254-HS299	46 (Mk. II)	
K5926-K6011	86 (Mk. I)	Initial production.	HS312-HS346	35 (Mk. II)	
K8346-K8449	104 (Mk. I)		HS361-HS410	50 (Mk. II)	
K8860-K8886	27 (Mk. I)		HS424-HS471	48 (Mk. II)	
L2717-L2866	150 (Mk. I)		HS484-HS519	36 (Mk. II)	
L7632-L7661	30 (Mk. I)		HS533-HS561	29 (Mk. II)	
L7670-L7701	32 (Mk. I)		HS579-HS625	47 (Mk. II)	
L9714-L9743	30 (Mk. I)		HS637-HS678	42 (Mk. II)	
L9756-L9785	30 (Mk. I)		LS151-LS193	43 (Mk. II)	
P3991-P4039	49 (Mk. I)		LS214-LS248	35 (Mk. II)	
P4061-P4095	35 (Mk. I)		LS261-LS299	39 (Mk. II)	
P4123-P4169	47 (Mk. I)		LS315-LS358	44 (Mk. II)	
P4191-P4232	42 (Mk. I)		LS362-LS403	42 (Mk. II)	
P4253-P4279	27 (Mk. I)		LS415-LS461	47 (Mk. II)	
V4288-V4337	50 (Mk. I)	Blackburn-built	NE858-NE906	49 (Mk. II)	
V4360-V4399	40 (Mk. I)		NE920-NE957	38 (Mk. II)	
V4411-V4455	45 (Mk. I)		NE970-NE999	30 (Mk. II)	
V4481-V4525	45 (Mk. I)		NF113-NF161	49 (Mk. II)	
V4551-V4600	50 (Mk. I)		NF175-NF217	43 (Mk. II)	
V4621-V4655	35 (Mk. I)		NF230-NF250	21 (Mk. II)	
V4685-V4719	35 (Mk. I)		NF251-NF274	24 (Mk. III)	
W5836-W5865	30 (Mk. II)		NF298-NF347	50 (Mk. III)	
W5886-W5925	40 (Mk. II)		NF369-NF414	46 (Mk. III)	
W5966-W5995	30 (Mk. II)		NR857-NR898	42 (Mk. III)	
DK670-DK719	50 (Mk. II)		NR913-NR958	46 (Mk. III)	
DK743-DK792	50 (Mk. II)		NR970-NR999	30 (Mk. III)	
HS154-HS196	43 (Mk. II)		NS112-NS156	45 (Mk. III)	
			NS168-NS204	37 (Mk. III)	NS204 delivered 18.8.44.

## ABBREVIATIONS

A.T.A. Air Transport Auxiliary.  
 c/n Construction Number.  
 C.P.O. Chief Petty Officer.  
 M.A.E.E. Marine Aircraft Experimental Establishment.  
 P./O. Petty Officer.

R.N.E.C. Royal Naval Engineering College.  
 T.A.G. Telegraphist/Air Gunner.  
 T.B.R. Torpedo-Bomber-Reconnaissance.  
 T.S.R. Torpedo-Spotter-Reconnaissance.  
 T.T.U. Torpedo Trials Unit.

*Handed back to Fairey after the war, Swordfish II LS326 was allocated the civil registration G-AJVH on 28.5.47. The silver and blue aircraft was dismantled at White Waltham in 1954, but restored to flying condition in 1956.*



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