



The Armee de L'Air is under the administration of the French Air Ministry and is controlled by the Supreme Air Council of which the air minister is the President. The rest of the council is made up of an Inspector-General, the Chief of Air Staff, and five other general officers.

Before the commencement of the war, it was estimated that France had well over 2,500 first line aircraft, with about 1,000 in reserve.

Perhaps more important than the actual number of aircraft at present in service, France has built up a "behind the lines" system of aircraft production that will enable her to replace and increase the strength of her first line continuously.

This rapid system of production that is now in operation all over France has an estimated monthly output that is equal to any other nation in the world. The immediate change from a peace-time basis to a war-time basis in all factories enabled this system to go into operation instantaneously, and it was a matter of days before the large-scale production of military planes was resulting in a never-ending stream issuing from factories all over the country.

Additionally, the estimate of the French Armee de L'Air personnel before the outbreak of hostilities was in the region of 40,000. It is beyond a doubt that this has now vastly increased and that a very large section of the mobilised manhood of the French nation is now incorporated in the Armee de L'Air.

Co-operation between the British and French nations has resulted in the virtual amalgamation of their two Air Forces.

In quality of equipment, efficiency of personnel and quantity both of first line machines and rate of production, they have presented to the enemy a fighting machine which is not only at the present moment an undefeatable block, but has behind it the skill and careful co-operation of years of experienced knowledge with the spirit of comradeship in a common cause.'

Before we move on to individual aircraft types, let's check a few of the 'facts' in the above article.

*'France's Air Force can be compared with any in Europe.'*

- Many French fighters were slower or less capable than the German Messerschmitt Bf 109E.
- The French Air Force was largely designed to support the army (tactical support) rather than fight an independent air war. This caused them to lack a strategic command structure, resulting in a failure to attack vital German supply lines efficiently.
- The Luftwaffe had a superior number of modern aircraft, trained pilots with combat experience from the Spanish Civil War, and a more efficient, centralized command structure compared to the French.

*'France has well over 2,500 first line aircraft, with about 1,000 in reserve.'*

- In early 1940, the French possessed over 3,000 "modern" combat aircraft, with nearly 2,500 fighters supplied in 1939-1940. However, at the start of the German offensive, only a fraction of these were in operational, combat-ready units.
- On 5 June 1940, out of 2,086 machines available, only about 599 were actually serviceable (29% readiness rate).

- The French held back many bombers for a longer conflict, and their fighters were heavily dispersed, with many stationed in North Africa rather than at the front.

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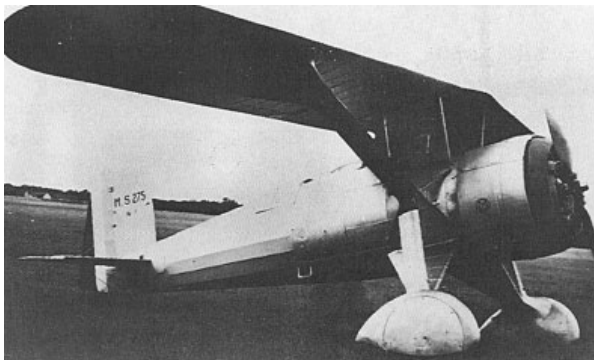
- French industry struggled to produce spare parts and, due to a lower readiness rate, the Luftwaffe was able to maintain much higher serviceability rates.

So, to sum up, France had many types of aircraft but most were inferior designs. The command structure was not set up for the type of war that was being waged. Although France did have numerous fighters, most were not operational. A large number of aircraft were held back in other theatres such as Africa, and were conserved for a longer war. Although French industry was geared up for aircraft production, spare parts were lacking and logistics was uncoordinated.

## **The AIRCRAFT**

We now take a look at the aircraft in the magazine article.

### **Morane Saulnier 275.CI**



**What the article said:** *'Rather similar to the British Hawker 'Hart' series of planes, the Moran Saulnier 275.CI is a plane originally constructed two years or so ago that is still to be seen in certain of the French fighter squadrons. The plane has a top speed of 230mph and a range of 720 miles.'*

**The reality:** Designed to fit a 1931 requirement for a new fighter, the M.S.275.CI retained the classic parasol monoplane configuration of preceding Morane-Saulnier fighters and was flown in 1934. Powered by a Gnome-Rhone nine-cylinder radial rated at 600hp at 4000m and armed with two synchronised 7.7mm guns, the M.S.275 proved exceptionally manoeuvrable and offered a very respectable performance. It found little favour, however, owing to its dated concept, development was discontinued owing to it being obsolete. Those few examples that were operational at the outbreak of war served only as trainers.

### **Morane-Saulnier M.S.406**



**What the article said:** *'France's latest and most efficient fighter now in production for delivery in large numbers to the French fighter squadrons. The 860 hp Hispano Suiza gives the plane a top speed in the region of 315mph.'*

**The Reality:** The Morane-Saulnier M.S.406 was a French fighter aircraft developed and manufactured by Morane-Saulnier starting in 1938. It was France's most numerous fighter

during the Second World War and one of only two French designs to exceed 1,000 in number. At the beginning of the war, it was one of only two French-built aircraft capable of 400 km/h (250 mph – see claimed speed above).

The type was capable of holding its own during the so-called Phoney War from September 1939 to 10 May 1940. Upon the invasion of France in May 1940, approximately 400 Moranes were lost. Out of these, around 150 were lost to enemy fighters and ground fire, while another 100 aircraft were destroyed on the ground during enemy air raids; the remainder were deliberately destroyed by French military personnel to prevent the fighters from falling into German hands.

### Loire 46

**What the article said:** *'The seagull-winged Loire 46 is another machine that can still be seen in the French Air Force. This multi-gun fighter is a single seat machine and has a top speed of approximately 250 mph.'*



**The Reality:** The Loire 46 was a French single-seater fighter aircraft of the 1930s. A high-winged monoplane designed and built by Loire Aviation, when it was purchased by the French Air Force. It was also supplied to the Spanish Republican forces during the Spanish Civil War, but was almost out of service by the outbreak of World War II. By the beginning of World War II, the Loire 46's gull wing configuration was recognized as obsolete and most of these

fighters had been relegated to *Armée de l'Air* training schools, where they were used as advanced trainers. However, one fighter *Escadrille* was still equipped with the Loire 46 during the early weeks of the war. Their performance against modern German fighters was predictable. Max speed 230mph.

### Loire 70



**What the article said:** *'One of France's largest reconnaissance flying boats, this plane has accommodation and sleeping quarters for a crew of six. The speed at sea level is 135 mph and the range is 1,550 miles.'*

**The Reality:** The Loire 70 was designed to meet a 1932 French Navy requirement for a long-range flying boat for maritime reconnaissance and bombing. The prototype first flew on 28 December 1933. It was an all-metal monoplane, with a heavily braced high wing, with three radial engines mounted above the wing, two as tractors and one as a pusher. The original engines, three 500 hp (373 kW) Gnome et Rhône 9Kbr radials, were not powerful enough and were replaced with 740 hp (552 kW) Gnome-Rhône 9Kfr radials. *Seven* production aircraft were produced.

The seven production aircraft and the prototype were all delivered to the French Navy, serving with *Escadrille E7* at Karouba in Tunisia. During the early days of World War II, the aircraft carried out patrols in the Mediterranean. In an Italian air raid on their base on 12 June 1940, three of the four surviving aircraft were destroyed. The remaining Loire 70 was one of a number of aircraft that were requested to be scrapped on 4 October 1941. They played no part in the Battle of France.

### **Breguet 691**



**What the article said:** *'This is one of the new dual-purpose machines at present being developed in France. As in the RAF where the Bristol 'Blenheim' has been developed as both fighter and bomber, the Breguet 691, with a few modifications can be converted to either bomber, reconnaissance machine or fighter.*

*The top speed is around 300 mph. There are four different types of this machine, which also include a dive bomber.'*

**The Reality:** The Bréguet 690 and its derivatives were a series of light twin-engine ground-attack aircraft that were used by the French Air Force in World War II. The aircraft was intended to be easy to maintain, forgiving to fly, and capable of 480 km/h (300 mph) at 4,000 m (13,000 ft). The type's sturdy construction was frequently demonstrated and the armament was effective. French rearmament began two years later than that in Britain and none of these aircraft were available in sufficient numbers to make a difference in 1940.

As Bréguet 691s were not available in late 1939, (when the magazine was published it was just a prototype), the crews flew the Potez 633 light bomber instead. When they were delivered, the Bréguets were popular with their crews, although the unreliable engines in the 691 affected aircraft serviceability and undercarriage failures proved especially troublesome.

### **Dewotine D-513**



**What the article said:** *'This machine is a single seater fighter with a maximum speed of 300 mph. The unusual arrangement of the airscrew in relation to the engine is occasioned by the placing of the armament.'*

**The Reality:** The D.513 was a single-seat low-wing cantilever monoplane fighter that first flew on 6 January 1936. The D.513 was powered by an 860 hp (641 kW) Hispano-Suiza 12Ycrs1 V-12 piston engine and had a retractable tailwheel landing gear. Testing proved that the D.513 was unstable and not able to reach the expected speeds and it was rebuilt with a new fuselage and a modified tail unit. The changes did not improve the stability or the maximum speed and problems were also found in the engine cooling and landing gear, and further development was halted. Maximum speed 277 mph.

## Bloch 151



**What the article said:** *'Numbered as second among the French fighters, the Bloch 151 has a 940 hp engine that gives a maximum speed of 318 mph. This plane, like the Morane Saulnier, is being used as the backbone of the modern French fighter squadrons. It is now in production in large numbers.'*

**The Reality:** The Bloch MB.150 (later MB.151 to MB.157) was a French fighter aircraft developed and produced by *Société des Avions Marcel Bloch*. It featured an all-metal construction, complete with a retractable undercarriage, low cantilever wing and an enclosed cockpit.

The MB.150 was originally developed to conform with the requirements of the 1934 French Air Ministry competition seeking a new fighter design. Despite the competition being won by the competing Morane-Saulnier M.S.406, it was decided to proceed with development. After failing to take off, the modified prototype conducted its maiden flight in October 1937. Service trials of the MB.150 determined the aircraft to hold sufficient promise to warrant further work, leading to the adoption of an expanded and strengthened wing and a more refined Gnome-Rhone 14N-7 engine. During spring 1938, following the completion of further proving trials, an order for a pre-production batch of 25 aircraft was placed.

Redesigns of the MB.150 design led to the improved MB.151 and MB.152 which entered squadron service with the *Armée de l'Air*. By the outbreak of the Second World War, around 120 aircraft had been delivered to the *Armée de l'Air*, but most were not sufficiently equipped to be considered operational.

## Marcel Bloch 200



**What the article said:** *The Marcel Bloch 200, one of the older planes that form a large part of the foundations of the Armee de L'Air. Despite the need for modern planes in a present-day air force, it is essential to have a certain number of planes on which to fall back. [A ridiculous statement]. This plane, a night bomber, has a top speed of 180 mph and a range of 620 miles.'*

**The Reality:** The Marcel Bloch MB.200 was considered a moderately good, reliable bomber at the time of its introduction (1934–1935), but it became rapidly obsolete due to the fast pace of aircraft development in the late 1930s and was largely phased out by the start of the Second World War. It was a robust, all-metal, twin-engine, high-wing monoplane that served as a staple of the French Air Force and the Czechoslovak Air Force just before World War II.

## Caudron C.670



**What the article said:** *'The Caudron C.670 heavily armed medium bomber has a top speed of 250 mph and a range of 1,625 miles. The two engines are 220 hp Renaults and the armament includes a useful load of bombs.'*

**The Reality:** Similar in concept to the de Havilland DH.88 Comet the C.640 was designed by Georges Otfinovsky and Marcel Riffard for use on long-range postal routes. The first aircraft first flew on 17 June 1935. The aircraft was a twin-engined low-wing cantilever monoplane of wooden construction. Seven C.640s were built. The 'Typhon' established 5000 km speed records. It was not a success in operation as its flexible wings experienced buffeting and vibration problems. The C.670 Typhon – was a prototype high-speed bomber version with a crew of three, similar to the C.640 but with increased dimensions and weights, only *one was built*.

## LE.O 45



**What the article said:** *'The LE.O 45 reminiscent in design of its two contemporaries, the Breguet 691 and the Potez 63, is a twin-engined high performance bomber. The top speed of this plane is about 300 mph and the range is 1,600 miles. It is interesting to note that all three of these machines have a tail unit with twin rudders.'*

**The Reality:** Lioré-et-Olivier Le.O 45 was a French medium bomber that was used during and after the Second World War. It had been designed for the new *Armée de l'air* as a modern medium bomber capable of performing independent strategic operations, unlike the majority of previous French bombers.

The Le.O 45 was a low-wing monoplane, all-metal in construction, equipped with a retractable undercarriage and powered by two 1,060 hp Gnome-Rhône 14N engines. The prototype, which made its maiden flight on 16 January 1937, had been fitted two 1,100 hp Hispano-Suiza engines. The Le.O 45 had been developed as a modern and advanced bomber for the new *Armée de L'air*, which had gained its independence on 1 April 1933. Introduced to operational service in 1938, it was a very effective and capable bomber.

As only a handful of aircraft had been introduced into the French Air Force by the outbreak of the Second World War, the Le.O 45 was too late to provide a substantial contribution during the Battle of France in the face of an invasion by Nazi Germany.

### Potez 63



**What the article said:** *'The Potez 63. This is the reconnaissance type of this machine which, similar to the Breguet, is a convertible bomber-fighter-reconnaissance plane.'*

**The Reality:** The Potez 63(0) and its derivatives were a family of twin-engined, multi-role aircraft developed for the French Air Force in the late 1930s. The design was a contemporary of the British Bristol Blenheim (which was larger and designed purely as a bomber) and the

German Messerschmitt Bf 110 (which was designed purely as a fighter).

The Potez 63(0) was in use by several operators during the Second World War. In February 1940, a new war plan, *Plan V bis*, was adopted; under this plan, nearly all Potez 630 and a number of Potez 631 aircraft were retired from front line service, with some of the 630s converted to become dual-control training aircraft.

Following the Battle of France, the Vichy French Air Force and Free French Air Forces used the type; a number of captured aircraft were operated by several air wings of the Axis powers. After the end of the conflict in 1945, a handful of aircraft were used for training purposes for some time.

### Curtis P-36A



**What the article said:** *'The Curtiss P-36A is an American machine which France has taken large deliveries of. Details of the performance of this machine are not available, but it has an all-metal construction and a 1,100 hp Pratt and Whitney "Twin Wasp" engine.'*

**The Reality:** The Curtiss P-36 Hawk, also known as the Curtiss Hawk Model 75, was an American-designed and built fighter aircraft of the 1930s and 40s. A contemporary of the Hawker Hurricane and Messerschmitt Bf 109, it was one of the first of a new generation of combat aircraft—a sleek monoplane design with a retractable undercarriage making extensive use of metal in its construction.

Perhaps best known as the predecessor of the Curtiss P-40 Warhawk, the P-36 saw little combat with the United States Army Air Forces during World War II. It was the fighter used most extensively and successfully by the French Air Force during the Battle of France. French pilots loved the Hawk 75, achieving 230 confirmed victories against only 29 losses.

## Reality Check

The magazine story with its exciting pictures of aircraft seemingly gathered together in the sky ready for a fight was very far from the truth. Mostly, these planes were either obsolete at the start of WWII, not operational or too few in numbers. One or two were barely adequate at best, with just the American Curtis P-36A (Hawk), able to face the German onslaught on anything like equal terms.

This air force was no great addition to the RAF, its numbers would have helped marginally, but the quality was not there. The statement in the article at the beginning that “...it will help to make a fighting service that is invincible not only by its quantity, but, above all, its quality,” is so wrong that it is laughable.