

French Rafale Vs Russian Su-35S: What Are the Biggest Differences ***Georgios Mavridis - HotCars***

*While the Russo-Ukrainian war shows no sight of subduing, more and more aircraft of the Russian Federation count losses. Lately, we were informed that **one Russian Su-35S was shot down by Ukrainian fire**. Based on this event and on more losses of the Russian Air Force, more light is being shed on the capabilities of complex combat aircraft.*



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*The outcome of the special **military** operation in Ukraine also hurts export sales, **as possible buyers like China and Egypt** may abandon the Russian choices. This face-off and combat effectiveness have intrigued us to compare the French Rafale with the Russian Su-35S.*

Getting To Know The Sukhoi Su-35S

The Russian aircraft is being referred to as one of the most capable fourth-generation fighters. The Sukhoi plane is often called a 4.5-generation aircraft, as it has more capabilities than a fourth-generation fighter but lacks the stealth characteristics of the fifth-generation.

The Su-35S is impressively agile and versatile, as it can operate in a bunch of different roles. That makes it a multi-role fighter. Russia promotes it as a jet that was designed with all the capabilities of a fifth-generation airplane. The Sukhoi uses a digital data control system and an improved radar system.

*It is being said that **its radar can effectively engage with eight enemy targets at the same time**. The multi-role fighter can detect an enemy threat at a distance of 250 miles. Its modern radar system helps it track 30 different targets simultaneously. Moscow believes that it can jam the radar of every Western fighter jet.*

The Su-35S is the first version of the Su-35 aircraft that was produced in big numbers. It uses the AL-41F1S engines, which are also called Saturn 117S. With these engines, the aircraft can fly at a maximum speed of 1,485 mph and a maximum altitude of 11 km. Its range is limited to 2,200 miles, while its ferry range is 2,800 miles.



Getting To Know The The French Rafale

Rafale is the excellent 4.5-generation fighter jet of France. The comparison is interesting because Rafale belongs to the same, specific generation as the Su-35S. The twin-seat multi-role fighter of Paris can perform a variety of different missions, on short or long range. These operations include air superiority, suspension, aerial surveillance, ground support, bombing, anti-ship hits, and nuclear utterance.

When it comes to the aerodynamic sector, the aircraft is called a weak plane. But the French used a fly-by-wire system to enhance its stability in a man-made way. Rafale, which was designed, developed, and produced by Dassault Aviation, will operate as the main French fighter until its replacement. Its successor will be the aircraft of the French-German next-generation fighter program.

The Key Differences Between The Rafale and Su-35S

Rafale is an impressive 4.5-generation fighter jet, while Su-35S is an improved version of the Soviet-era Su-27 Flanker. The Flanker was designed during the Cold War, as a response to the US-made F-15. The French masterpiece can achieve a top speed of 1.8 Mach, while the Russian aircraft can fly at 2.25 Mach and a higher altitude. So, in this section, the Su-35S is a clear winner.

When it comes to armament, Rafale can carry weapons in 14 different stations, while the Sukhoi aircraft in 12 stations. The available weaponry of each fighter includes a variety of different missiles, bombs, and pods. Rafale weighs 10 ton, while its Russian competitor weighs 18.4 ton. The Dassault product can take off with a maximum weight of 24.5 ton, but the multipurpose plane of Moscow with a payload of up to 34.5 ton.

Some available missiles of the French fighter include air-to-ground missiles and air-to-air missiles. These weapons are the most effective missiles of the French military. On the contrary, Su-35 has the biggest variety, like air-to-air missiles, air-to-surface missiles, anti-ship missiles, and anti-radiation missiles.

When it comes to range, Rafale can cover a maximum distance of 2,300 miles, while Su-35S can fly in a range of 2,200 miles. Although, [two external gas tanks can make it fly 600 miles farther](#), reaching a maximum range of 2,800 miles. Dassault's aircraft can reach a maximum altitude of 50,000 feet (9.5 miles), while the Russian jet can fly up to 62,000 feet (12 miles) high.

At the end of the day, comparing these two multi-role fighters gets us to this point; Su-35S can take on a wider range of missions due to the biggest variety of weapons and the biggest range. On the other hand, Rafale turns out to be a more air superiority-focused jet, that can handle dog fighting better than its Russian competitor.

Although, that doesn't mean it can complete with success another type of mission. Don't forget that Rafale-M is a very capable naval version for operations on aircraft carriers. It just makes sense that based on the position of France on the map, Paris wanted a fighter that could focus on air-to-air and on air-to-surface battles.

Sources: Dassault Aviation, Rostec, Military Today