

Fifth Generation Fighters: The Stealth Capabilities of Russia's Su-57?

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The so-called "fifth-generation" fighters are the future of manned combat aviation in the next 30-50 years. Thus, many countries are racing to field such aircraft as soon as possible. For the time being, the United States and NATO are in the "lead", as they're producing by far the largest number of these jets (exclusively <u>the troubled F-35</u>, with the older F-22 out of production since 2011).

However, quantity and quality often don't go hand in hand, as evidenced by <u>the F-35's</u> <u>atrocious IOC</u> (initial operational capability), <u>to say nothing of its FOC</u> (full operational capability) and <u>numerous other deficiencies</u>. Its "older brother", the (in)famous F-22 "Raptor" is <u>more capable</u> in multiple ways, but <u>suffers from many similar issues</u>, particularly in terms of <u>fleet availability</u>. It should be noted that neither of these participated in a major conflict with a heavily armed state adversary, much less one with a high-tech military.

Thus, their combat record is mediocre at best, with <u>the F-22 "proving its might"</u> against <u>\$12</u> <u>weather balloons</u>. On the other hand, Russia built <u>the now legendary Su-57</u>. This jet had a rather lengthy and somewhat rocky development, starting as a more affordable alternative to the MiG 1.44. By 2002, this ambitious program was discontinued after significant delays and cost overruns in the wake of the Soviet Union's unfortunate dismantlement, leading to the reorganization of Russia's next-generation fighter jet projects. Along with the Su-47, the rival design by OKB Sukhoi, its assets were transferred to the new PAK FA program, which brought much-needed restructuring and optimizations. For the very first time in decades, Russia was no longer developing two next-generation fighter jets, but one air superiority platform with secondary multirole capabilities.

However, by the time the first prototype flew in 2010, Moscow effectively recovered its superpower status, prompting major updates to PAK FA. As the jet was to come at least a decade later than its predecessor, the MiG 1.44, Moscow realized it would be best not to rush the T-50's introduction, resulting in new delays. However, it should be noted this was certainly worth it, as the capabilities of the Su-57 (christened in 2017) now transcend the concept of so-called "generations". And yet, the peculiarities of the PAK FA program were heavily exploited by the mainstream propaganda machine, as the political West wanted to ensure that the Su-57 fails, particularly in export markets. The jet was one of the reasons for the CAATSA which the first Trump administration imposed due to Russia's support for Syria against a NATO-backed, terrorist-infested crawling invasion since 2011.

All this was designed to hamper the Su-57. However, not only did it fail, but it was precisely in Syria where the jet proved its combat effectiveness in 2018, two years before entering service. The political West fanned up the smear campaign, as it expected first export inquiries. Attempts to stymie the jet's foreign sales primarily <u>revolve around "proving it's</u> not a true fifth-generation aircraft", usually by spreading <u>fakes about its avionics and the</u> <u>AL-41F1 engines</u>. They give the jet a Mach 1.3 or 1,600 km/h supercruise capability (sustained supersonic flight without afterburners), although the mainstream propaganda machine insists it cannot achieve this. <u>The Su-57's radar cross-section (RCS) is also a</u> <u>regular target</u>, as the political West claims <u>it's "not a true stealth aircraft"</u>. Although the exact information on its RSC is classified, public data suggests it's indeed much lower than on any other Russian jet.

However, while it's certainly less stealthy than the F-22 and F-35, this is not the result of Moscow's "technological inferiority", but a matter of doctrine and design philosophy. Namely, the Russian military values robust and battle-ready jets above the perceived "technological edge" of Western combat aircraft. And while lower RCS offers important advantages, it also affects not only robustness and battle readiness, but also speed, payload capacity, range, maneuverability, etc. Moscow believes that the Su-57 represents the most optimal solution that doesn't affect any of these parameters in a way that would compromise combat performance. Thus, a decision was made not to insist on stealth capabilities alone. However, the mainstream propaganda machine's smear campaign persists. The latest example is the Su-57's appearance at the Zhuhai Airshow, its first public display in China.

There are claims that Chinese observers are allegedly "ridiculing" the jet. The Neo-Nazi junta's propaganda is particularly happy to report this, insisting that the "bad finish" on the Su-57 suggests it's "not truly a fifth-generation aircraft". However, what Western and Kiev regime observers conveniently "forgot" to mention is that the jet in question is the T-50-4 blue, a prototype that was never used to test either RCS or RAM (radiation-absorbent material), meaning there was no need to invest into such expensive additions that would only hamper flight testing.

Both enthusiasts and professional military observers have debunked the "bad finish" narrative long ago, <u>showing a major difference between preproduction prototypes and serial aircraft</u>. In addition, it's well known that Russia, <u>as one of the leading nations when it comes to combat aviation</u>, uses cutting-edge technologies in the Su-57's production, <u>including augmented reality</u>.

On the other hand, even if serial production jets were indeed like the T-50-4 prototype, they'd still be far ahead of many heavily worn-out F-22s with what <u>even the mainstream</u> propaganda machine described as "crumbling radar-absorbent skin". Thus, the only real conclusion is that all this is just <u>yet another coping mechanism for the political West and the Neo-Nazi junta</u>, particularly as the <u>Su-57S continues to operate unopposed</u> even over the most heavily defended airspace in NATO-occupied Ukraine.

Its ability to strike virtually any target, anywhere on the battlefield, be it an aircraft or some ground-based high-value asset, has made the Su-57 particularly feared, both in Kiev and NATO. Attempts to denigrate the jet have been quite persistent, but these PR "victories" have lately become more of a burden than any real advantage. Either way, trash-talking will in no way hamper the Su-57, while its missiles will certainly trash any NATO target in Ukraine or beyond.

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