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Analyst: Russian MiG-29 and Su-27 Top American F-35

by Brendan McGarry

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Can Soviet-era fighter jets like the one above, the twin-engine MiG-29 Fulcrum, or the bigger one below, the Su-27 Flanker, outperform the newest American design, the F-35 Joint Strike Fighter?

Yes, according to Bill French, a policy analyst with the National Security Network, a Washington, D.C.-based think tank favors progressive defense policies. He's the author of a report released Tuesday by the organization. It's titled, "Thunder without Lightning: The High Costs and Limited Benefits of the F-35 Program," a pun on the jet's official name, Lightning II.

The document comes a month after news of an internal Pentagon review that detailed how an F-16 outperformed an F-35 in a dog-fight.

In his research, French wrote the Joint Strike Fighter performed only slightly better than the F-16, F-18 and AV-8B Harrier — the U.S. aircraft it's slated to replace. What's more, he compared the power, maneuverability and maximum payloads of the fifth-generation stealth fighter against those of the older Russian aircraft.

Here's what he wrote:

"The F-35's performance characteristics also compare unfavorable to already deployed foreign 4th-generation fighters such as the Russian-designed MiG-29 Fulcrum and Su-27 Flanker (also produced by China) in service with air forces around the world. These are the kinds of aircraft the F-35 would most likely face in air-to-air engagements against a high-end opponent. Compared to both the Su-27 and the MiG-29, the F-35 is grossly inferior in terms of wing loading (except for the F-35C), transonic acceleration, and thrust-to-weight. All F-35 variants also have significantly lower maximum speeds, Mach 1.6 for the F-35 compared to Mach 2.2 for the Su-27 and Mac 2.3 for the MiG-29.

Air-to-air simulations paint an even grimmer picture. In 2009, U.S. Air Force and Lockheed Martin analysts indicated that the F-35 could be expected to achieve only a 3-to-1 kill ratio against the decades-old MiG-29 and Su-27 despite its advantages in stealth and avionics. The results of other simulations have been far worse. In one simulation subcontracted by the RAND Corporation, the F-35 incurred a loss exchange ratio of 2.4–1 against Chinese Su-35s. That is, more than two F-35s were lost for each Su-35 shot down. While these simulations take into account a host of other factors and include assumptions about the context in which the engagements take place, they nevertheless underscore the need for skepticism regarding the F-35's air-to-air capabilities.

Unfortunately, there are insufficient data on foreign 5th-generation fighters to allow for meaningful comparisons. Three such fighters are known to be under development: the Russian PAK FA and the Chinese J-20 and J-31.

The F-35 is the Pentagon's most expensive weapons acquisition program, estimated to cost $391 billion to purchase 2,457 aircraft for the Air Force, Marine Corps and Navy.

The Corps recently announced the F-35 Joint Strike Fighter was ready to fly initial operations — albeit with a less lethal version of the aircraft. The Air Force is expected to make a similar declaration in 2016 and the Navy in 2019.

Corps officials have acknowledged they'll have to "make do" with a less lethal version of the airplane. For example, the early operational F-35Bs won't include a new night-vision helmet, Small Diameter Bomb II or GAU-22/A four-barrel 25mm Gatling gun — or the ability to stream video or simultaneously fuse sensor data from four aircraft.

Many of the weapons improvements will be included as part of a future software upgrade, known as 3F, which is slated for fully operational F-35Bs in late 2017. Indeed, proponents of the aircraft argue that fully operational Joint Strike Fighters will easily outperform fourth-generation aircraft.

Eight countries have committed to help develop the F-35, including the U.K., Italy, the Netherlands, Turkey, Canada, Australia, Denmark and Norway. Also, Israel, Japan and South Korea plan to buy production models of the aircraft.