

The F-35A Joint Strike Fighter: “A Stealthy Price” for Canada

Harper’s Stealth Campaign to Purchase Not-So-Stealthy F35 Fighter-Bombers

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Stephen Harper’s campaign to persuade Canadians of the merits of the Lockheed-Martin F-35A Joint Strike Fighter has been a stealthy one. But has he successfully evaded the BS-detector radar defences of the Canadian electorate?

1. A stealthy price?

Mr. Harper has told us—in that bored-Sunday-school-teacher tone of patient exasperation that seems to be his native accent—that the 65 F-35As he bargained for at a cost of just \$75 million Canadian each are a “good deal” for this country.

But there are problems with that price-tag—a figure which, as defence journalist David Pugliese notes, “is nowhere to be found in official U.S. government reports on the aircraft.”[1]

The US Government Accountability Office (GAO) “has warned about serious ongoing problems with the aircraft and rising costs,” and estimates “that the F-35 model that Canada is buying will cost between \$110 to \$115 million per plane.”[2]

US Vice Admiral David Venlet, who heads the F-35 Joint Program Office, testified to a US congressional committee in March 2011 that his confident “procurement cost estimate” for the F-35A, the conventional take-off and landing model that Stephen Harper wants, is “\$126.6 million (including \$15 million for the engine).”[3]

Winslow Wheeler, a former defence procurement analyst with the GAO and currently Director of the Straus Military Reform Project of the Washington, DC Center for Defense Information, warns that the F-35As, including their engines, will probably cost Canada “around \$148 million” each.[4]

Liberal leader Michael Ignatieff has proposed that the price per unit will amount to some \$156-million US when a maintenance contract is included.[5]

Steven Staples, President of the Rideau Institute and founder of Ceasefire.ca, noted in January 2011 that “Canadians are being asked to spend between \$16 and \$21 billion of public dollars in initial purchase and maintenance costs, according to Department of National Defence estimates, [...] without a clear explanation of why [F-35s] are needed for our protection.”[6] According to the Parliamentary Budget Officer, however, the DND estimates are misleading: the F-35 program’s full cost to Canada will be more like \$29.3-

billion, or \$450-million for each plane over its planned lifetime.[7]

Stephen Harper does indeed have supporters in this debate. Prominent among them is retired General Paul Manson, former Chief of the Defence Staff—who in January 2011 stealthily neglected to say, when he co-authored an Ottawa Citizen op-ed piece pushing the F-35 deal, that he is also a former Chairman of Lockheed Martin Canada, and a former member of the Board of that same company.[8]

When he's not in stealth mode, General Manson's default posture seems to be bluster: his notion of refuting Winslow Wheeler's critique of the F-35 deal is to denounce it as "a low-credibility rant by an American visitor from a left-wing Washington organization renowned for its anti-defence posture." [9] (That would be the Center for Defense Information, "an organization founded by retired American generals and admirals." [10])

2. Stealthy engines?

There may be problems not just with the F-35A's price, but with its engine as well. The Pentagon's original procurement plans called for the development of two competing engine models, one by Pratt & Whitney, and the other by General Electric and Rolls-Royce. Shortly after the Pentagon cancelled the second engine program in March 2011, all twelve of the F-35 test planes had to be grounded due an in-flight failure of both electrical generators in one of the Pratt & Whitney engines.[11]

That little glitch may evoke unhappy memories among retired air force pilots of another Lockheed single-engine fighter, the CF-104 Starfighter, which entered service with the Canadian air force in 1962. Canada had a total of 200 CF-104s, of which fully 110 were lost in accidents, many of them engine flame-outs. The surviving Lawn Darts, or Widowmakers, as pilots called them, were replaced by two-engine CF-18s during the 1980s.[12]

We should be asking whether it makes sense for an air force that flies fighter planes, sometimes in difficult weather conditions, out of bases like Cold Lake, Alberta and Goose Bay, Labrador, to send its pilots up in single-engine aircraft.

But Stephen Harper appears to have finessed the engine question by quoting a price for the F-35A that includes neither the program's rapidly escalating development costs over the past several years nor—more basically—the cost of supplying these aircraft with engines.[13]

Is it possible, one might wonder, that Harper actually means it when he sits down at the piano to warble out John Lennon's peace anthem, "Imagine"? [14] Is he willing to buy fighter-bombers, yes, but not the engines that would get them into the air, where they might harm other human beings—or even other fifth-generation fighter aircraft, like the Chinese J-20 and the Russian Sukhoi 35S and T50 PAK SA? Or are Harper's "Imagine" and his fiddling with F-35 figures just two more instances of stealth behaviour? [15]

3. A not-so-stealthy aircraft?

There appear to be problems, finally, with the F-35s performance. Perhaps most strikingly, the plane's geometry means that it is significantly stealthy (that is, able to avoid early detection and 'lock-on' by enemy radar) only from directly in front. Together with recent and ongoing improvements in air defence radar systems, this suggests that the F-35 will be unable to reliably carry out its primary ground-attack role unless air defences have already

been disabled by more capably stealthy fighters like the F22.[16]

In other respects as well the F-35 has been harshly criticized. Winslow Wheeler has called the aircraft a “gigantic performance disappointment,” with sluggish aerodynamics and merely average performance as a bomber.[17] Although it is being marketed as a multi-role aircraft, the F-35 appears to be overmatched by other currently available fighter aircraft, in terms both of the weaponry it can carry and its powers of evasion. One expert has quoted Major Richard Koch, chief of the USAF Air Combat Command’s advanced air dominance branch, as saying: “I wake up in a cold sweat at the thought of the F-35 going in with only two air-dominance weapons.”[18] And in a recent computer-simulation wargame conducted in Australia which matched F-35s against new-generation Russian fighters, the F-35s were outmaneuvered, out-climbed, and outrun[19]—or, as one report brutally put it, they were “clubbed like baby seals.”[20]

Some of the basic facts about the F-35’s limitations have been usefully summarized by the Australian expert, and F-35 opponent, Carlo Kopp:

“The F-35 is an aircraft which was defined as a battlefield interdictor, intended to attack and destroy hostile battlefield ground forces, once opposing air defences have been stripped away by the much more capable, and now cheaper F-22 Raptor. The JSF aircraft was defined for a very narrow niche role, and its intended performance and capabilities were constrained to avoid overlapping other US Air Force capability niches, such as ‘deep strike’ occupied by the F-15E and F-22A, and ‘air dominance’, occupied by the F-22A.

“The actual F-35 aircraft, as it has ‘devolved’ through a problematic and protracted development process, shows all the signs of falling well below the promised and mediocre performance targets set in the original definition document.

[...] What is remarkable about the Canadian government decision to pursue the F-35 is that it occurred during a period where the failure of the F-35 Joint Strike Fighter is patently obvious, well documented publicly, and provable by reading a myriad of US and non-US public documents.”[21]

A lucid alternative to the F-35A program has been advanced by Steven Staples of the Rideau Institute and published by the Canadian Centre for Policy Alternatives. He proposes, first, abandoning so-called “expeditionary” roles for the Canadian air force. (And why not? Since the Cold War that justified Canada stationing interceptors and fighter-bombers in Western Europe is long past, of what conceivable use are F-35s abroad, unless to participate in dubious and illegal resource wars like the one currently underway in Libya?)

Staples suggests extending the life of Canada’s existing CF-18s by restricting them to a domestic air defence and air surveillance and control role, and considering less expensive alternatives to the F-35. (These might include modernized versions of the current CF-18 Super Hornet, or other aircraft such as the Saab Gripen or the Dassault Rafale—and, for other purposes, the coming generation of long-range, long-endurance pilotless aircraft.)

We could then, Staples says, use the money saved by these measures “to contribute to Canadian and global security in more effective ways.”[22]

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Notes

[1] David Pugliese, "Canadian Public Has Been Provided With F-35 Information, Says Harper. Conservative Leader Says Stealth Fighter Purchase a 'Good Deal' For Canadians," *Ottawa Citizen* (11 April 2011), <http://communities.canada.com/ottawacitizen/blogs/defencewatch/archive/2011/04/11/canadian-public-has-been-provided-with-f-35-information-says-harper-conservative-leader-says-stealth-fighter-a-quot-good-deal-quot-for-canadians.aspx>.

[2] David Pugliese, "Will F-35s include engines? Defence Department report raises questions," *Winnipeg Free Press* (17 April 2011), <http://www.winnipegfreepress.com/canada/will-f-35s-include-engines-119997399.html?device=mobile>.

[3] Quoted from a statement issued by Alan Williams, former Assistant Deputy Minister (Materiel) of the Defence Department, in response to the Conservative Party's April 10, 2011 media release; reproduced by Pugliese, "Canadian Public Has Been Provided."

[4] David Pugliese, "Canada's F-35s: Engines not included. Government will be required to provide powerplant for stealth fighters, documents show," *Ottawa Citizen* (17 April 2011), <http://www.ottawacitizen.com/news/Canada+Engines+included/4629251/story.html>.

[5] Max Munsle, "Canadian Politicians Lack Problem-Solving Skills in F-35 Debate," *Canadian Affairs by Suite 101* (26 April 2011), <http://www.suite101.com/content/canadian-politicians-lack-problem-solving-skills-in-f-35-debate-a367938>.

[6] Steven Staples, "Harper's F-35 stealth fighter purchase confirms Eisenhower's warning," *Rabble.ca* (17 January 2011), <http://rabble.ca/news/2011/01/harpers-f-35-stealth-fighter-purchase-confirms-eisenhowers-warning>.

[7] Munsle, "Canadian politicians"; and Mary Bourrie and Zhang Dacheng, "F-35 purchase continues to dominate debate in Canadian election," *Xinhuanet.com* (11 April 2011), http://news.xinhuanet.com/english2010/world2011-04/11/c_13822831.htm.

[8] "Ottawa Citizen Article by Paul Manson and Angus Watt," *F-35: Canada's Next Generation Fighter* (24 January 2011), <http://f-35.ca/2011/ottawa-citizen-article-by-paul-manson-and-angus-watt/>.

[9] Paul Manson, "Don't lecture us about defence," *Ottawa Citizen* (13 April 2011), <http://www.ottawacitizen.com/opinion/lecture+about+defence/4605568/story.html>.

[10] I derive this information from *Ceasefire.ca*, which is linked to the Rideau Institute—described in Manson's letter as "farleft." See "Manson: Stop ranting!!!" *Ceasefire.ca* (17 April 2011), <http://www.ceasefire.ca/?p=7775>.

[11] Bob Cox, "F-35 engine debate rages; plane's cost deepens political flap in Canada," *Fort Worth Star-Telegram* (24 March 2011),

http://www.star-telegram.com/2011/03/24/2948479/f-35-engine-debate-rages-planes.html#0_undefined,0_

[12] “Canadair CF-104 Starfighter,” Wikipedia, http://en.wikipedia.org/wiki/Canadair_CF-104_Starfighter. The German Luftwaffe made less intensive use of its 916 Starfighters, but still lost 292 planes—and 115 pilots—to accidents. See “List of F-104 Starfighter operators,” Wikipedia, http://en.wikipedia.org/wiki/List_of_F-104_Starfighter_operators

[13] Pugliese, “Canada’s F-35s: Engines not included.”

[14] Stefan Christoff, “Imagine that, Yoko Ono nails Stephen Harper for copyright infringement,” Rabble.ca (7 April 2011), <http://rabble.ca/news/2011/04/imagine-yoko-ono-nails-stephen-harper-copyright-infringement>.

[15] Harper’s repertoire also includes the Rolling Stones’ “Jumping Jack Flash”; see “Harper rocks Tory party with musical performance,” Toronto Star (8 December 2010), <http://www.thestar.com/news/canada/article/904009-harper-rocks-tory-party-with-musical-performance>. For one musician’s response, see Dick Overdale, “Hey Stephen, you can’t play in my band,” Rabble.ca (27 April 2011), <http://rabble.ca/rabbletv/program-guide/2011/04/best-net/hey-stephen-you-cant-play-my-band-1>. The best available dissection of Harper’s behaviour is by Murray Dobbin, “Harper’s Hitlist: Power, Process and the Assault on Democracy,” The Council of Canadians (15 April 2011), <http://www.canadians.org/democracy/index.html>.

[16] Noah Shachtman, “\$337 Billion Stealth Jet Not So Stealthy: Report,” Danger Room: What’s Next in National Security (7 January 2009), <http://www.wired.com/dangerroom/2009/01/report-joint-st/>. The report in question is by Dr. Carlo Kopp, “Assessing Joint Strike Fighter Defence Penetration Capabilities,” Air Power Australia (10 April 2011), <http://www.ausairpower.net/APA-2009-01.html#mozToCld927290>.

[17] Greg Markey, “U.S. Expert says F-35 purchase is wrong deal for Canada,” Ottawa Citizen (13 April 2011), <http://www.ottawacitizen.com/technology/expert+says+purchase+wrong+deal+Canada/4564357/story.html>.

[18] Quoted by Bill Sweetman, “JSF Leaders Back in the Fight,” Ares: A Defense Technology Blog, in Aviation Week (22 September 2008), <http://www.aviationweek.com/aw/blogs/defense/index.jsp?pickController=Blog&pickScript=blogScript&pickElementid=blogDest&pickBlogPage=BlogViewPost&pickPostid=Blog%3A27ec4a53-dcc8-42d0-bd3a-01329aef79a7Post%3Ab1c3536a-8d96-481f-aef5-d6428ec6f9ca>.

[19] Jeroen Trommelen, “2016: Russen overweldigen JSF,” vk.nl (20 September 2008), <http://www.volkskrant.nl/vk/nl/2686/Binnenland/article/detail/923142/2008/09/20/2016-Russen-overweldigen-JSF.dhtml>. “Volgens de analyse zal hij ook directegevechten moeten leveren. Daarin es hij ‘dubbel inferieur’, omdat hij ‘niet kan draaien, niet kan klimmen en niet kan rennen’.”

[20] Quoted by Sweetman, “JSF Leaders Back in the Fight.”

[21] Dr. Carlo Kopp, "F-35 JSF: Can It Meet Canada's Needs?" Air Power Australia (19 October 2010), <http://www.ousairpower.net/APA-NOTAM-191010-1.html> .

[22] Steven Staples, "Pilot Error: Why the F-35 stealth fighter is wrong for Canada," Canadian Centre for Policy Alternatives (14 October 2010), available at <http://www.rideauinstitute.ca/2010/10/14/pilot-error-why-the-f-35-stealth-fighter-is-wrong-for-canada> .

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