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QUELLING THE BLEEDING: ROYAL CANADIAN AIR FORCE PILOT EXODUS

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AIM

1. The inability to retain military pilots is a growing problem affecting the Royal Canadian Air Force (RCAF). All too often, pilots who have acquired advance skills and qualifications are leaving military service. Furthermore, military pilots are choosing to leave the RCAF resulting in a significant gap in experience and leadership. The loss of experienced pilots could potentially result in shortfall in future requirements as new aircraft are fielded in Canada. However, there is a way forward; through examination of the current United States (US) Marine Corps and Navy initiatives, the RCAF can apply an aviation bonus (AvB) that would quell pilot losses and allow the Canadian Armed Forces (CAF) to guarantee a return of investment. The AvB is a tool designed to target and stabilize critical manning shortfalls affecting the RCAF pilot population. Hopefully by expanding thought and discussing available options, we can continue to have open dialogue aimed at enhancing pilot retention.

INTRODUCTION

2. Pilot retention is a known issue in the RCAF and the US military. The time and money allocated to training a pilot makes them a much sought-after asset to the civilian sector. Additionally, the military cannot keep up with the allure of the civilian sector and are hemorrhaging talented pilots at an unsustainable rate. A report from officials at the RCAF forecasted a recent shortage of 275 pilots, ultimately reducing Canada's mission effectiveness in all types, models, and series of aircraft in the inventory for current and

future demands.¹ US studies have shown that the airline industry is currently, and will continue to, increase pilot hiring and target qualified military pilots to join their ranks.² Additionally, the airline industry is currently in the throws of a pilot shortage of their own, except they have the budget to offer significant increases in pay to pilots who leave the military. Moreover, future requirements show that the RCAF must recruit, train, and qualify approximately 7,000 pilots to replenish the outpour of pilots to the airlines in Canada in order to field the future fighter.³ The rates at which the RCAF are losing pilots are not sustainable from an operator aspect and not economically viable from a budgetary standpoint. An increase in pilot retention can only occur when a fair examination of the problem from the perspective of the aviator is considered.

3. Ultimately, military pilots are in search of a balance of monetary compensation, off-time, family time, and job satisfaction. However, when one or more of these aspects falls short of expectation, there must be fair and equitable redistribution of either money, time, or fulfillment; leadership must recognize their shortfalls and seriously consider offering an AvB to incentivize service. Additionally, there is no need to develop a policy from scratch because there are current AvB programs aimed at pilot retention being used in the US armed services. Most notably, the US Marine Corps has recently invested in the AvB program to target key experience levels and sustain critical manning shortfalls in its aviation platforms. The amount of money offered to pilots and additional contractual

¹ Berthiaume, Lee. "Canada's Air Force Is Losing Too Many Experienced Pilots - and the Clock Is Ticking." Global News. Global News, February 10, 2019. <https://globalnews.ca/news/4945534/canada-air-force-pilot-shortage/>.

² Mattock, Michael G., Beth J. Asch, James Hosek, and Michael Boito, "The Relative Cost Effectiveness of Retaining Versus Accessing Air Force Pilots." PDF file. Santa Monica, CA: RAND Corporation, 2019, March 27, 2019. https://www.rand.org/pubs/research_reports/RR2415.html

³ Berthiaume. "Canada's Air Force Is Losing Too Many Experienced Pilots..."

obligations were ascertained through an in-depth analysis by RAND and applied to the US Marine Corps aviation. Furthermore, the RCAF and the US Marine Corps have a great deal of similarities with the size of their fleet, budget, and issues. The parallel between the RCAF and US Marine Corps aviation could extend even further to application of the AvB policy. If the RCAF implemented a similar AvB program, then seasoned and capable Canadian pilots could be retained. With increased retention, pilot inventories would be stabilized for a known amount of time and give time for exploration of long-term solutions and policy changes.

DISCUSSION

4. With Canada's future fighter procurement on the horizon, there will be a need for a larger pool of trained pilots to both train on the new aircraft and continue to fly the legacy CF-18. However, current CF-18 pilot replacement rates were found to be at a rate of 30 pilots trained for every 40 leaving service.⁴ The loss rate is not sustainable to continue current operations, yet alone usher in a new fighter. Even more shocking, were the results of a recent auditor general report that determined that the RCAF could "no longer defend Canadian air space and carry out NATO missions in Europe" because the loss of pilots and maintainers is occurring at too rapid a rate.⁵ Despite an obvious overall reduction of mission effectiveness, there is an institutional failure to fill the experience void created by those combat-seasoned pilots who were operationally deployed and have since departed the pattern.

5. The experience level lost from mid to senior pilots is unquantifiable. The

⁴ *Ibid.*

⁵ Fisher, Matthew. "RCAF's Pilot Shortage Being Felt in Romania." Canadian Global Affairs Institute. Canadian Global Affairs Institute. Accessed October 6, 2019.
https://www.cgai.ca/rcafs_pilot_shortage_being_felt_in_romania.

implications of lost experience is best explained by the current Commander of the RCAF, Lieutenant General Alexander Donald Meinzinger who said, “[e]xperience is what allows us to (transfer knowledge) and grow for the future.”⁶ He goes on to say that experience is “kind of the center of gravity. In the extreme, if you lose all your experience, you can’t regenerate yourself.”⁷ The RCAF aviation communities are becoming more inexperienced than that of RCAF pilots in the past as a result of failing pilot retention. In fact, LGen Meinzinger explained to reporters at a recent press event that, “many pilots today are likely to have less experience than counterparts in similar positions 10 years ago.”⁸ With depleting experience levels, commanders are left shouldering a greater burden of risk and required to accomplish the mission without the requisite personnel.

6. The experience vacuum is being felt in the RCAF writ large from garrisoned squadrons to deployed units. LCol Timothy Woods, of Air Task Force Romania, who has personally seen the effects of pilot retention issues on deployment recently told press that he “couldn’t fix the [pilot] losses quickly enough” and he is concerned that the CF-18 community is “losing our core experienced fighter pilots to train the next generation.”⁹ We are at a crossroads in retention and failure to implement a change will leave the RCAF woefully short of experienced pilots to train and ultimately defend Canada’s interests. Moreover, if a timely change is not implemented, retention will reach a veritable tipping point requiring an exponential increase in time and money to correct. Changes in current policy, pay, and bonuses could go a long way; if for nothing else, but to display an act of institutional good faith and communicate an awareness of a problem

⁶ Berthiaume. “Canada’s Air Force Is Losing Too Many Experienced Pilots...”

⁷ *Ibid.*

⁸ *Ibid.*

⁹ Fisher. “RCAF’s Pilot Shortage Being Felt in Romania.”

to its operators.

7. In the US, all of the armed services have been having difficulty with retaining experienced pilots. Recently, the US commissioned a RAND study to better address the pilot retention problem plaguing the US Air Force. In March 2019, RAND released their study reviewing the feasibility, scope, and suggested AvB amount necessary to limit the outpour of pilots from the military. The study found that the cost to train and initially qualify US Air Force pilots varied from \$1.1 million to \$10.9 million and that fighter pilots are more expensive to train than traditional fixed-wing pilots.¹⁰

The cost to train fighter pilots is more expensive than the cost to train rotary-wing or traditional fixed-wing pilots because of the increased time to train and larger operating costs of fighter aircraft. Training pilots is expensive and when retention fails, this equates

Table 1. The Total Cost of Training a Basic Qualified Pilot, by Aircraft Platform, in Fiscal Year 2018 Dollars¹¹

Aircraft	Cost per Pilot
A-10	5,961,000
B-1	7,338,000
B-2	9,891,000
B-52	9,688,000
C-130J	2,474,000
C-17	1,097,000
C-5	1,397,000
F-15C	9,200,000
F-15E	5,580,000
F-16	5,618,000
F-22	10,897,000
F-35A basic ^a	10,167,000
F-35A transition ^b	9,467,000
KC-135	1,196,000
RC-135	5,447,000

SOURCES: Air Force Total Ownership Cost data; Air Combat Command, 2014a, 2014b, 2015, 2016, and 2017; AETC, 2012, 2013, 2014a, 2014b, 2014c, 2015a, 2015b, and 2015c; Air Force Global Strike Command, 2012 and 2016; Air Mobility Command, 2016.

^a A student must have graduated from introduction to fighter fundamentals.

^b For pilots previously qualified on F-35 or other fighter or attack aircraft.

¹⁰ Mattock. "The Relative Cost Effectiveness of Retaining Versus Accessing Air Force Pilots."

¹¹ *Ibid.*

to an overall loss in investment, time and money. Conversely, RAND took a different approach at the problem to see all available options from every possible angle. They wanted to determine if it were more economical to increase accession and training throughput to offset the loss of experienced pilots then focus on retainment with an AvB.¹² The study determined that “increasing AvB to increase retention is more efficient than expanding the pipeline to sustain a given pilot inventory.”¹³ Additionally, RAND concluded, “[t]he reason that increasing AvB is more efficient than increasing accessions is that pilot training cost is so high.”¹⁴ RAND found that an AvB below \$100,000 per year would prevent building too senior of an aviator pool that failed to allow for the addition of new pilots. Instead, RAND determined that the optimum amount for compensation to allow for continued growth and sustainment was “from \$25,000 to \$35,000” per year.¹⁵ By aiming at around \$35,000, experience levels would be tempered and balanced because the bonus is high enough to retain more pilots, but not so high that it would retain everyone.

8. In a similar vein, the US Marine Corps recognized a large shortage of pilots in 2016 and began using the AvB program as a tool to control the aviator population and slow pilot outflow to the civilian sector. In July 2019, the US Marine Corps released a Marine Administrative Message (MARADMIN) 388/19 clarifying bonus stipulations and the eligible population. MARADMIN 388/19 explicitly stated that the AvB plan is “a program [that] provides a proactive, short-term incentive for aviation officers in certain

¹² Mattock. “The Relative Cost Effectiveness of Retaining Versus Accessing Air Force Pilots.”

¹³ *Ibid.*

¹⁴ *Ibid.*

¹⁵ *Ibid.*

grades and communities with current or forecasted inventory shortfalls.”¹⁶ The MARADMIN was specifically targeting pilots in the 10 – 14 total Years of Service (YOS) demographic because that group of aviators has a wealth of operational experience and corporate knowledge that is deemed valuable to the organization. It is also necessary to note for timing purposes, that it takes approximately four years to qualify an aviator in their respective fleet aircraft. Moreover, once complete with training, fixed-wing pilots must incur a 6-year obligation. However, included in a pilot’s total time to train is completion of a 6-month officer course that is required of all Marine officers directly after commissioning. Therefore, once a US Marine pilot is complete with all their training, they arrive to their first squadron with approximately four to five YOS. Additionally, they are not eligible to leave the service until completion of a 6-year service obligation – roughly equating to 10 to 11 total YOS before being contractual obligations are met. Per Table 2, bonuses are broken down by pilot community, YOS, contract length and payout; the table shows that the bonus targets pilots near the halfway mark of their career. The monetary incentive offered to aviators, if accepted obligates further service until approximately 17 to 19 YOS —where they are just shy of a 20-year retirement.¹⁷ The AvB is not only an option available to the Marines but again lends for easy application to the RCAF. As LtGen. Michael Rocco, the Deputy Commandant for Marine Manpower and Reserve Affairs (MMRA) said, the AvB helps “retain its best

¹⁶ “FY20 Aviation Bonus (AVB) (MARADMIN 388/19).” Marines.mil - The Official Website of the United States Marine Corps. United States Marine Corps, July 11, 2019. <https://www.marines.mil/DesktopModules/ArticleCS/Print.aspx?PortalId=1&ModuleId=542&Article=1901903>.

¹⁷ Snow, Shawn. “The Corps Is Dishing out \$280,000 Bonuses to Qualified Pilots.” Marine Corps Times. Marine Corps Times, June 27, 2019. <https://www.marinecorpstimes.com/news/your-marine-corps/2019/06/27/the-corps-is-dishing-out-280000-bonuses-to-qualified-pilots/>.

aviators” and by offering an incentive, “[i]t adds one more positive benefit when Marine aviators weigh their options whether to continue serving or move on from the military.”¹⁸

Table 2.¹⁹

FISCAL YEAR 2020 AVIATION BONUS				
The Corps is once again dishing out big bonuses to Marine aviators. For fiscal year 2020, Osprey and F-35 pilots can net \$280,000 if they sign a lengthy eight year contract.				
PILOT COMMUNITY	YEARS OF COMMISSIONED SERVICE	CONTRACT	YEARLY	TOTAL
F-35 MV-22	<11 YEAR	8 YEAR	\$35K	\$280K
	<12 YEAR	6 YEAR	\$35K	\$210K
		4 YEAR	\$25K	\$100K
	12 - 14 YEAR	5 YEAR	\$35K	\$175K
		4 YEAR	\$25K	\$100K
	>14 YEAR	3 YEAR	\$25K	\$75K
F/A-18 AV-8 C-130	<12 YEAR	6 YEAR	\$35K	\$210K
		4 YEAR	\$25K	\$100K
	12 - 14 YEAR	5 YEAR	\$35K	\$175K
		4 YEAR	\$25K	\$100K
	>14 YEAR	3 YEAR	\$25K	\$75K
AH-1 UH-1 CH-53	<12 YEAR	6 YEAR	\$25K	\$150K
		4 YEAR	\$15K	\$60K
	12 - 14 YEAR	5 YEAR	\$25K	\$125K
		4 YEAR	\$15K	\$60K
	>14 YEAR	3 YEAR	\$15K	\$45K

Source: Marine Corps Manpower and Reserve Affairs

CONCLUSION

9. The current demand for military pilots in the airline industry is creating a large loss of talented, experienced pilots. With the introduction of Canada’s replacement fighter aircraft, an experienced cadre is required to usher in the new fighter, train aircrews, while continuing to fly the legacy CF-18. Without the addition of an AvB, the RCAF will not be able to meet their requirements without some significant assumption of risk. Moreover, without an AvB more pilots will continue an exodus and leave an experience vacuum. The lack of experience will take years to grow the bench and a great

¹⁸ Dickstein, Corey. “Marines Offering Big Bonuses to Keep Certain Aviators from Leaving for Commercial Airlines.” Stars and Stripes, July 1, 2019. <https://www.stripes.com/news/us/marines-offering-big-bonuses-to-keep-certain-aviators-from-leaving-for-commercial-airliners-1.588426>.

¹⁹ Snow, Shawn. “The Corps Is Dishing out \$280,000 Bonuses to Qualified Pilots.”

deal of time to resume a healthy posture. Additionally, if no change is made soon, the problem will only become more enigmatic and expensive to solve. As the RAND study found, it is much more economical and prudent to retain the seasoned, experienced, and talented aviators then to increase accession and throughput. Also, the training pipeline is laden with innumerable and unforeseeable variables, like aircraft availability and weather.

10. By investing in the known quantity—experienced aviators near the middle of their careers—the RCAF would both allot themselves time to find additional alternatives and make active steps toward improving retention. The AvB is a retention tool aimed at targeting critical populations. Additionally, it serves as a good faith offer to the RCAF, displaying an active and positive gesture toward improving the current problem.

Additionally, there are current policies in existence in the US Marine Corps that are actively dealing with retention issues among its pilots. With some manipulation, the Marine AvB policy could easily be applied to the RCAF. Though it may not be a panacea, the AvB provides a short-term option to help quell the hemorrhage of talented pilots and communicate to the RCAF that their leadership has acknowledged a problem and are implementing a fix. Failing to act decisively will only exacerbate the problem.

RECOMMENDATION

11. Recommend that the RCAF institute an aviation bonus targeted at retaining the necessary experience required to cadre Canada's future fighter, while continuing to meet current and future operational needs. The US Marine Corps, much like the RCAF, did not initially embrace an aviation bonus because they believed that service to country was the common motivator across the pilots corps. However, with operational tempo increases,

posting moves, and frequent business travel, pilots are asking whether they should continue to serve or seek employment elsewhere. The US Marine Corps found that it was going to start losing some of its experienced pilots in the 10 to 14-year mark if they did not implement a bonus or at least consider incentivising continued service in the US Marine Corps as a pilot. Additionally, like the Marine Corps, the RCAF must identify key career decision points to best invest in their pilots and make them at least consider the option of staying in uniform. Given a standard 25-year career in the CAF, the RCAF should identify those pilots who are near to slightly below mid career because these pilots are approaching key decision points in their careers. Moreover, pilots will often continue to serve despite misgivings, if they can see retirement as much more than an idea but a reality. Further, the aviation bonus should consider paying Canadian pilots amounts that are equivalent to those being offered by the US Marine Corps, in the range of \$34,000 to \$48,000 CAD. Given manpower analysis, consideration should be given to mirroring US contractual obligations of service to coincide with the AvB.

12. For equality amongst the platforms, the bonus must be offered across all types, models, and series of aircraft in the inventory. Failure to offer the bonus to the aviation population writ large may cause consternation in communities not offered a bonus and ultimately lead to a shortage in that community later. However, it is understandable to pay more critical pilot platforms a greater amount as long as everyone is considered and no community is forgotten about. Nothing is guaranteed in retention except contractual obligations, but by making a pilot consider continued service at key points in their career with viable financial benefits, many of those on the fence will chose the known vice the unknown.

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