



"It Needs to Start with a Dream": **Women Take on Jobs in Aviation and Aerospace**

Janice Wilson, a young woman from Burlington, Ontario, seemed destined for an artistic career four years ago. She was enrolled at Toronto's Sheridan College in graphic design studies, having spent the bulk of her free time during her formative years winning awards as a ballet and tap dancer, and as an actor with her high school's drama club.



"I definitely want to work on airplanes," says Ms. Wilson. "It's where my passion lies."

The Next Generation

Ms. Wilson is among a new generation of young women who are beginning to rediscover the exciting opportunities and careers available in the world of aviation maintenance and aerospace manufacturing. In late October 2005, the Canadian Aviation Maintenance Council (CAMC) noticed it had 79 women, making up

4.5 per cent of CAMC's associate and certified membership. It's still a small percentage, but a definite increase from May 2002's 2.8 per cent.

The number also doesn't take into account young women enrolling in the Aircraft Maintenance Orientation Program (AMOP) in 19 high schools across Canada. It is estimated that about five per cent of those enrolled in AMOP are young women; anywhere from 350 to 500 students take part in AMOP classes during a given year.

"One of the things we have to work on and point out to young women and girls is that, if you work in aviation maintenance or aerospace manufacturing, these are important jobs that help people." — Barb Bowen, Manitoba Aerospace Association

Still, for every young woman who is interested in a career in aviation and aerospace, many more appear to remain unaware of what the sector has to offer. This was an issue raised by *A Human Resources Study of the Aviation Manufacturing and Maintenance Industry* in November 2002.

The study — issued jointly by CAMC, industry and the federal government — found that the high-water mark insofar as Canadian women being employed in aviation maintenance and aerospace manu-

facturing is in the composites fabricating and electrical/electronic assembly fields, where one out of four workers are women. On the other hand, the study also reported that a mere one to three per cent of licensed Aviation Maintenance Engineers (AMEs) are female.

Both these percentages are a fair cry from numbers seen in the mid-1940s, when Canadian women and men were working in near-equal numbers side-by-side at aviation maintenance positions. While it's true that the circumstances of the time made this a necessity — women were needed on assembly lines to replace men fighting the war in Europe — women also proved during this period that they were more than capable of setting rivets or operating welding irons, and in record numbers.

In fact, half of the 4,500 workers employed at one northern Ontario factory in 1945 by Canada Car and Foundry, the company that produced Hawker Hurricane fighter aircraft for the British Royal Air Force (RAF), were women. One notable Canadian woman of the period, Elizabeth "Elsie" MacGill, even worked at Canada Car and Foundry as a chief aviation engineer. She went on to help draft International Air Worthiness regulations for the design and production of commercial aircraft immediately following the war.

In many ways, Ms. Wilson can be considered to be as much a pioneer for women pursuing aviation technical studies as Ms. MacGill was some 75 years ago.

"The first day of class was pretty intimidating," she recalls. "I remember walking in and sitting down, and seeing that I was the only girl in the room (in a class of 24 people). I remember thinking, 'Oh no!' But then another girl walked in and I was, like, 'Yes!'"

Making Aviation Maintenance and Aerospace Manufacturing Attractive

There are a number of positive things now happening that should see the number of women pursuing trades in the aviation and aerospace sector gradually increase over the coming years. For instance, CAMC plans to increase its promotional efforts at making technical

However, Ms. Wilson suddenly had a change of heart mid-way through her first year of college in 2001. She felt she wanted more responsibility and excitement in her life — a type of lifestyle she felt working in front of a computer all day wouldn't provide her.

"I liked the idea of being out there on the hanger floor in a set of coveralls," says Ms. Wilson. "There's a hands-on, fun part about working on an airplane. It's very clean and precise work. It's not like doing mechanical work on cars, which can get a little bit sloppy."

Ms. Wilson is now juggling her studies in Avionics Engineering at the Northern Alberta Institute of Technology (NAIT) in Edmonton, Alberta, with raising her three-year-old daughter. Despite the fact she is often up until the wee hours studying, she made the Dean's List at NAIT. She's now in her second and final year at the institute.

This past summer, she had a job at NAV CANADA that saw her performing minor tasks at radar sites. She also installed stereo equipment and antennas in company vehicles, and it wasn't uncommon to see her soldering diodes onto radio circuit boards — a type of work far removed from the cashier job she held down at a Tim Hortons a few years ago. As part of another summer job at NAIT in 2005, Ms. Wilson even found herself completing simple installation tasks on Cessna 172 Skyhawks — a type of small four-seater, single-engine airplane.

After getting a taste of what it's like to work in aviation maintenance, she says she wouldn't dream of going back into graphic design.



work in aviation and aerospace attractive to young women: the Council is currently working on a brochure promoting technical careers in the sector as part of its Youth Internship Program (YIP).

Barb Bowen, the Special Programmes Manager at the Manitoba Aerospace Association, notes that her organization did an informal survey of its 23 corporate members in 2003 and found that between 15 and 20 per cent of those employed in the sector were women. Ms. Bowen says that one of her goals is to increase that number by an additional 10 per cent within the next five years.

Ms. Bowen notes her association is helping women gain exposure to jobs in aviation and aerospace in a number of different areas. First of all, in conjunction with government, non-profit sector and industry partners, the Manitoba Aerospace Association has set up a number of new hiring projects. One of them should see seven Aboriginal women receive the training and develop the skills they need through Standard Aero to become Aircraft Gas Turbine, Engine Repair and Overhaul Technicians.

Skills Canada Manitoba also hosts a one-day Young Women's Conference for girls in Grade 8 each year. At the conference, girls met up with female mentors in six trade- and technology-based occupations, and the students and mentors are then given a tour of the provincial Canadian Skills competition. This event introduces girls to specific technical occupations, including aviation maintenance.

"Nursing and teaching have been traditional (occupations for women), and one reason is because women like to help people," says Ms. Bowen. "One of the things we have to work on and point out to young women and girls is that, if you work in aviation maintenance or aerospace manufacturing, these are important jobs that help people too. For instance, if you don't do a good job as an Aviation Maintenance Engineer (AME), there can be dire consequences.



The same is true in manufacturing or repair and overhaul."

In addition to increasing awareness about aviation and aerospace among girls, industry organizations allowing women to network and obtain more information about the sector have started to spring up. For instance, the U.S.-based Women in Aviation International (WAI) is a non-profit organization founded in 1990 that offers conferences, seminars and general sessions to more than 7,000 members. It has provided more than \$3 million U.S. in college scholarships to women interested in aviation and aerospace as a career during the past seven years.

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 — Educator Chantal Boucher

Closer to home, Canadian Women in Aviation (CWIA) represents WAI members living in Canada. It hosts a biennial conference — the most recent one was held in Ottawa last June, and CAMC representatives were proud to be in attendance. CWIA now has chapters in Vancouver, Calgary, Winnipeg, Toronto and Ottawa, and brand new chapters in Edmonton and Montréal were in the works this past October.

New Niche Opportunities

Employers in the aviation and aerospace sector are now also looking for women to fill specific positions where they might have an edge over men in certain skill sets.

Chantal Boucher, a welder who teaches Aircraft Structures Technician courses at Collège Édouard-Montpetit/École nationale d'aérotechnique near Montréal, says she noticed some aviation firms have been hiring seamstresses to manufacture and repair aircraft seats, particularly during the past four years.

"I think the (largest) percentage of women we've seen working in the industry recently is in avionics maintenance or finishing," says Ms. Boucher. "We've seen that employers are now hiring (female) workers who've taken courses in upholstery, and are giving them training upgrades in aviation materials and aviation safety."

No matter where women wind up in the aviation and aerospace industry, however, those in the thick of things say it takes a lot of hard work, vision and passion to reach great heights in the field.

"It needs to start with a dream," says Ms. Boucher. "You need to set goals and go through with your plan, no matter what. Even I thought of changing trades after my first three years because I felt it just wasn't for me, I wasn't good enough and I wasn't getting along with everyone. But, after a certain point, you pass that stage and you start to feel great. You have to keep going and don't let go."

"You have to be able to stand your own out there because it is a male-dominated field," adds Ms. Wilson. "You have to maintain a high level of consistency in your work, and make sure that you do your job well. It can be challenging work, so I'd advise other women to work hard if they do decide to go into this. But I'd also advise women to stick it through because it will be worth it in the long run. There's a lot of opportunity out there."

