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## **U.S. Senate on Commerce, Science and Transportation Senate Aviation Subcommittee Field Hearing October 24, 2011**

### **“The Aviation Workforce: Industry and Labor Perspectives on Training Needs and Challenges”**

Testimony presented by  
Jim Bearden, Administrative Assistant to the President  
Aerospace Machinists District Lodge 751

Good morning Sen. Cantwell and members of the Subcommittee. My name is Jim Bearden, Administrative Assistant to the President for Aerospace Machinists District Lodge 751, which represents 45,000 active and retired aerospace workers. Thank you for the opportunity to address the subcommittee.

I'm here today to talk about opportunities that I got as a young person that don't exist today in America, and to encourage you, as leaders in Congress, to take steps to re-energize the teaching of vocational skills in our nation's schools.

Without a strong commitment to this, America will lose its position as the global leader in aerospace manufacturing, which will lead to further declines to our nation's economy in general, and lost jobs for our middle class in particular.

When I was a teenager – back in the Seventies – I had the option of taking a variety of vocational classes. I took metal shop. I took auto shop. I took wood shop. By the time I reached my junior year of high school, I already knew that I enjoyed working with my hands, and that I was good at it. As a result, I focused on preparing to learn a skilled trade.

That led me to union jobs in Everett, at the Hanford Nuclear Reservation in the Tri-Cities, and eventually at Boeing, where I became an Aerospace Machinists Union officer.

It's been a rewarding career. I've been able to buy a home and raise a family. I pay my taxes and I contribute to charities.

But as I've raised my family here in Washington state, I've seen changes in educational philosophy that aren't changes for the good. Over the past 15 years or so, our schools have promoted the idea that everyone needs to go to college, to get a four-year degree and become a software engineer or a banker.

Most of our local schools don't offer metal shop anymore. Many don't offer wood shop. Auto shops are few and far between.

When these shop courses are offered, they're offered at vocational skills centers. The instruction at those places may be good, but it's only offered to high school juniors and seniors.

I'd argue that by the time a teen-aged boy or girl is a junior in high school, it's too late. If our young people aren't exposed to possible careers in manufacturing and other trades at an early age, they'll never have the chance to consider whether a manufacturing job could be their calling, and their life's work.

That's a shame. It's possible to make a good living as a manufacturing worker in America, without going having a bachelor's degree. That's particularly true if you're working in a union job. Our union members at Boeing earn, on average, more than \$58,000 a year. They have good benefits too, the kind of health insurance that means they don't have to fear bankruptcy should someone in their family be struck with a serious health problem.

But while you don't have to hold a college degree to become an aerospace Machinist, you do have need to have a high-quality education.

There are a lot of physical skills to be learned, and manual dexterity to master. I recently visited a vocational skills center in Yakima where high school students are training for potential careers in aerospace manufacturing. The instructor there has his students practice for 15 minutes every day the technique for drilling holes, so that at the end of their two years of study, they can be confident in their ability to drill a hole straight and clean – and accurate to within a few thousandths of an inch.

That's a skill they must have to succeed. Failure to do that in the workplace can mean an aircraft part worth tens of thousands of dollars is ruined.

The young people also will need to learn how to use tools far more complex than drills. They'll need to learn how to program computerized numerical control machines. They'll need to know how to read the digital displays that have replaced blueprints.

And while these vocational skills are essential, they'll also need classroom learning. Our Machinists Union members have to have good skills in math – geometry and trigonometry in particular, but also beginning calculus. They need to understand principals of physics, metallurgy and electricity and the new composite technologies. And they need to have the soft skills that all businesses require: the ability to read and write, to work in groups yet be individually accountable.

Sadly, one of the biggest problems we have finding candidates for our joint IAM/Boeing apprenticeship program is that many of the people who apply lack these basic academic skills – particularly in math. As a result, they don't get the chance to train for the top-level, highest-skill jobs that command the biggest paychecks.

To fix this, we need to start making serious investments in our schools, and in other workforce training programs, like apprenticeships, which for centuries have offered young people a path toward meaningful careers in skilled trades.

But we need to start immediately. Our union has 30,000 members across Washington state, and we estimate about a third of them will retire in the next five to seven years. Meanwhile, a full-fledged aerospace manufacturing apprenticeship can take four years to complete. This means we only have a short window of time to help our members pass on their skills and experience to the next generation, and to get our new people trained to the highest level.

It's going to be a tremendous challenge. The administrator in charge of that Yakima skills center told me that if every community college in Washington, and every high school vocational center, graduated 100 workers from aerospace training programs a year, that still would only equal half of the workers Boeing needs, to replace workers who are retiring, and to ramp up to meet the production goals the company has set for itself.

And that's not taking into account the needs of the aerospace suppliers around Washington state. We've got more than 600 of them here, companies like Triumph Composites in Spokane, Pexco in Union Gap and Hytek Finishes in Kent. Each of them does complex work that requires a highly trained, highly skilled workforce.

Having this kind of workforce is essential to these companies' futures – and to our nation's future.

Aerospace, as we all know, is a key part of our national security. We have to maintain a deep and broad pool of skilled aerospace workers if we are to continue to build and maintain the military aircraft that defend our borders.

Aerospace is also essential to economic security of the United States. It's well known that Boeing is America's No. 1 exporter, which helps us maintain our position as a leading world economy. In addition, aerospace exports have a positive impact on our nation's balance of trade.

But industry's impact on local economies is even greater – here and in places like Wichita and Portland and Long Beach, California, and everywhere else that aerospace workers spend their union paychecks. The money they earn building airplanes and airplane parts gets spent at local car dealerships and restaurants, shopping malls and convenience stores. Their insurance benefits support local clinics and hospitals, and their pensions allow them to retire with dignity, without being a burden on their families or communities.

If we don't have enough trained workers to meet the demand, American will lose our position as the world's leader in aerospace, and we'll lose all the global and local economic advantages that go along with that.

To keep that from happening, I'd urge the Senate to take action quickly, to spur improvements in all forms of workforce training. We, as a nation, need more investment in vocational education in our local schools and in our community and technical colleges. We, as a nation, need to encourage a rebirth of manufacturing apprenticeships, which we in the labor movement like to call the original four-year degree. And we need to improve the quality of math and science education in our nation's public schools, so that our high school graduates are able to perform the high-skill manufacturing work that will earn them the best standard of living.

Ninety-nine percent of our children will never become investment bankers or Wall Street financiers. Not everyone is cut out for college – I wasn't.

But because I had opportunities to explore career choices as a skilled tradesman, I was able to find a career in manufacturing that allowed me to buy a home, raise a family and contribute to my community. It's my duty as a union officer to make sure that the young people who come after me have that same opportunity, and it's my goal as an American citizen to see government, business and labor come together to support our nation's aerospace industry and the economic benefits it creates.

A perfect example is the recently awarded U.S. Department of Labor \$20 million grant to the Air Washington

consortium in support of aerospace workforce development in our state. I want to take this opportunity to express our sincere gratitude to Senator Cantwell for her assistance in securing that grant.

Machinists Union District Lodge 751 is committed to keeping our nation the world's leader in aerospace, with Washington state at its center. We work daily with Boeing, other aerospace companies, elected officials, the educational institutions and workforce development councils to maintain this highly-skilled workforce, which is our major competitive advantage. Along with my testimony, I've submitted a power point that outlines some of the IAM's collaborative efforts with Boeing in this area.

I would encourage you as leaders in the U.S. Senate to continue and redouble your efforts to ensure we have the most highly-trained aerospace workers in the world for decades to come.