



Virginia Aviation

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Rolls-Royce begins construction on new Prince George manufacturing facility

Rolls-Royce, the global power systems company, has begun construction at Crosspointe, its new aircraft engine components plant in Prince George County. Crosspointe is the first Rolls-Royce manufacturing facility built from-the-ground-up in the United States. Located on more than 1,000 acres, it is the largest Rolls-Royce site by area in North America with ample space to accommodate suppliers' and partners' co-location in the future.

Initial Rolls-Royce investment in this site is \$170 million. Over time, the company anticipates total investment of approximately \$500 million in Virginia. The first phase of work will support roughly 140 jobs; the company expects future growth in Virginia to generate some 500 jobs in the coming years.

"Rolls-Royce is investing in America," said James M. Guyette, President & CEO, Rolls-Royce North America. "This is a historic day for us as we begin construction on our first manufacturing facility built from-the-ground-up in the United States. Crosspointe will be a flagship operation for Rolls-Royce, and the significant investment we are making here will enhance our competitiveness in

global markets and position us for future growth."

The Crosspointe campus will accommodate the Commonwealth Center of Advanced Manufacturing (CCAM), a unique higher education partnership founded by the Commonwealth of Virginia,

the University of Virginia, Virginia Tech, Rolls-Royce and other partners. The vision for CCAM is to become a world-class research facility delivering a step change in design and manufacturing technologies. In addition, the Commonwealth Center for Aerospace Propulsion Systems (CCAPS), a virtual research and technol-

ogy center of excellence established by the same partners, creates a framework in which to tackle the technology challenges of today and tomorrow and is also closely linked to Crosspointe and CCAM and shares the same collaborative vision.

"This site would not be possible without the support of the Commonwealth of Virginia, the University of Virginia, Virginia Tech and Prince George County. We're delighted to be bringing so many good, high-tech and advanced manufacturing jobs to the **See "Rolls-Royce" on page 8**



Photo courtesy of the Office of the Governor of Virginia

Gov. Tim Kaine attended the groundbreaking ceremony for the new Rolls-Royce manufacturing facility in Prince George.

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Director's Corner



Hello Virginians, as you may have already noticed-- *Virginia Aviation* is back in print! After going digital for about a year, we found our technical resources were just not yet capable of pushing the news out to you the way we wanted and, consequently, we weren't reaching nearly as many of you as we did when we were in print. We will continue working on the technical challenges to provide you an electronic newsletter, but, until then, we are glad to be back in print. So here we are! *Virginia Aviation* is all about sharing information with you on all the wonderful aviation news, opportunities and events that we have here in the Commonwealth. So please don't forget to send us your news, announcements and any story ideas you have for the newsletter. E-mail editor Kelly Pruitt at kelly.pruitt@doav.virginia.gov.

This year has been both a great year and a challenging year for aviation. It was challenging in that revenues and budgets were tight for most of us in aviation, ridership fell in most communities, and numerous aviation business models were put to the test. But 2009 has also been a great year in that we saw a resurgence in optimism for many segments of aviation, attendance at many of our national aviation events was up, Sun 'n Fun, Air Venture, National Business Aircraft Association, Helicopter Association International, AOPA Summit, and many others had very good events this year. Attendance also improved at most of our local air shows, open houses and fly-ins.

For 2010, we will continue to face revenue challenges throughout our aviation system, but we also have some great opportunities ahead. In 2010 DOAV will achieve its ISO 9000 Certification which will help us ensure we are being effective and efficient as possible in delivering services to you, our customer. In 2010 we will deliver a new Economic Impact Report for our airport and aerospace community showing the value of this industry to the Commonwealth and our citizens. Next year, we will see great strides in our Small Community Access Program as we work to put an Automated Weather Observing System and an instrument approach into every licensed public-use airport in Virginia. We also hope to make 2010 the year that Virginia has an AOPA Airport Support Network representative at every public airport. DOAV will also be delivering a report identifying our aviation/aerospace workforce needs for the future so that we can work with the schools and employers to capitalize on aviation/aerospace employment opportunities. NextGen will hold great opportunities for Virginia in 2010 as we work to become a leader in early implementation of NextGen technologies, utilize Virginia's aviation/aerospace business base to become a test bed for emerging technologies and our top notch aviation/aerospace research facilities to help the FAA research issues to take us well into the future. We will be working closely with the Virginia Airport Operators Council's (VAOC) Juan Rivera, Virginia Aviation Business Association's (VABA) Mike Michaels, NASA's Guy Kimmerly, and the National Institute for Aeronautics' (NIA) Dr. Bob Lindbergh to ensure Virginia is a leader in NextGen.

Of course none of these things could happen without the support of our Virginia Aviation Board and the teamwork of many fine aviation organizations. To learn more about the many Virginia aviation organizations, and how you can get involved, please visit our website at www.doav.virginia.gov. Also, check out our calendar of events for upcoming aviation/aerospace events in the Commonwealth. If you are holding an event, let us know so we can put it on the calendar for you. We will also notify the top 13 national aviation publications of your event.

Finally, from all the staff here at DOAV, safe flying and Happy Holidays.

DOAV Director elected to NASAO board

Members of the National Association of State Aviation Officials (NASAO) elected Randall P. Burdette, director of the Virginia Department of Aviation, Vice Chairman of the Board of Directors for 2010 at their annual convention and trade-show in Tucson, Ariz. earlier this fall.

Burdette was a senior Army aviator and has flown general aviation aircraft from more than 34 years. His vision and passion for Virginia aviation to become the standard of excellence amongst state aviation agencies is legendary. Burdette has been a member of NASAO since 2004 and previously served as NASAO's treasurer and secretary of the board as well as current co-chair of the NASAO Security Committee.

The National Association of State Aviation Officials is one of the most senior aviation organizations in the United States, predating even the Federal Aviation Administration's predecessor, the Civil Aeronautics Authority. Since its founding in 1931 the association has represented the men and women, in state government aviation agencies, who serve the public interest in the states, Guam and Puerto Rico. These highly skilled professionals are full partners with the federal government in the development and maintenance of the safest and most efficient aviation system in the world. They organize, promote, and fund a wide variety of aviation programs across the nation.

Liberty gives update on School of Aeronautics

In September, members of the Virginia Department of Aviation attended a presentation by the Schools of Aeronautics and Engineering and Computational Sciences at Liberty University in Lynchburg. The presentation noted that Liberty University is now the largest flight school in Virginia (with nearly 300 students) and the second largest faith-based university level flight school in the United States. It is also one of only three universities in the United States to offer both airplane and helicopter training. An aircraft mechanics program is expected to soon receive FAA certification and the first class will enter in January 2010.



Gen. David Young, Dean of the School of Aeronautics (SOA), and Dr. Ron Sones, Dean of the School of Engineering and Computational Sciences (SECS), shared the vision and needs of each school. With enrollment in the SOA and the SECS continuing to rise, both schools are making plans for future growth and development, including new facilities and programs.

Chancellor Jerry Falwell, Jr. discussed how enhancing these academic programs furthers the university's goals to improve the overall educational experience offered at LU.

"These schools are taking us beyond what a liberal arts college usually offers — to research and technical training that we've never had before, and we're excited about it," Falwell said.

As the university continues to grow, the addition of research and technical degrees are rounding out the academic programs, truly making Liberty University the top evangelical university in the nation.

The school, in order to accommodate further growth of the program, has designed a new facility to be constructed at Lynchburg Regional Airport. A proposed complex of new engineering school buildings, to be built nearby, was also presented at the meeting.

Ninety-Nines celebrate 80 years



Members of the Virginia Chapter Ninety-Nines. Back row: Shirley B. White, Sara Parmenter and Sharon Blodinger. Front row: Mary Lee Marcum, Sara Reese, Betty Vinson and Ginny Riley

Eighty years ago, 26 women pilots met in a hangar at Curtis Airport in Valley Stream, Long Island, NY, for the purpose of creating an organization "just for women pilots."

Only two months before, at the conclusion of the inaugural Women's Air Derby in Cleveland, OH, Louise Thaden, winner of the large engine class; Phoebe Omlie, winner of the small engine class; Gladys O'Donnel, Amelia Earhart, Blanche Noyes, and Ruth Nichols met under the spectator bleachers to discuss the race experience. There was suspicion of sabotage, attempts to shorten the race, and attempts to cancel the race, all because some felt that women shouldn't fly or couldn't withstand the rigors of long distance cross-country flying.

Choosing a name proved a little more troublesome. Suggestions included The Climbing Vines, Noisy Birdwomen (a reference to the Quiet Birdmen which does not allow women members), Homing Pigeons, and Gadflies. Amelia **See "Ninety-Nines" on page 7**

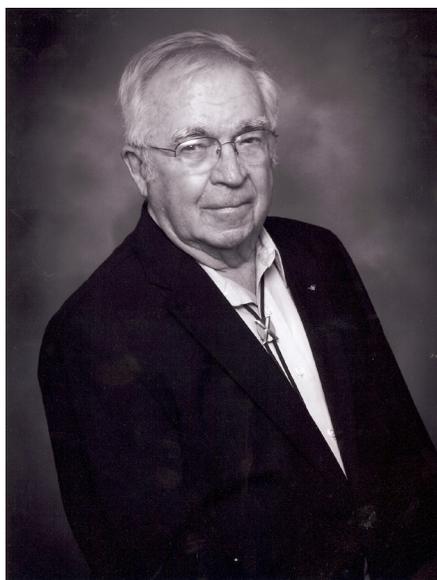
VAHS names Hall of Fame inductees

James M. Patton Jr. is retired chief research pilot and flight operations head who is responsible for establishing NASA Langley as the national center of expertise in aircraft stall, spin and spin resistance. Philip W. Brown is a retired NASA research pilot who has developed F-18 and F-16XL air combat maneuvers and measured space shuttle exhaust plume environmental impact. Alston M. Stevens is a retired airport manager who operated traffic patrols for radio stations across Tidewater. Their achievements when they were inducted into the Virginia Aviation Hall of Fame at the Virginia Aeronautical Historical Society's Virginia Aviation Hall of Fame Induction Dinner at the Virginia Aviation Museum on Nov. 14.

Patton has logged 8,000 spin turns in his career. He initiated a 14-year long program establishing NASA Langley Research Center as the place to go for information on stalls, spins and spin resistance as well as development of safe flight testing equipment and methods. The findings of the program led to production of new airplanes that were spin resistant along with improved flight training information, procedures and techniques. The work also led to development of a Federal Aviation Administration spin resistant airplane certification category. Patton has flown 157 types of aircraft during more than 9,000 flight hours. He produced more than 100 technical papers for NASA, receiving numerous NASA awards. He was recognized by the Experimental Aircraft Association for exceptional contributions in research and technology in aircraft spin behavior. Patton now lives in Crystal River, Florida.

Brown conducted flight tests on the ability control F-16XLs and F-18s in extreme maneuvers. He developed F-16XL and F-18 air combat maneuvers based on this testing program. Brown was a project pilot on NASA's modified Beechcraft Sundowner which was used in tests to establish ways to achieve general aviation aircraft spin resistance. He has flown tests to measure space shuttle exhaust plume's environmental impact. He has been instrumental in flight testing leading to lightning protection standards for aircraft. Brown went to work with NASA in 1974 as an engineer who was to work half time as a research pilot. Within one year he moved into full time duty in flight ops. In 27 years as a research pilot he logged 7,100 flying hours. Brown earned his Navy wings in 1963. He lives in Williamsburg.

Stevens is a retired airport manager who started flying at Colonial Heights Airport when he was 16. He retired from the Navy as a senior chief aviation machinist mate, then went to work at South Norfolk Airport. Within one year he was promoted to airport manager. He started air forest patrols and air traffic patrols for area radio stations. He created a banner flying business. All along he encouraged new pilots, setting standards and fees for flight training at the airport. He hired pilots and mechanics as independent contractors. When South Norfolk Airport closed in 1985, he moved his operation to Atlantic Air Park in Pungo where he stayed until he retired. He lives in Norfolk.



James M. Patton Jr. (left), Philip W. Brown (middle), and Alston M. Stevens were inducted into the Virginia Aeronautical Historical Society Hall of Fame on Nov. 14.

Roanoke completes screening checkpoint enhancement



The Roanoke Regional Airport has completed expanding the security checkpoint from one lane to two lanes. This expansion will allow for two lines of passengers to be screened at once during busier times. An unused gate area was converted into an expanded checkpoint area, creating more room. The total cost of the checkpoint expansion was \$237,400.

Another passenger-oriented improvement is the recently installed new Flight Information Display screens combined with a new public address system.

The Roanoke Airport has installed new, high definition flight information display screens throughout the terminal. The new high definition LCD screens are easier to read and allow for integration with a new public address system that allows for visual and audio messaging to better accommodate all passengers, including those with hearing or vision related disabilities. The total project cost was \$807,198.



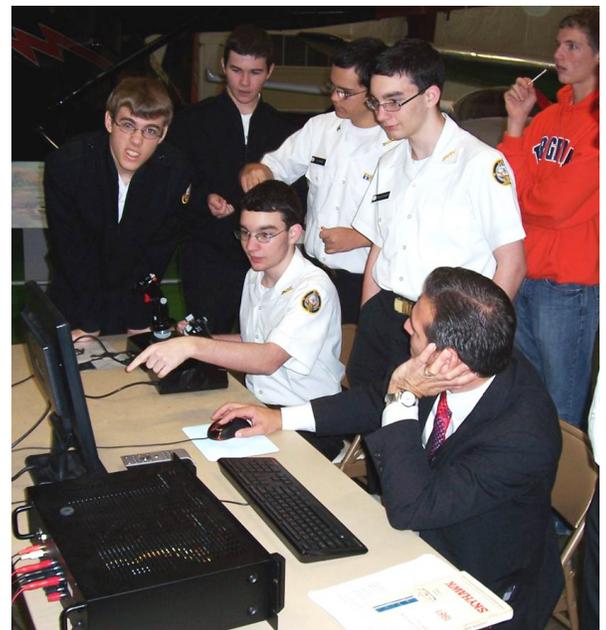
High school students turn out for career day

More than 300 area high school students expressing an interest in exploring career opportunities within the aviation industry attended the 24th Annual Rotary Aviation Career Day at the Virginia Aviation Museum at Richmond International Airport in October.

High school students from across the region, including the city of Richmond, the counties of Chesterfield, Hanover, Henrico, New Kent, and Charles City participated in the annual event organized by the Rotary Clubs of Sandston, Henrico, New Kent and Mechanicsville.

Attending students discovered first-hand the career opportunities in aviation by meeting with exhibitors representing commercial airlines, military aviation units, law enforcement, federal agencies, college level aviation programs and more. Students had the opportunity to tour the Virginia Aviation Museum, visit static displays of military and civilian aircraft, use flight simulators, and hear a keynote speech from Troy Merryfields of NASA's Langley Research Center.

Exhibitors this year included Aerial Adventures, Campbell and Paris, Civil Air Patrol, Capital Region Airport Commission, Delta Airport Consultants, Federal Aviation Administration, Hanover Radio Control, Heart of Virginia Aviation, Highland Springs Technical Center, Metro Police/Henrico Police, Million Air, New Kent Aviation, Transportation Security Administration, Virginia Air National Guard and Virginia Department of Aviation.



Letters from the Air Boss: Miramar Air Boss Academy

Dear Friends in Aviation,

Mention the word Miramar and, to the fans of Aviation movies, it means one thing—"Top Gun." Miramar is the world's largest military airshow with 500,000 attendees.

In October, I was one of 14 members of International Council of Air Shows (ICAS) privileged to attend the first-ever Air Boss Academy at the Marine Corps Air Station (MCAS). Now I wouldn't be so bold as to say we were the "best of the best" (pilots are known to stretch the envelope some), but we were there because we wanted to be better.

We were allowed unprecedented access to all areas of operations. A dream team of the Blue Angels, the Snow Birds, the Golden Knights, the Red Bull Mig and Helio Teams were all there! And when Sean Tucker of Team Oracle sat down beside me I felt as if I had won the aviation lottery!

The glamour immediately wore off when the base commander took the stage following the Morning Prayer. "This is serious business and things can and do happen. We want to give the public a great exhibition. We have an obligation to the safety of our audience. That's why we practice and conduct this briefing. Our meteorologist will speak followed by the man you are working here for today—The Air Boss. Now go fly a good show and let's have some fun."

So what exactly is an Air Boss (AB)? He/she coordinates the timing, the take-offs and landings as well as the safety of the pilots, performers and jumpers. He keeps the show focused and on track. He is the additional set of eyes and ears for the performers and works closely with the announcer who is the voice of the show, entertaining and informing the public about what is going on. The Air Boss and the Announcer have two different roles. Wayne Boggs, president of Air Boss International Consulting, was our primary instructor. He is a retired Federal Aviation Administration (FAA) Control Tower operator and has served as AB at Oshkosh and Sun 'n Fun Fly-In just to name two.

An Air Boss, like a performer, has to be careful about being distracted. He should establish cues, like a hand on his right shoulder, when the announcer needs to tell him something important but not critical.

A good Air Boss manages the airshow activities in accordance with the briefed schedule. He is not bossy, but is firm and in command. He does not deviate from the plan discussed at the pre-show briefing, and does not improvise as the show proceeds. That should have been done beforehand.

A good AB needs to have a certain type of personality. If he rubs pilots the wrong way from the start then your show has a serious problem. The briefing—while serious—should be relaxed. The less chatter the better. An AB needs to be flexible with the performers rather than bend them out of shape just to make a point. This is a coordinated effort. It's OK to smile. Hey, we're here to



Adolfo DeMontalvo, executive/administrative officer of the Blue Angels, (left) and John Dudley Barksdale at the Miramar Air Boss Academy.

have some fun!

Sean Tucker really got our attention while relaying the importance of not disturbing an aerobatic pilot with unnecessary comments while he is in "the zone" unless he is in imminent danger. The performers have a planned routine that have been practiced to make perfect. You should not ask a performer to extend or shorten his routine since you would be giving him an extra mental load that he doesn't need to think about in the middle of a critical maneuver.

Sean stressed the importance of minimizing risks by taking the right precautions because this can be a very dangerous business. "During a slow roll on take off there is no time for adjustment when your wing tip clears the runway by a few feet or inches." Sean spoke from his heart and didn't try to sugar coat anything while reminding us of the responsibility we have to the general public.

The same goes for all of aviation—that's why we start all our flights with a good preflight check and start to get our heads into the zone. We have all heard this before—about focusing on the flight at hand and getting our flying helmets on while putting the other stuff behind us.

This preparation is similar to the "Wings" safety meetings hosted by the Virginia Department of Aviation and conducted by the Aircraft Owners and Pilots Association (AOPA). All this contributes to our well being and continued experience of flight.

CAVU,
John Dudley Barksdale

Lonesome Pine lets freedom ring, is approved for instrument landing system

More than 600 students and their parents visited Lonesome Pine Airport in October for the second annual “Let Freedom Ring,” an event that honors American Veterans.

On display were vintage aircraft such as the “Spirit of Freedom,” a C-54 cargo plane used in the 1948 Berlin airlift that is now a flying airlift museum, and a P-51 fighter plane.

The event included a ceremony held by organizers and local veterans of foreign wars honoring veterans and active-duty personnel, as well as a reenactment of the infamous airlift when crew members of the “Spirit of Freedom” dropped Hershey bars as part of their mission to drop supplies to Berlin after the Soviet Union blockaded Germany.

In other news, the Federal Aviation Administration has approved a NAS Change Proposal for the Lonesome Pine Airport’s Localizer placement which eliminates the final obstacle to commissioning an Instrument Landing System at the airport.

Lonesome Pine Airport, originally received a Congressional Appropriation, via Congressman Rick Boucher, for a full FAA ILS in 2000 or 2001. Many issues; including the fact that the airport didn’t meet FAA standards for an ILS, hadn’t received an environmental finding, and had obstruction problems; held up the commissioning. Most recently there were issues with the location of the Localizer. FAA criteria for an FAA-installed LOC called for it to be located a minimum of 450’ from the runway end. The FAA installed the LNP LOC on the previously-installed DOAV concrete pad located 300’ from the runway end. An NCP had to be approved before the FAA would commission the equipment at the 300’ location.

Now that the NCP is approved, the airport is awaiting a flight check on the system. Once the system is successfully flight checked, it will be published and available to pilots.



Students learn about vintage aircraft and American veterans at the second annual “Let Freedom Ring” event at Lonesome Pine Airport in October.

Ninety-Nines continued...

Earhart and Jean Hoyt finally proposed the name be taken from the number of charter members. Once The 86s, then The 97s, the new organization eventually became The 99s.

Other organizations for women pilots with various purposes have come and gone, some founded by 99s charter members: The Skylarks, The Betsy Ross Corps, Women Fliers of America, Women’s Air Reserve.

The 99s has since enjoyed a total membership of over 20,000 women pilots worldwide. With over 165 U. S. and Canadian chapters and 14 international sections such as Germany, Mexico, Israel, and Russia, 99s worldwide enjoy a community of friends, role models, and mentors in the largest and oldest international organization of women pilots.



Calendar of Events www.doav.virginia.gov/calendar.htm

Rolls-Royce continued...

building on our presence in and partnership with Virginia,” continued Guyette.

“Today marks the beginning of an exciting future for Virginia,” said Virginia Governor Timothy M. Kaine. “In addition to the hundreds of quality jobs that Rolls-Royce will create in the short-term, this transformational project will bring international focus to Virginia’s aerospace industry and promises economic benefit to the Commonwealth for decades to come.”

At Crosspointe, Rolls-Royce will manufacture, assemble and test a range of aerospace components and products. The first building on site will be a 140,000-square-foot disc manufacturing facility. Discs, the part of a turbofan engine that contains the blades, are considered one of the most critical components of the engine. Discs manufactured at Crosspointe will be used in some of the company’s newest civil aerospace products - the Trent 1000, Trent 900 and Trent XWB - optimized for the Boeing 787, Airbus A380 and A350 XWB respectively. Disc production at Crosspointe will begin as soon as the site is operational, currently expected in early 2011.

Plans are also proceeding for the second building on site, a blisk manufacturing facility. Blisks, or bladed discs, incorporating fan blades and discs into a single piece, are designed for use in the next generation of gas turbine engines. Blisks manufactured at Crosspointe will be used in the F136 engine for the Joint Strike Fighter, the world’s largest ever fighter program.

“For us, Crosspointe is about growth -- about positioning for the future. With this new campus in the US, we are spreading our capability around the world, getting closer to our customers, growing our presence in key markets and strengthening our ability to manage business continuity risk,” added Guyette.

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Purpose: "To foster aviation as an industry, as a mode of transportation for persons and property and as an arm of the national defense; to join with Federal government and other groups in research, development
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