AEDC machine shop provides product development solutions

By Walt Bishop

AEDC Contributing Writer

When you think about testing, your first thoughts probably aren’t about the AEDC Model and Machine Shop. But, often is where it all begins — with a customer who needs a model or test-related hardware developed and often on a tight deadline.

A skilled and experienced workforce, whose focus is on making practically anything, has ensured that capabilities exist to quickly respond to a myriad of manufacturing needs in support of the Complex as set requirements.

Over the past 60 years, AEDC has developed a manufacturing service comprised of a fleet of computer numerically controlled (CNC) and manual machines with unique capabilities. These machines are operated by some of the most skilled craftsmen available in today’s workforce who are accustomed to turning concepts into working products.

The machine shop regularly fabricates everything from wind tunnel models and balance to large test and facility-related structures and hardware.

AEDC manufacturing services provide a wide range of capabilities to its customers by providing precision machined products and complex fabricated hardware structures and components. The manufacturing organization uses and

WW II veteran’s military service recognized by AF Chief of Staff

By Raquel March

Air Force Public Affairs


Welsh wrote, “Like so many brave Americans, you joined the military after the attack on Pearl Harbor and during one Nation’s greatest time of need. Your service in the Pacific flying transport and medical missions let us take the fight to the enemy, while providing our wounded warriors emergency medical support. In the end, you and the other veterans of the Greatest Generation won World War II and showed us the meaning of words like sacrifice, courage and humility. Our Air Force stands on your shoulders.”

Blood Drive personnel prepare for donations

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AF Quarterly Award winners announced

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Revolutionary Change: Changes occur to future Information Technology contracts

AEDC Commander Col. Raymond Toth, is providing periodic updates on AEDC’s Source Selection efforts to the entire workforce via email and video messages called “What’s the Buzz?”. The High Mach will print those messages and transcripts in a series titled “Revolutionary Change.” Additionally, Toth’s messages and other information can be found online at www.arnold.af.mil/transition

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AEDC Safety, Health & Environmental

Most of us have the knowledge, training tools and experience to do our jobs safely and correctly. No one wants to be injured or to injure others. Yet, we sometimes ignore our training and take shortcuts that result in injury.

The Tullahoma Test Center (TTC), High Mach, is the Department of Commerce’s Engineering Development Complex (EDC) at the Arnold Engineering Development Center (AEDC) within the U.S. Air Force, Arnold Engineering Development Complex (AEDC) at NASA’s Armstrong Flight Research Center, contract with ADSA, supports all government personnel at the TTC. The TTC, AEDC, and AEDC personnel at the TTC are important to the nation’s need for aerospace and defense research and development in support of DoD and NASA programs.

“Every advertised in this publication will be made available for purchase without regard to race, color, national origin, age, sex, religion, political affiliation or any other criterion except of course of merit.”

For advertising information, call (931) 455-4545. For information about high Mach, call (931) 455-6546 or visit www.armld.af.mil

Aerospace Testing Alliance (ATA) contractor publication for the week before publication. The ATA is a government-wide Acquisition Personnel Action Report (APAR) for the AEDC’s Technical Center (TTC).

The complex’s vision: We deliver the nation’s best value ground research, development and test services.

Vision: "We deliver the nation’s best value ground research, development and test services for aerospace and defense systems to ensure our nation’s integrity and effective mission accomplishment and action line support.

Col. Raymond Toth
AEDC Commander

High Mach is published by the Tullahoma News, a publication associated with the U.S. Air Force, Arnold Engineering Development Complex (AEDC) at NASA’s Armstrong Flight Research Center, contract with ADSA, supported by the government personnel at the TTC.

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Core Values

We serve. We deliver on our promises. We do our work with integrity and effective mission accomplishment and action line support.

• Continuously improve in all we do.
• Use disciplined and rigorous program management.
• Align with customer goals.
• Continually improve in all we do.
• Do our work with integrity and effective mission accomplishment and action line support.

Children and Families are in great need of donated food this summer.

Participate in the Feds Fed Family program by donating your non-perishable food items to the Good Samaritan Pantry!

Ends August 29

Collection boxes located at:

• AEDC building (bidg. 190)
• Carolling building (bidg. 110)
• EF&T Test Support building (bidg. 109)
• Staff Office (bidg. 13 & 14)
• Alliant SB vendors of the TTC (bidg. 13 & 14)
• TTC Action Line boxes at the base cafeterias

A flywheel for change is started when non-perishable food items are collected and distributed.

“Geolocation Services: Who is tracking you?”

Col. Tah Col.Tah
Learning + fun = happy campers

The dates and corresponding locations are: Aug. 12 – 14 Karman Gas Dynamics Facility, building 767; Aug. 13 – the Administration and Administrative building 100; Aug. 14 – the Carrell building; Aug. 15 – the Main Auditorium, building 452. Employees may donate at any of these locations during work hours with approval from their supervisor.

To be eligible to donate, you must be at least 17 years old (16 years old with parental consent), weigh at least 100 pounds and be in good health. The process usually takes about 30 minutes and donors are asked to drink fluids, plenty of fluids – avoiding caf-feine – and eat a meal that is rich in carbohydrates. Donors must show identification in the form of a donor card or driver’s license.

It takes more than 400 donations every day to meet the need for blood in the areas served by Blood Assurance. The donations received will be used in Winchester, Manchester and Tullahoma hospitals. Blood Assurance is a non-profit, full-service regional blood center serving more than 50 health care facilities in Tennessee, Georgia, Alabama and North Carolina. Founded in 1972 as a joint effort of the Chattanooga Hamilton County Medical Society, the Chattanooga Area Hospital Council, and the Chattanooga Jaycees, the mission of Blood Assurance is to provide a safe and adequate supply of blood and blood components to every area patient in need.

For more AEDC Blood drive guidelines and information, call 454-3835.

The Blood Assurance Organization will provide a Bloodmobile Aug. 12 – 15 at AEDC for employees to donate blood from 10:30 a.m. – 3:30 p.m. each day.

The Bloodmobile is a mobile blood collection lab that provides a convenient method for donating blood and it moves to a different location each day while stationed at AEDC.

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Tyndall AFB takes F-22 pilot training to next level

By Maj. Wilson Camelo

Public Affairs

TYNALLD AIR FORCE BASE, Fla. (AFNS) – The Air Force’s effort to continue developing a fifth generation fighter aircraft fleet ready to meet the challenges of future warfare, hinges in large part on, a steady in- flux of capable and trained F-22 Raptor pilots. 

Due to major collaborative improvisations at the 43rd Fighter Squadron training unit here, the Combat Air Force, or CAF, is now poised to meet the largest volume of basic course graduate – Raptor pilots in the program’s history, with projections to graduate even higher numbers of pilots in years to come. The 43rd, along with the 325th Training Support Squadron, are responsible for worldwide B-22 student production. F-22 B-Course graduations increased from approximately 10 pilots per year on average to 23 pilots during fiscal year 2014. The program expects to graduate 30 pilots in fiscal year 2015 and 35 pilots in fiscal year 2016. 

AF Staff Air is required to meet the expectations of a CAF fighter need, the trend is heading in the right direction. 

“We are not declaring victory, but think we have turned the corner on the production of B-22s,” said Col. David Hurst, Chris LaGrange, Brad Reid and Luke Hobbs. 

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F-22 B-Course graduation metric.
AFMC wins Air Force Small Business top command awards

By Stacey Geiger
Air Force Materiel Command Public Affairs

WRIGHT-PATTERSON AIR FORCE BASE, Ohio — Air Force Director of Small Business Programs Mark Teskey presented Air Force Materiel Command winners with the 2013 Secretary of the Air Force Annual Small Business Awards during a July 24 visit to the headquarters here. Dave Duesterhaus, an AEDC Test Technology Branch lead engineer, was among one of the winners for the Small Business Programs Process Action Team award.

The Secretary of the Air Force Annual Small Business Awards Program recognizes teams and individuals who have contributed significantly to strengthening the industrial base and meeting warfighter needs through an array of small business capabilities that bring innovation, agility and efficiency.

For the second year in a row since this award’s inception in 2012, AFMC Command Commander Gen. Janet Wolfenbarger accepted the Secretary of the Air Force Small Business Director’s Top MAJCOM award. This award recognizes the top major command for outstanding achievements in promoting a culture highly supportive of small business as demonstrated by acquisition strategy decisions, policies and procedures and community and/or industry outreach initiatives. With the exception of women-owned businesses, AFMC exceeded percent goals in all socio-economic categories and achieved 10.82 percent equaling $3.5 billion dollars in small business contracts for fiscal year 2013. The command also increased industry communication and improved market research to maximize small business participation.

Teskey also presented AFMC Director of Small Business E. Jean Smith with the Outstanding MAJCOM Small Business Director Award. This award recognizes significant actions, performance and contributions of a major command small business director in advocating the award of Air Force small business contracts that provide significant contributions to the Air Force and Department of Defense. After being in the position for less than two years, Smith implemented a small business metric in the command’s strategic plan and successfully obtained

Teskey also stated that it is not about the goals but more about the capabilities small businesses bring to the warfighters.

AFMC award winners include the following:

Small Business Programs Process Action Team
David Sikora, Air Force Research Laboratory
Richard Flake, Air Force Research Laboratory
Stephen “Buzz” Sawyer, Air Force Nuclear Weapons Center
James Duan, Air Force Sustainment Center

Secretary of the Air Force Special Achievement/Champion (Individual) Award
Jason Cadek, Air Force Life Cycle Management Center

Secretary of the Air Force Small Business Director’s Outstanding Senior Leader Small Business Achievement (Individual) Award
Maj. Gen. Craig Olson, Air Force Life Cycle Management Center

ESG Team, Air Force Materiel Command
Barbara Liptack
David Boris
Mary Uchy
Graceful Hidalgo
Debra Haner
Emesilda Rodriguez
Sylvia Linke

Steven Wert, Air Force Life Cycle Management Center
Robert Mohler, Air Force Life Cycle Management Center

Secretary of the Air Force Small Business Director’s Beyond Goals Award (Individual/Activity/Unit)
ESG Team, Air Force Materiel Command
Barbara Liptack
David Boris
Mary Uchy
Graceful Hidalgo
Debra Haner
Emesilda Rodriguez
Sylvia Linke

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AFMC Materiel Command Public Affairs
Air Force Public Affairs Agency

WASHINGTON (APNS) — As the Air Force programs for new challenges and opportunities of the coming decades, it faces sobering 21st-century realities: global centers of power have become more distributed and the terrorist threat more dispersed. Most importantly, the emerging environment is demonstrating a trend that could prove to be the defining current of the accelerating pace of change.

Thus, the Air Force’s ability to continue to adapt and respond faster than the potential adversaries is the greatest challenge it faces during the next 30 years. To meet the challenges, Secretary of the Air Force Deborah Lee James and Chief of Staff of the Air Force Gen. Mark A. Welsh III have developed a strategic framework that will guide Air Force planning and resourcing over the next several decades. The framework has three main elements: a long-term future look that provides the vectors and imperatives necessary to guide planning activities, a 20-year resource-informed plan, and a 10-year balanced budget, based on focal projections.

The first document of the trilogy, “America’s Air Force: A Call to the Future,” is the cornerstone guidance for a unified path to the future. The document emphasizes the need for strategy-driven resource decisions. But more important is the common need to make bold change, because Airmen must think and do things differently to drive in the 21st century. In an era defined by rapid change, the institution that can keep pace in its processes, thinking, and actions will be the one best poised for success in determining conflict, and winning should a fight be required. This is what “A Call to the Future” refers to as strategic agility. Agility combines the attributes of flexibility and adaptability to leverage speed. The rate at which the Air Force develops capabilities needs to increase to match the pace of change and the opportunities to incorporate new technologies and improve existing systems.

James explained further that, “In addition to strategic agility, our nation demands an Air Force capable of harnessing diverse ideas and perspectives.

The most important responsibility of a military service is to provide decision makers with viable solutions for the challenges of tomorrow, real or to Air Force heritage, it will meet that challenge. The Air Force will continue to deliver, responsive airpower, and global power for national security through both the strength of Airmen and the responsive and effective application of global vigilance, global reach, and global power for America.”

As Welsh stated earlier in 2014, “The core missions of the Air Force are not going to change. These missions are what the combatant commanders and the nation expect us to provide, but the way we think about how they are provided has to change. The Air Force have the strategic agility required to successfully respond to the complex challenges that will confront our nation.”

“Innovation is a centerpiece of our way of business, total force integrators, and external partnerships provide the nation with the Air Force it expects, serves, and needs.”

Students enjoy both building rockets and land them near the designated target.

The student who won the competition by getting the rocket to land the farthest was Sukhvir Bobs of Shelbyville. Bobs has since announced the winner of the state Beach for the Star competition, which makes her eligible for the national competition at the Space and Rocket Center in Huntsville, Ala.

THOUGH this was the first time the event has been held at AEDC, those who had a hand in organizing the competition have said it was a great success. “Overall the kids seemed to enjoy the event and participation, and the overwhelming favor it being the actual launches,” Jim Burns, AIAA Senior Technical director and Pre-College Outreach chair for AIAA, said. “Shelby scheduled agreements with competitions of this kind one way that fun and help in sparking students’ interests is science.”

“In the next thing about this event is that it’s total hands on and the students enjoy both building the rockets and then get to take them home,” he said. Members of AIAA and the AIAA STEM team thank the Gossick Leadership Center staff and the volunteers for assisting with the event.
By Amber Beiles
U.S. Air Force Academy, Colo. (APNS) — New research here reveals Academy trash might be a treasure.

During August 2013, the Defense Environmental Security Technology Certification Program funded CDM Smith, a national engineering and construction firm, to test how the U.S. Air Force Academy can reduce energy use and decrease water cost at its wastewater treatment plant, and convert food waste from its dining hall into energy. Academy professors and engineers toured the Mitchell Hall kitchen and examined food waste from the wastewater treatment plant here July 15, to learn more about the processes and results of the year-long project.

"About 2.3 percent of the nation’s energy demand is used to treating wastewater and water that is used for food." CDM Smith vice president Don Russell Hume, said the younger Airmen an understand that if you give the environment respect, the environment will give you back what you need to live.

The research team, led by CDM Smith "led to the development and implementation of a food-waste-to-energy project here at the Academy. They have also helped train other installations on the Air Force base how to implement similar projects on their own," U.S. Air Force Academy directorate of Installations, said converting waste into energy is a "phenomenal step in the right direction for the Academy and beyond. I think it has been a great demonstration of the art of the possible," he said. "I would like to see this technology further developed and perfected to the point that it becomes widely available to all."
AEDC quarterly award winners announced

35 YEARS
Steve Simpson, ATA; Marc Smarshman, ATA; Gary Vanzant, Premiere
30 YEARS
Jeffrey Deid, ATA; John Doews, ATA; Danny Hudson, ATA; Paul Kelly, ATA; Thomas Layne, ATA; David Moore, ATA; Dana Pentrom, ATA; Betty Rutherford, ATA; Mohammad-Zadeh Saeed, AF; Matthew Wilson, ATA
25 YEARS
Lora Arnold, ATA; James Maldeton, ATA; Paul Schrautibergen, ATA; Kevin Cohans, ATA; Roger Vaughn, ATA
20 YEARS
Jeremy Ball, ATA; James Gilliam, ATA; Robert Martin, ATA; Andrew Nelsus, ATA
15 YEARS
Harry Simmsore, ATA; Bradley Winklemann, ATA
10 YEARS
By Airman 1st Class Jacob Betts, 40th Airlift Squadron loadmaster.
"This training was educational and helped me realize there's more to being a loadmaster than what we normally do," said Airman 1st Class Jacob Betts. 40th Air Lift Squadron loadmaster.
"It was remarkable to envision the sound of the radio chatter in the headset was constant, as the loadmaster relayed instructions that resulted in "roller coaster-esque" movements, revealing how fast the J-model can react when the aggressor imposes an attack," Webb said. "In the state of current events, it’s absolutely imperative to train our airmen to be prepared for any threat, both on the ground and in the air." More opportunities for these exercises are expected to continue, until then, the aircrew members who participated will pass on what they learned to this experience to others.

The 317th Airlift Group is very unique in that we’re small enough to rapidly adapt to real-time mission pressures, but we’re large enough to where we can make a difference," Webb said. "The culture here is to be the best we can possibly be and that is what we strive to do."
Air Force Public Affairs

By Staff Sgt. Carlin Leslie

WASHINGTON (AFNS) – Active-duty and retired Airmen have contributed more than $6 million to the Air Force Assistance Fund, or AFAF, during this year’s fund drive. Although the annual AFAF drive has yet to gain this year’s $6.4 million goal, contributions continue to roll in from the 79 active-duty members, it remains open for the retiree-year-round to submit contributions through the mail.

While the overall totals to date paint a sober picture that may be indicative of the current economic situation and financial uncertainty that permeates the U.S. and its government right now, officials said they also show the Air Force takes care of its own.

All the money donated to AFAF directly supports Airmen and their families through four key programs:

- The General and Mrs. Curtis E. LeMay Foundation helps Air Force retirees’ widows, both officer and enlisted, with grants of assistance whenever needed.
- The Air Force Enlisted Village provides a safe and secure place for surviving spouses of retired Air Force service members.
- The Air Force Village provides a comfortable living environment for retired Airmen and their families and offers worldwide family welfare assistance programs.
- The Air Force Assistance Fund provides worldwide emergency assistance to members and their families, sponsors educational assistance programs and offers base community programs to improve Airmen and family welfare.

For more information regarding the four charities sponsored by AFAF please visit http://www.afassistancefund.org/

SOLUTIONS from page 1

By Staff Sgt. Carlin Leslie

AF Assistance Fund may not hit 2014 goal

Top photo: An F-22 Raptor performs aerial maneuvers in support of the Arctic Thunder Open House at Joint Base Elmendorf-Richardson, Alaska. Arctic Thunder, a biennial event, features more than 40 Air Force, Army and civilian aerial acts and hosts a crowd of more than 200,000 people. It is the largest two-day event in the state and one of the premier aerial demonstrations in the world. The Raptor is assigned to the 90th Fighter Squadron, 3rd Operations Group, 3rd Wing at Elmendorf. (U.S. Air Force photo/Staff Sgt. Joseph Araiza)

Right photo: An F-22 Raptor displays its weapons bays to the crowd during the Arctic Thunder Open House at Joint Base Elmendorf-Richardson, Alaska. (U.S. Air Force photo/Staff Sgt. Jared Becker)

U.S. Air Force. He was eventually assigned to fly a C-46 cargo plane and flew supplies to Pacific islands during World War II.

Welsh also mentioned in his appreciation letter the recognition Farrar received from Bedford County Mayor Eugene Ray, who declared Jan. 26, 2014 as “Farrar Day” in Bedford County due to Farrar’s contributions to the community.

Farrar resides in the Flat Creek Community where he maintains a dairy farm.

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By Staff Sgt. Carlin Leslie

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Chief of Staff Gen. Larry O. Spencer (AFNS) – When the Wright brothers first took to the skies in December 1903, they had no idea that their ingenuity and determination would inspire others to achieve their dream of heavier-than-air powered flight.

Charles Taylor’s role in helping the Wright brothers cannot be fully told without him. Taylor designed and built the engine that made the Wright brothers’ pioneering powered flight possible.

According to museum director, retired Lt. Gen. Jack Hudson, the Wright brothers could not have achieved their pioneering dream without the Wright brothers themselves. Hudson said, “They said it could be done so they did it.”

The Wright brothers made only about 110 flights a year, and flying an airplane is a very demanding activity physically and mentally. Taylor was one of the first aviation mechanics.

“His development of the engine was critical,” said Hudson. “Taylor’s story is an inspiration to anyone pursuing a career in science, technology, engineering and math.”

A bronze bust honoring the first aviation mechanic, Charles E. Taylor, is now on permanent display in the National Museum of the U.S. Air Force’s Early Years Gallery.

The camp was part of a larger Defense Department initiative called the DOD STEM Diversity Campaign.

The National Museum of the United States Air Force, located on Wright-Patterson Air Force Base near Dayton, Ohio, is the service’s national institution for preserving the Air Force story from the beginning of military flight to today’s war on terrorism. It is free to the public and features more than 360 aerospace vehicles and missiles and thousands of artifacts amid more than 17 acres of indoor exhibit space. About 1 million people visit the museum annually.

**First aviation mechanic display added to the National Museum of the U.S. Air Force**

By Rob Bardua
National Museum of the U.S. Air Force

**DAYTON, Ohio –** The National Museum of the U.S. Air Force honored the first aviation mechanic, Charles E. Taylor, by unveiling a bronze bust of his likeness for permanent display during a ceremony in the museum’s Early Years Gallery July 21.

A brilliant, self-taught man, Taylor began working in the Wrights’ bicycle business in 1896, and played an important role in their flying experiments for two years. Unable to find a manufacturer who could build an engine to their specifications weighing no more than 180 lbs. and delivering 6-9 horsepower – the Wright brothers turned to Taylor. In just six weeks Taylor designed and built the engine that made their pioneering powered flight possible.

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