By Giancarlo Casem
•

The Air Force took another step towards fielding a hypersonic weapon following its first captive-carry test of the AGM-183A Air-launched Rapid Response Weapon under a wing of a B-52 Stratofortress off the Southern California coast, Aug. 8.

The flight resulted in the successful transmission of telemetry and GPS data from the AGM-183A IMV-2 (Instrumented Measurement Vehicle) to Point Mugu Sea Range ground stations. The test verified system integration with the B-52 launch platform and telemetry while practicing concepts of operations that will be utilized during its first Booster Test Flight later this year.

“The first step in bringing game-changing hypersonic capabilities to our Warfighters.”

The ARRW program is a rapid prototyping effort, the first step in bringing game-changing hypersonic capabilities to our Warfighters.

By AEDC Fellows Committee

2020 AEDC Fellows announced

By Giancarlo Casem

August 17, 2020
Arnold AFB, Tenn.

Vol. 67, No. 16

Air Force conducts latest hypersonic weapon flight test

2020 AEDC Fellows announced

By AEDC Fellows Committee

Lt. Col. Adam Quick, left, director of the Arnold Engineering Development Complex (AEDC) Space and Missile Branch, briefs Vice Chief of Staff of the Air Force Gen. Stephen Wilson as they walk through part of the arc heater facility Aug. 11 at Arnold Air Force Base. Arc heaters allow for the testing of thermal protection systems in simulated environments representative of hypersonic flight. (U.S. Air Force photo by Jill Pickett)
By Deirdre Moon  
AEDC Public Affairs

By Secretary of the Air Force

By Chief of Staff

By Commander

By Deputy

By General

By Advisor

By Administrator

By Director

By Team

By Facility

By Department

By Office

By Unit

By Agency

By Program

By Project

By Task

By Program

By Office

By Unit

By Agency

By Program

By Project

By Task

By Program

By Office

By Unit

By Agency

By Program

By Project

By Task

By Program

By Office

By Unit

By Agency

By Program

By Project

By Task

By Program

By Office

By Unit

By Agency

By Program

By Project

By Task

By Program

By Office

By Unit

By Agency

By Program

By Project

By Task

By Program

By Office

By Unit

By Agency

By Program

By Project

By Task

By Program

By Office

By Unit

By Agency

By Program

By Project

By Task

By Program

By Office

By Unit

By Agency

By Program

By Project

By Task

By Program

By Office

By Unit

By Agency

By Program

By Project

By Task

By Program

By Office

By Unit

By Agency

By Program

By Project

By Task

By Program

By Office

By Unit

By Agency

By Program

By Project

By Task

By Program

By Office

By Unit

By Agency

By Program

By Project

By Task

By Program

By Office

By Unit

By Agency

By Program

By Project

By Task

By Program

By Office

By Unit

By Agency

By Program

By Project

By Task

By Program

By Office

By Unit

By Agency

By Program

By Project

By Task

By Program

By Office

By Unit

By Agency

By Program

By Project

By Task

By Program

By Office

By Unit

By Agency

By Program

By Project

By Task

By Program

By Office

By Unit

By Agency

By Program

By Project

By Task

By Program

By Office

By Unit

By Agency

By Program

By Project

By Task

By Program

By Office

By Unit

By Agency

By Program

By Project

By Task

By Program

By Office

By Unit

By Agency

By Program

By Project

By Task

By Program

By Office

By Unit

By Agency

By Program

By Project

By Task

By Program

By Office

By Unit

By Agency

By Program

By Project

By Task

By Program

By Office

By Unit

By Agency

By Program

By Project

By Task

By Program

By Office

By Unit

By Agency

By Program

By Project

By Task

By Program

By Office

By Unit

By Agency

By Program

By Project

By Task

By Program

By Office

By Unit

By Agency

By Program

By Project

By Task

By Program

By Office

By Unit

By Agency

By Program

By Project

By Task

By Program

By Office

By Unit

By Agency

By Program

By Project

By Task

By Program

By Office

By Unit

By Agency

By Program

By Project

By Task

By Program

By Office

By Unit

By Agency

By Program

By Project

By Task

By Program

By Office

By Unit

By Agency

By Program

By Project

By Task

By Program

By Office

By Unit

By Agency

By Program

By Project

By Task

By Program

By Office

By Unit

By Agency

By Program

By Project

By Task

By Program

By Office

By Unit

By Agency

By Program

By Project

By Task

By Program

By Office

By Unit

By Agency

By Program

By Project

By Task

By Program

By Office

By Unit

By Agency

By Program

By Project

By Task

By Program

By Office

By Unit

By Agency

By Program

By Project

By Task

By Program

By Office

By Unit

By Agency

By Program

By Project

By Task

By Program

By Office

By Unit

By Agency

By Program

By Project

By Task

By Program

By Office

By Unit

By Agency

By Program

By Project

By Task

By Program

By Office

By Unit

By Agency

By Program

By Project

By Task

By Program

By Office

By Unit

By Agency

By Program

By Project

By Task

By Program

By Office

By Unit

By Agency

By Program

By Project

By Task

By Program

By Office

By Unit

By Agency

By Program

By Project

By Task

By Program

By Office

By Unit

By Agency

By Program

By Project

By Task

By Program

By Office

By Unit

By Agency

By Program

By Project

By Task

By Program

By Office

By Unit

By Agency

By Program

By Project

By Task

By Program

By Office

By Unit

By Agency

By Program

By Project

By Task

By Program

By Office

By Unit

By Agency

By Program

By Project

By Task

By Program

By Office

By Unit

By Agency

By Program

By Project

By Task

By Program

By Office

By Unit

By Agency

By Program

By Project

By Task

By Program

By Office

By Unit

By Agency

By Program

By Project

By Task

By Program

By Office

By Unit

By Agency

By Program

By Project

By Task

By Program

By Office

By Unit

By Agency

By Program

By Project

By Task

By Program

By Office

By Unit

By Agency

By Program

By Project

By Task

By Program

By Office

By Unit

By Agency

By Program

By Project

By Task

By Program

By Office

By Unit

By Agency

By Program

By Project

By Task

By Program

By Office

By Unit

By Agency

By Program

By Project

By Task

By Program

By Office

By Unit

By Agency

By Program

By Project

By Task

By Program

By Office

By Unit

By Agency

By Program

By Project

By Task

By Program

By Office

By Unit

By Agency

By Program

By Project

By Task

By Program

By Office

By Unit

By Agency

By Program

By Project

By Task

By Program

By Office

By Unit

By Agency

By Program

By Project

By Task

By Program

By Office

By Unit

By Agency

By Program

By Project

By Task

By Program

By Office

By Unit

By Agency

By Program

By Project

By Task

By Program

By Office

By Unit

By Agency

By Program

By Project

By Task

By Program

By Office

By Unit

By Agency

By Program

By Project

By Task

By Program

By Office

By Unit

By Agency

By Program

By Project

By Task

By Program

By Office

By Unit

By Agency

By Program

By Project

By Task

By Program

By Office

By Unit

By Agency

By Program

By Project

By Task

By Program

By Office

By Unit

By Agency

By Program

By Project

By Task

By Program

By Office

By Unit

By Agency

By Program

By Project

By Task

By Program

By Office

By Unit

By Agency

By Program

By Project

By Task

By Program

By Office

By Unit

By Agency

By Program

By Project

By Task

By Program

By Office

By Unit

By Agency

By Program

By Project

By Task

By Program

By Office

By Unit

By Agency

By Program

By Project

By Task

By Program

By Office

By Unit

By Agency

By Program

By Project

By Task

By Program

By Office

By Unit

By Agency

By Program

By Project

By Task

By Program

By Office

By Unit

By Agency

By Program

By Project

By Task

By Program

By Office

By Unit

By Agency

By Program

By Project

By Task

By Program

By Office

By Unit

By Agency

By Program

By Project

By Task

By Program

By Office

By Unit

By Agency

By Program

By Project

By Task

By Program

By Office

By Unit

By Agency

By Program

By Project

By Task

By Program

By Office

By Unit

By Agency

By Program

By Project

By Task

By Program

By Office

By Unit

By Agency

By Program

By Project

By Task

By Program

By Office

By Unit

By Agency

By Program

By Project

By Task

By Program

By Office

By Unit

By Agency

By Program

By Project

By Task

By Program

By Office

By Unit

By Agency

By Program

By Project

By Task

By Program

By Office

By Unit

By Agency

By Program

By Project

By Task

By Program

By Office

By Unit

By Agency

By Program

By Project

By Task

By Program

By Office

By Unit

By Agency

By Program

By Project

By Task

By Program

By Office

By Unit

By Agency

By Program

By Project

By Task

By Program

By Office

By Unit

By Agency

By Program

By Project

By Task

By Program

By Office

By Unit

By Agency

By Program

By Project

By Task

By Program

By Office

By Unit

By Agency

By Program

By Project

By Task

By Program

By Office

By Unit

By Agency

By Program

By Project

By Task

By Program

By Office

By Unit

By Agency

By Program

By Project

By Task
Arnold AFB Combating Trafficking in Persons program manager urges awareness

Air Force removes administrative burden, allows pregnant, postpartum women to attend PME

By Secretary of the Air Force Public Affairs

WASHINGTON (AFP) - Pregnant or postpartum members may now attend professional military education without an exception to policy, and are also exempt from the requirement to have a passing fitness assessment prior to attending.

Previous policy prevented pregnant women and women within their one-year postpartum deployment period from attending PME, creating an unintended barrier to their developmental milestones.

Empowering women to make a decision about the right time to attend PME, especially during or after pregnancy, is the right thing to do, said Gemayel DeFilippi, assistant deputy director of Air Force manpower, personnel and services and strategic director of the Air Force Barrier Analysis Working Group. “These type of policy changes provide women flexibility to balance family planning and career progression, they help to level the playing field. We’re committed to improving diversity, and inclusion and belonging across the Department of the Air Force, and sometimes it’s harder to know what to do. Thanks to the Women’s Initiative Team and the work of the IVW, the DAFBGW, the Women’s Initiative Team Task Force, the WIT, which is an all-female leadership team, is able to implement meaningful changes that will help retain women in our ranks.”

This change, in collaboration with Col. Richy Mills, Squadron Officer School commander, brings an end to a barrier within the workforce, says Col. Alea Nadeem, Women’s Initiative Team chief. “It’s about empowering women, particularly pregnant or postpartum women to work directly with their primary care manager or obstetrician to make a well-informed decision. We keep our ground and listen to what our teammates are saying. Thanks to the Air and Space Professionals who came forward and identified this as a barrier, and also for the support of Col. Mills and his team, we’re able to make this important change.

Air Force Instruction 21-2670, Total Force Development, outlines the exemption for pregnant and postpartum members. Routine obstetric care may not be available at the PME location, so members should work with their primary care manager or obstetrician to obtain medical clearance and any required paperwork.

Whether or not a member attends PME while pregnant or within the one-year postpartum period is left up to the individual, and her medical care manager or obstetrician.

For more information, members should contact their chain of command or refer to AFIP 56-2670, Total Force Development.

What is Trafficking in Persons (TIP)?

The use of force, fraud, or coercion to compel a person to provide labor, services, or commercial sex. Any minor under 18 years of age involved in commercial sex is a victim of human trafficking (no force, fraud or coercion need be proved). TIP is the recruiting, harboring, transporting, providing, or obtaining a person for the purpose of exploitation. In sex trafficking, it also includes soliciting and pimping.

Common Types of TIP: Labor Trafficking, Sex Trafficking, Child Smuggling, Domestic Servitude, Debt Bondage/Peonage, Involuntary Servitude

Who is at risk?

• Undocumented migrants
• Runaway and homeless youth
• Women and children with limited resources
• Oppressed social or cultural groups
• People displaced by natural disaster or conflict
• Victims of prior sexual or physical abuse

What are some indicators of TIP?*

Physical/Environmental Indicators. Victims may:
• Have signs of physical abuse (bruises, cuts, burns, broken bones)
• Not possess identification papers
• Show signs of physical close quarters or work site
• Be escorted or closely monitored at all times
• Be in debt bondage to employer
• Suffer medical conditions such as serious communicable diseases, injuries from violence or hazardous work conditions, malnutrition, dehydration

Psychological/Behavioral Indicators. Victims may be:
• Fearful
• Submissive
• Anxious
• Nervous
• Depressed
• Dependent on others
• Emotionally abused
• Lacking ability to move freely

*Indications listed are not an absolute sign of TIP, but when present signal a sign of TIP.

How to respond if TIP is suspected:

If you suspect a TIP situation, do not get directly involved. Report the situation to the appropriate authority immediately:

Chair of Command

DOD Inspector General Hotline
1-800-424-9098
http://www.dodig.mil/hotline

National Human Trafficking Resource Center
1-888-373-7888

Law Enforcement
Report and avoid any establishments or persons that you believe may be involved in TIP.

Never act alone, you may want to help, but trafficking situations are dangerous.

For more information is available at: ctip.defense.gov

By Jill Pickett
AEDC Public Affairs

Trafﬁcking in persons, or TIP, is the second largest criminal activ¬ity in the world, according to the Arnold Air Force Base Initia¬tion Policy on TIP. TIP is defined on the DOD Combating Trafficking in Per¬sons website as: “The use of force, fraud, or coercion to com¬pel persons to provide labor or services or commercial sex. TIP involves exploitation of all types.

Chain of command - DOD Inspector General

Local military or civilian law enforcement

National Human Trafficking in Persons (CTIP) program manager urges awareness.

Arnold AFB Combating Trafficking in Persons program manager, Col. Alea Nadeem, Women’s Initiative Team chief, and the WIT, which is an all-female leadership team, is able to implement meaningful changes that will help retain women in our ranks.”

This change, in collaboration with Col. Richy Mills, Squadron Officer School commander, brings an end to a barrier within the workforce, says Col. Alea Nadeem, Women’s Initiative Team chief.

“With our teammates, we’re able to make a well-informed decision. We keep our ground and listen to what our teammates are saying. Thanks to the Air and Space Professionals who came forward and identified this as a barrier, and also for the support of Col. Mills and his team, we’re able to make this important change.

Air Force Instruction 21-2670, Total Force Development, outlines the exemption for pregnant and postpartum members. Routine obstetric care may not be available at the PME location, so members should work with their primary care manager or obstetrician to obtain medical clearance and any required paperwork.

Whether or not a member attends PME while pregnant or within the one-year postpartum period is left up to the individual, and her medical care manager or obstetrician.

For more information, members should contact their chain of command or refer to AFIP 56-2670, Total Force Development.

Lt. Col. Hallie Herrera salutes during her change of command ceremony at Fort George G. Meade, Maryland, June 16. Hererra, who was eight months pregnant at the time, took command of the 22nd Intelligence Squadron. (U.S. Air Force courtesy photo by Felix Herrera)
Airman delays retirement, helps AEDC meet COVID-19 challenge

By Jill Pickett

TINKER AFB, Okla.—Members of the Oklahoma City Air Logistics Complex, an Air Force Sustainment Center wing, have produced the first additively manufactured metal component successfully tested on a U.S. Air Force aircraft engine, a significant milestone for future sustainment of an aircraft like the E-3 Airborne Warning and Control System and the B-52 Stratofortress.

The OC-ALC used additive manufacturing, also known as 3D printing, to create a component for the TF33-P10I Engine, an innovation meant to save time and improve efficiency. A collaboration between the 76th Propulsion Maintenance Group, the Reverse Engineering and Critical Tooling Lab, and the Air Force Life Cycle Management Center Propulsion Sustainment, led to the development of a 3D printed anti-ice gasket.

“Tinker AFB units produce first 3D printed engine component”

By 2nd Lt. Danny Gagnon

TINKER AIR FORCE BASE, Okla. (AFNS)—Members of the Air Force Materiel Command continues to encourage Airmen to be innovative and find new opportunities.

The team, like many, has digitalized and digitally engineered components that represent a substantial milestone in the Air Force sustainment. Although it is a basic component, the technology our OC-ALC team has developed will help resolve supply chain issues, reduce the time it takes to backfill capacities to support the warfighter. The project stemmed from a supply shortage of anti-ice gaskets. Historically, maintenance workers visually inspected and replaced the gasket component. Recently, OC-ALC personnel noticed that the published guidance directed maintenance personnel to discard the gaskets, significantly increasing demand for the component and subsequently causing a supply shortage.

“One of the things we found in this collaboration is that we could potentially solve the supply shortage by reengineering and printing something and prove it was safe to fly,” said Richard Banks, 76th PMXS el-egated engineering authority engineer. “The project was developed to make it easier to source materials, greatly reduces lead time and ultimately helps to reduce logistical and supply issues.”

So far, the REACT lab has digitally engineered and printed 30 anti-ice gaskets. Members of the 76th PMXS performed a successful engine acceptance test run earlier this month. Compared to the original component sourcing method, the new anti-ice gasket manufacturing process reduces administrative lead time—the amount of time between an initial contract and actual component manufacture—from 120-136 days to 14-21 days.

“We’ve implemented a culture, walk and run approach when it comes to additive manufacturing,” Teao said. “We haven’t had a 3D printed metal component in Air Force engines before, but in the next 12-24 months, this technology will open the door to more complex and critical components that help improve our sustainment efforts moving forward.”

Airman delays retirement, helps AEDC meet COVID-19 challenge

By Jill Pickett

TINKER AFB, Okla.—Members of the Oklahoma City Air Logistics Complex have produced the first additively manufactured metal engine part successfully installed and tested on a U.S. Air Force aircraft engine, a significant milestone for future sustainment efforts of aircraft like the E-3 Airborne Warning and Control System, E-8 Joint Surveillance Target Attack Radar System and the B-52 Stratofortress. (Photo courtesy of Oklahoma City Air Logistics Complex)

Master Sgt. Joshua Suggs was nearing the end of his many years of hard work, with terminal leave planned to begin May 1 and retire-ment Sept. 1. That was before CO-VID-19.

With the pandemic surging in the United States, Suggs demonstrated the Air Force core value of “service before self,” delaying his retirement to help team members at Air-nard Engineering Develop-oment Complex meet this new threat to personnel and the mission.

Suggs is the branch chief of the Arnold Air Force Base Medical Aid Station.

It was a very busy time for the unit—writing base polices, drafting return-to-full-capacity plans, pro-viding daily briefings for COVID-19 experts. This was the hardest part of the task because the guidance was and still is constantly changing.

“We still have a lot of ground to cover, but it is much more manageable at this point,” Suggs said.

The team, like many, shifted to a workation work modus operandi at the beginning of the pandemic and there were some very long and stress-ful days, but you learn a lot during those types of situations,” Suggs said.

“The airman who delays retirement, helps AEDC meet the COVID-19 challenge.”

By 3rd Lt. Danny Gagnon

TINKER AIR FORCE BASE, Okla. (AFNS)—Members of the Oklahoma City Air Logistics Complex, an Air Force Sustainment Center wing, have produced the first additively manufactured metal component successfully tested on a U.S. Air Force aircraft engine, a significant milestone for future sustainment of an aircraft like the E-3 Airborne Warning and Control System and the B-52 Stratofortress.

The OC-ALC used additive manufacturing, also known as 3D printing, to create a component for the TF33-P10I Engine, an innovation meant to save time and improve efficiency. A collaboration between the 76th Propulsion Maintenance Group, the Reverse Engineering and Critical Tooling Lab, and the Air Force Life Cycle Management Center Propulsion Sustainment, led to the development of a 3D printed anti-ice gasket. The gasket is a critical part of safe and efficient operation of the TF33 engine, which powers the E-3, the B-52, and the E-8 Joint Sur-veillance Target Attack Radar System.

“This accomplish-ment is truly a historical first,” said the AFLCMC propulsion structural competency lead. “This is a digitally designed and digitally engineered component that represents a sub-stantial milestone in the Air Force sustainment. Although it is a basic component, the technolog-ey our OC-ALC team has developed will help resolve supply chain issues, reduce the time it takes to backfill capacities to support the warfighter. The project stemmed from a supply shortage of anti-ice gaskets. Historically, maintenance workers visually inspected and replaced the gasket component. Recently, OC-ALC personnel noticed that the published guidance directed maintenance personnel to discard the gaskets, significantly increasing demand for the component and subsequently causing a supply shortage.

“One of the things we found in this collaboration is that we could potentially solve the supply shortage by reengineering and printing something and prove it was safe to fly,” said Richard Banks, 76th PMXS el-egated engineering authority engineer. “The project was developed to make it easier to source materials, greatly reduces lead time and ultimately helps to reduce logistical and supply issues.”

So far, the REACT lab has digitally engineered and printed 30 anti-ice gaskets. Members of the 76th PMXS performed a successful engine acceptance test run earlier this month. Compared to the original component sourcing method, the new anti-ice gasket manufacturing process reduces administrative lead time—the amount of time between an initial contract and actual component manufacture—from 120-136 days to 14-21 days.

“We’ve implemented a culture, walk and run approach when it comes to additive manufacturing,” Teao said. “We haven’t had a 3D printed metal component in Air Force engines before, but in the next 12-24 months, this technology will open the door to more complex and critical components that help improve our sustainment efforts moving forward.”

Air Force Materiel Command continues to encourage Airmen to be innovative and find new opportunities.

The team, like many, shifted to a workation work modus operandi at the beginning of the pandemic and there were some very long and stress-ful days, but you learn a lot during those types of situations,” Suggs said.

“The airman who delays retirement, helps AEDC meet the COVID-19 challenge.”
Tinker AFB units produce first 3D printed engine component

Grades Power

Grades Power has significantly advanced the subject matter expert for the last several years through his extensive modeling and analysis work. This has resulted in a wide range of applications in a highly technical field.

The ability to have accurate modeling capability and anomaly detection is critical in today's world.

These advances have been developed in an iterative process, where each new iteration builds upon the previous one to refine the overall capability.

Technical experts developing algorithms and approaches can be analyzed, through the use of powerful analytical and computational tools and techniques, to improve the accuracy of the modeling and analysis capabilities.

Power has been involved in such efforts for many years, contributing to the ongoing development of these advanced technologies.

His work has focused on developing new tools and techniques, and on the application of these tools to a wide range of problems.

Grades Power has now been recognized for his contributions to the field of computational fluid dynamics (CFD) and computational fluid mechanics (CFM), with the award of a prestigious technical achievement award.

Ramesh Chandra Gulati

Ramesh Chandra Gulati has been named as the recipient of the 2020 Electrical Engineering Technical Achievement Award from the American Institute of Electrical Engineers (IEEE) for his contributions to the field of electrical engineering.

Gulati's work has focused on improving the reliability of electrical systems, with a particular emphasis on developing new methods for predicting and mitigating failures.

His research has led to the development of new techniques for predicting failures in electrical systems, which have been widely adopted by the industry.

Gulati is currently the director of the Reliability and Maintenance Planning Department at the Air Force Research Laboratory (AFRL) at Wright-Patterson Air Force Base (WPAFB) in Ohio.

His work has focused on developing new methods for predicting and mitigating failures in electrical systems, with a particular emphasis on developing new techniques for predicting failures in electrical systems, which have been widely adopted by the industry.

Gulati's research has led to the development of new techniques for predicting failures in electrical systems, which have been widely adopted by the industry.

His work has focused on improving the reliability of electrical systems, with a particular emphasis on developing new methods for predicting and mitigating failures.

Gulati's current research focuses on developing new methods for predicting and mitigating failures in electrical systems, with a particular emphasis on developing new techniques for predicting failures in electrical systems, which have been widely adopted by the industry.

Gulati's research has led to the development of new techniques for predicting failures in electrical systems, which have been widely adopted by the industry.

His work has focused on improving the reliability of electrical systems, with a particular emphasis on developing new methods for predicting and mitigating failures.

Gulati's current research focuses on developing new methods for predicting and mitigating failures in electrical systems, with a particular emphasis on developing new techniques for predicting failures in electrical systems, which have been widely adopted by the industry.

His work has focused on improving the reliability of electrical systems, with a particular emphasis on developing new methods for predicting and mitigating failures.

Gulati's current research focuses on developing new methods for predicting and mitigating failures in electrical systems, with a particular emphasis on developing new techniques for predicting failures in electrical systems, which have been widely adopted by the industry.

His work has focused on improving the reliability of electrical systems, with a particular emphasis on developing new methods for predicting and mitigating failures.

Gulati's current research focuses on developing new methods for predicting and mitigating failures in electrical systems, with a particular emphasis on developing new techniques for predicting failures in electrical systems, which have been widely adopted by the industry.

His work has focused on improving the reliability of electrical systems, with a particular emphasis on developing new methods for predicting and mitigating failures.

Gulati's current research focuses on developing new methods for predicting and mitigating failures in electrical systems, with a particular emphasis on developing new techniques for predicting failures in electrical systems, which have been widely adopted by the industry.

His work has focused on improving the reliability of electrical systems, with a particular emphasis on developing new methods for predicting and mitigating failures.

Gulati's current research focuses on developing new methods for predicting and mitigating failures in electrical systems, with a particular emphasis on developing new techniques for predicting failures in electrical systems, which have been widely adopted by the industry.
Staying safe in the heat

Summer time is here - make sure you and your loved ones are staying cool and safe in this heat wave.

Heat-related illnesses happen when your body is unable to maintain a safe internal temperature. Your body normally cools itself by sweating, but some factors can interfere with this process.

When the body cannot cool itself well enough, a person's body temperature rises rapidly. Very high body temperatures may damage the brain or other vital organs. Here are some factors that can affect the body's ability to cool itself and increase your heat related illness risk:

- Old age
- Sunburn
- Children less than 4-years-old
- Dehydration
- Heart Disease
- High Humidity
- Illness or fever
- Drinking Alcohol
- Being overweight
- Poor overall health
- Some prescription drugs

Tips to stay safe

Schedule outdoor activities during cool er times:
Morning and late evening hours are usually best. Recover best by resting in shady areas with a fan or breeze.

Weather sunscreen:
Sunburn interferes with your body’s ability to cool down and can make you dehydrated. Use a broad spectrum UVA/UVB protecting sunscreen of SPF 15 or higher 30 minutes prior to going out and reapply every 2 hours.

Drink plenty of fluids:
If you are thirsty and drink even before you're thirsty. Choose drinks that replace electrolytes and carbohydrates, such as sports drinks, coconut milk or water. Water helps but does not replenish electrolytes. Room temperature or cool drinks are better than cold drinks. Avoid very cold drinks because they can cause stomach cramps. Avoid sugary or alcoholic drinks because these can cause dehydration.

Wear appropriate clothing:
Lightweight, light-colored, loose-fitting, sun-glasses, and wide brim hat.

Heat exhaustion:
Symptoms:
- In a person who does not take in enough fluids, the body and the over-heat. Heat exhaustion is often accompanied by dehydration. The warning signs of heat exhaustion are:
- The pulse rate will be fast and weak, and you may feel lightheaded or nauseated. If you are not aware of them, take the following steps:
- Stop all activity and get quickly into a cool place.
- Drink cool water or a sports beverage.
- Do not return to strenuous activity too soon for fear of relapse.

Seek medical attention for heat cramps if they last more than one hour.

Heat exhaustion:
- If you are dealing with a life-threatening emergency, call the hospital emergency line. Be sure you follow your doctor’s instruction.
- Get the victim to a shady area.
- Cool the victim不受 a cool environment.
- Take a cool shower, or use cool, damp cloths. They suffer from a high body temperature and need immediate medical attention.
- Drink fluids:
- Drink cooled milk, coconut water, or other beverages.
- See medical attention if symptoms worsen or last longer than a few hours.
- Heat stroke is the most serious heat-related illness. The body’s temperature may rise rapidly, the sweat mechanism fails and the body is unable to cool down. Body temperature may rise to 100 degrees Fahrenheit or higher within 10 to 15 minutes. Heat stroke can cause death or permanent disabil ity if emergency treatment is not provided.
- Do not approach a victim. Heat stroke vary but may include:
- The warning signs of heat exhaustion:
- The pulse rate will be fast and weak, and you may feel lightheaded or nauseated. If you are not aware of them, take the following steps:
- Stop all activity and get quickly into a cool place.
- Drink cool water or a sports beverage.
- Do not return to strenuous activity too soon for fear of relapse.

Seek medical attention for heat cramps if they last more than one hour.

Heat exhaustion:
- If you are dealing with a life-threatening emergency, call the hospital emergency line. Be sure you follow your doctor’s instruction.
- Get the victim to a shady area.
- Cool the victim不受 a cool environment.
- Take a cool shower, or use cool, damp cloths. They suffer from a high body temperature and need immediate medical attention.
- Drink fluids:
- Drink cooled milk, coconut water, or other beverages.
- See medical attention if symptoms worsen or last longer than a few hours.
- Heat stroke is the most serious heat-related illness. The body’s temperature may rise rapidly, the sweat mechanism fails and the body is unable to cool down. Body temperature may rise to 100 degrees Fahrenheit or higher within 10 to 15 minutes. Heat stroke can cause death or permanent disabil ity if emergency treatment is not provided.
- Do not approach a victim. Heat stroke vary but may include:
- The warning signs of heat exhaustion:
- The pulse rate will be fast and weak, and you may feel lightheaded or nauseated. If you are not aware of them, take the following steps:
- Stop all activity and get quickly into a cool place.
- Drink cool water or a sports beverage.
- Do not return to strenuous activity too soon for fear of relapse.
Survivor harnesses resilience to overcome invisible wounds

(TSgt Brittany Johnson
"Harnessing Resilience To Overcome Invisible Wounds and Regain Control over Life")

By Air Force Wounded Warrior Program

JOINT BASE SAN ANTONIO-RANDOLPH, Texas (AFNS) – Reality hit when then Airmen First Class Brittan-y Johnson of the 49th Logistics Readiness Squadron left the hos-pital in September 2010 after a week-long stay for sexual and physical assault.

“I didn’t feel like my-old self,” recalls Johnson, now a technical sergeant with the 36th Civil En-gineering Squadron. “I couldn’t find joy in ac-tivities anymore.”

While at home on convalescent leave, Johnson found her-self reliving memo-ries of her assault. She couldn’t move on from her traumatic experi-ence and started having nightmares, flashbacks and panic attacks. Waking up in a dark room or coming across re-minders of her attacker, like a similar last name, haircut or car model he drove, would trigger her symptoms.

Her symptoms had a large impact on her daily life. She became distrustful of people and withdrew from perso-nal interactions, in-cluding her 19-month-old daughter. Johnson lost interest in activities she had enjoyed before, even those as simple as taking a walk.

“I wanted to sleep all day even though I couldn’t fall asleep,” recalls Johnson as she of-ten was too tired to get out of bed.

Johnson felt her life slipping away from her control until a conver-sation with her mother made her pause.

“How can you take care of anyone else until you take care of yourself?” Johnson re-members her mother’s words. “How can you pour from a cup that’s empty?”

Those words stuck with Johnson. Having the support of her fam-ily gave Johnson the strength to reach out for help so she could take back her power over her life.

In October, one month after leaving the hospital, Johnson made an appointment at the mental health clinic and talked to her supervisor, a casualty while still on convalescent leave, to let him know she was seeking treatment. The provider diagnosed her with PTSD, anxiety and depression and recom-mended a mix of thera-py and medication.

“In the beginning, I was the outcast,” Johnson talks about her early days of treatment. “I was so shut down that I had a hard time open-ing up and talking about what happened.”

But the provider was supportive and worked with Johnson to personalize her treat-ment, including help-ing Johnson open up by switching her to a different therapist with whom she felt a more personal connection.

As Johnson went back to work in December, she, at first tried to hide her state of mind and “put on a happy face” to show she was OK. But after going home from work, she wouldn’t eat and would cry most days.

“I didn’t know what normal or happy were anymore,” Johnson said.

Then Johnson’s lead-ership stepped in. They supported Johnson’s de-sire to return to work and also encouraged her to seek any addi-tional help she needed. Unit support was im-portant to Johnson, and it helped her overcome con-cerns about seek-ing various resources to help work through her experiences.

“My leadership would check in on me asking questions like, ‘How has it been go-ing? Is there any-thing I could do to help you?’ And they really meant it,” Johnson re-called. “My supervisor and her supervisor were supportive and made sure she took the time she needed for any work tasks or meetings during those times.”

“We have a great re-lationship and still talk to this day even though he’s retired. He still checks in on me.”

With trusted advos-ters behind her, John-son turned her life around.

“Treatment helped me regain control over my life,” Johnson said.

Seeking help gave her the tools to under-stand her feelings and two to manage her symptoms.

“I started to recog-nize when there’s stress added. I under-stand those panic attacks would begin, so would pause to breathe and use coping tech-niques, like the 5-4-3-2-1, method to take back control over the situa-tions,” Johnson said.

As Johnson started to learn how to manage her invisible wounds, her weekly therapy ses-sions became bimonthly, monthly, and finally, as needed. Within the first two years of treatment, Johnson completed medication and therapy, after which her thera-pist told Johnson she could still set an ap-pointment whenever she needed to talk.

“I still occasionally go to therapy to main-tain my mental health and stay resilient,” Johnson said.

Seeking treatment definitely helped my career and made my life better overall. I’m bet-ter able to help myself and others. I’ve learned to listen and process my emotions and can take a step back from a situation and work through what’s going on first be-fore reacting.”

Seeking treatment also helped Johnson create a more support-ive culture for Airmen at work, especially as she continued to move up the ranks and took on more leadership responsibil-ities over the last decade. A lot of Airmen now come to her for ad-vise.

“They’re comfort-able asking me for help or talking with me about personal hardships or challenges in their lives.”

Johnson wishes more Airmen would ask for help to look after them.

“You can’t properly do your job if you’re not 100 percent OK, especially if you’re in a leadership position,” Johnson said. “It’s a snowball effect every time starts with you.”

Johnson encourages Airmen to seek treatment by using the Wounded Wear-ding advice for Air- men, caregivers, and leaders.

“Airmen. Take care of yourself first. Never be ashamed to ask for help. Encourage them to figur-e out what works for them, but they have to do the work themselves. Treatment won’t be ben-eﬁcial unless they are willing to do the work to get better.”

Caregivers. Be em-pathic towards your Airmen and be ready to have difﬁcult conver-sations. Do whatever it takes to create a sup-portive culture for your Airmen, so they are comfortable and trust you enough to come for-ward and ask for help.”

Air Force Wounded Warrior Program
courtesy graphic)

PRACTICE SOCIAL DISTANCING
AIR FORCE MATERIEL COMMAND

6 Feet
New acquisition guidance leverages diverse talent pool for competitive edge

By Secretary of the Air Force

WASHINGTON (AFNS) – The Department of the Air Force issued new guidance on March 16 to include a wider range of anthropometric data to optimize the recruiting population and provide the opportunity for future leaders roles across the force.

"With accelerating disruptions to technologies—like artificial intelligence, blockchain, big data, and automation—the U.S., continuing our culture of agility and superior advantage is paramount as we address the unprecedented battlefield challenges," Dr. Will Roper, Assistant Secretary of the Air Force for Acquisition, Technology and Logistics, said in a memo distributed across the department. "Ensuring our maximum readiness is all we can do that bullying will find we are not backed by our odd in what is already a backed deck. The time to move out is now."

The guidance updates minimum size design specifications for officer crew positions to reflect the 1967 male pilot survey, which stands in stark contrast to current body statistics according to the Center for Disease Control’s National Health Statistics Report (December 2018). Mean Body Weight, Height, Waist Circumference, and Body Mass Index, Among Adults: United States, 1999-2000 Through 2015-2016.

The 1967 study established 44% of the U.S. female population—inclusion of diverse and non-civilian African Americans, 72 percent of Latino Americans, and 60 percent of Asian Americans—unions they receive a waiver odds in what is already a backed deck. The time to move out is now."

The guidance updates minimum size design specifications for officer crew positions to reflect the 1967 male pilot survey, which stands in stark contrast to current body statistics according to the Center for Disease Control’s National Health Statistics Report (December 2018). Mean Body Weight, Height, Waist Circumference, and Body Mass Index, Among Adults: United States, 1999-2000 Through 2015-2016.

The 1967 study established 44% of the U.S. female population—inclusion of diverse and non-civilian African Americans, 72 percent of Latino Americans, and 60 percent of Asian Americans—unions they receive a waiver odds in what is already a backed deck. The time to move out is now."

The guidance updates minimum size design specifications for officer crew positions to reflect the 1967 male pilot survey, which stands in stark contrast to current body statistics according to the Center for Disease Control’s National Health Statistics Report (December 2018). Mean Body Weight, Height, Waist Circumference, and Body Mass Index, Among Adults: United States, 1999-2000 Through 2015-2016.

The 1967 study established 44% of the U.S. female population—inclusion of diverse and non-civilian African Americans, 72 percent of Latino Americans, and 60 percent of Asian Americans—unions they receive a waiver odds in what is already a backed deck. The time to move out is now."

The guidance updates minimum size design specifications for officer crew positions to reflect the 1967 male pilot survey, which stands in stark contrast to current body statistics according to the Center for Disease Control’s National Health Statistics Report (December 2018). Mean Body Weight, Height, Waist Circumference, and Body Mass Index, Among Adults: United States, 1999-2000 Through 2015-2016.

The 1967 study established 44% of the U.S. female population—inclusion of diverse and non-civilian African Americans, 72 percent of Latino Americans, and 60 percent of Asian Americans—unions they receive a waiver odds in what is already a backed deck. The time to move out is now."

The guidance updates minimum size design specifications for officer crew positions to reflect the 1967 male pilot survey, which stands in stark contrast to current body statistics according to the Center for Disease Control’s National Health Statistics Report (December 2018). Mean Body Weight, Height, Waist Circumference, and Body Mass Index, Among Adults: United States, 1999-2000 Through 2015-2016.

The 1967 study established 44% of the U.S. female population—inclusion of diverse and non-civilian African Americans, 72 percent of Latino Americans, and 60 percent of Asian Americans—unions they receive a waiver odds in what is already a backed deck. The time to move out is now."

The guidance updates minimum size design specifications for officer crew positions to reflect the 1967 male pilot survey, which stands in stark contrast to current body statistics according to the Center for Disease Control’s National Health Statistics Report (December 2018). Mean Body Weight, Height, Waist Circumference, and Body Mass Index, Among Adults: United States, 1999-2000 Through 2015-2016.

The 1967 study established 44% of the U.S. female population—inclusion of diverse and non-civilian African Americans, 72 percent of Latino Americans, and 60 percent of Asian Americans—unions they receive a waiver odds in what is already a backed deck. The time to move out is now."

The guidance updates minimum size design specifications for officer crew positions to reflect the 1967 male pilot survey, which stands in stark contrast to current body statistics according to the Center for Disease Control’s National Health Statistics Report (December 2018). Mean Body Weight, Height, Waist Circumference, and Body Mass Index, Among Adults: United States, 1999-2000 Through 2015-2016.

The 1967 study established 44% of the U.S. female population—inclusion of diverse and non-civilian African Americans, 72 percent of Latino Americans, and 60 percent of Asian Americans—unions they receive a waiver odds in what is already a backed deck. The time to move out is now."

The guidance updates minimum size design specifications for officer crew positions to reflect the 1967 male pilot survey, which stands in stark contrast to current body statistics according to the Center for Disease Control’s National Health Statistics Report (December 2018). Mean Body Weight, Height, Waist Circumference, and Body Mass Index, Among Adults: United States, 1999-2000 Through 2015-2016.
AEDC Unions agree to CBA extension with NAS

By Holly Logan-Arrington

Robert Pade-Alc

Mike Hayes, center, Warner Robins Air Logistics Complex Ergonomics Program technician, and Staff Sgt. Dakota Hickey, right, with the 52nd Combat Communications Squadron, learn how to fit on an exoskeletal lift support system, as it's fitted to Tech Sgt. Destin Maulding, with the 51st Combat Communications Group, as its fitted to Tech Sgt. Destin Maulding, with the 51st Combat Communications Group. Mike Hollowell, NAS Public Affairs chief spokesman for negotiations, said, "On behalf of the AEDC, and thanks to those who served on the negotiating teams," Hollowell said. "I appreciate their willingness to take on and successfully complete negotiations in today's difficult climate, and to forecast to contract negotiations next year when hopefully the COVID-19 virus will be behind us."

NAS is the Test Operations and Sustainment Contractor at AEDC.

By Holly Logan-Arrington

Robert Pade-Alc

Mike Hayes, center, Warner Robins Air Logistics Complex Ergonomics Program technician, and Staff Sgt. Dakota Hickey, right, with the 52nd Combat Communications Squadron, learn how to fit on an exoskeletal lift support system, as its fitted to Tech Sgt. Destin Maulding, with the 51st Combat Communications Group. Mike Hollowell, NAS Public Affairs chief spokesman for negotiations, said, "On behalf of the AEDC, and thanks to those who served on the negotiating teams," Hollowell said. "I appreciate their willingness to take on and successfully complete negotiations in today's difficult climate, and to forecast to contract negotiations next year when hopefully the COVID-19 virus will be behind us."

NAS is the Test Operations and Sustainment Contractor at AEDC.

By Holly Logan-Arrington

Robert Pade-Alc

Mike Hayes, center, Warner Robins Air Logistics Complex Ergonomics Program technician, and Staff Sgt. Dakota Hickey, right, with the 52nd Combat Communications Squadron, learn how to fit on an exoskeletal lift support system, as its fitted to Tech Sgt. Destin Maulding, with the 51st Combat Communications Group. Mike Hollowell, NAS Public Affairs chief spokesman for negotiations, said, "On behalf of the AEDC, and thanks to those who served on the negotiating teams," Hollowell said. "I appreciate their willingness to take on and successfully complete negotiations in today's difficult climate, and to forecast to contract negotiations next year when hopefully the COVID-19 virus will be behind us."

NAS is the Test Operations and Sustainment Contractor at AEDC.

By Holly Logan-Arrington

Robert Pade-Alc

Mike Hayes, center, Warner Robins Air Logistics Complex Ergonomics Program technician, and Staff Sgt. Dakota Hickey, right, with the 52nd Combat Communications Squadron, learn how to fit on an exoskeletal lift support system, as its fitted to Tech Sgt. Destin Maulding, with the 51st Combat Communications Group. Mike Hollowell, NAS Public Affairs chief spokesman for negotiations, said, "On behalf of the AEDC, and thanks to those who served on the negotiating teams," Hollowell said. "I appreciate their willingness to take on and successfully complete negotiations in today's difficult climate, and to forecast to contract negotiations next year when hopefully the COVID-19 virus will be behind us."

NAS is the Test Operations and Sustainment Contractor at AEDC.

By Holly Logan-Arrington

Robert Pade-Alc

Mike Hayes, center, Warner Robins Air Logistics Complex Ergonomics Program technician, and Staff Sgt. Dakota Hickey, right, with the 52nd Combat Communications Squadron, learn how to fit on an exoskeletal lift support system, as its fitted to Tech Sgt. Destin Maulding, with the 51st Combat Communications Group. Mike Hollowell, NAS Public Affairs chief spokesman for negotiations, said, "On behalf of the AEDC, and thanks to those who served on the negotiating teams," Hollowell said. "I appreciate their willingness to take on and successfully complete negotiations in today's difficult climate, and to forecast to contract negotiations next year when hopefully the COVID-19 virus will be behind us."

NAS is the Test Operations and Sustainment Contractor at AEDC.
Brown formally installed as 22nd Air Force Chief of Staff

By Charles Pope

Joint Base Andrews, Md. (AFNS) - Proclaiming himself "proud, yet humble," Gen. Charles Q. Brown, Jr. was officially installed Aug. 6 as the Air Force's 22nd Chief of Staff, becomiing the first African American in history to lead a military service as its highest ranking officer.

In remarks following the formal "Change of Responsibility" ceremony in which he took over from retiring Gen. David L. Goldfein, the 21st Chief of Staff, Brown acknowledged an array of people who influenced his life. Among them were his wife, Sharen, and his parents, as well as a list of Air Force colleagues, including Goldfein and "other extraordinary leaders.

Yet, cognizant of the moment in history, Brown also noted, "Today is possible due to the perseverance of those who went before me serving as an inspiration to me and many others."

"Those like the Tuskegee Airmen, Benjamin O. Davis Jr., Chappie James, African American leaders across our Air Force and military, past and present, to include today's special guest, Maj. Dwight, America's first African American astronaut candidate," he said. "It is due to their trials and tribulations in breaking barriers that I can address you today as the Air Force Chief of Staff."

Brown, who previously served as commander of Pacific Air Forces, was elevated to his new assignment during a solemn, socially distanced, 90-minute ceremony that focused on his achievements while also honoring Goldfein's 37-year service in the Air Force and his four years as chief of staff.

Among those paying tribute were Defense Secretary Mark Esper, Deputy Secretary of the Air Force Barbara Barrett, and Chairman of the Joint Chiefs of Staff Gen. Mark A. Milley. The ceremony also honored Goldfein as Esper presented him with the Defense Distinguished Service Medal.

Esper honored Dawn Goldfein as well, presenting her with the Department of Defense Distinguished Public Service Award.

"Gen. Goldfein, Dawn, our Airmen thrive in today's environment because of your strong leadership and your steadfast commitment to upholding the core values of the Air Force - integrity, service, and excellence, each and every day," Esper said. "The United States of America is safer because of you. Thank you for your lifetime of service to our great nation."

Moments later in remarks to the new Chief of Staff, Esper said, "As he returns to the Pentagon, Gen. Brown brings with him more than 35 years of service distinguished by a depth of expertise and experience that makes him exceptionally qualified to be our nation's next Air Force Chief of Staff."

"I am confident you will take the Air Force to greater heights and I'm excited to watch you lead."

In her remarks, Barrett offered similar praise for Goldfein's service and accomplishments. Like others she expressed confidence that Brown has the correct mix of experience and temperament to lead the Air Force to a bright and diminutive future. Brown, she said, "brings a wealth of joint leadership experiences and global perspectives to his new role as 22nd Chief of the Staff of the Air Force. Embodying the Air Force core values of integrity, service before self, and excellence in all we do, General Brown has the right character, experience, and perspective to lead the United States Air Force."

Like Goldfein and those who came before, Brown as chief of staff is responsible for ensuring the Air Force is trained, ready and equipped to accomplish any mission at any time. Yet he's also taking the reins of an Air Force in transition, one moving from a decades-long priority on combating and containing terrorism to a new area of Great Power Competition. As part of this new focus, the Air Force and Coast Guard U.S. military must be trained, ready and properly equipped to compete, deter and if necessary, defeat, challenges from Russia and China. It also comes at a time of heightened challenges from North Korea and other geopolitical shifts across Asia. In his remarks, Brown said he would work to build on Goldfein's legacy and "look to the future to compete, deter, and if necessary defeat, challenges from Russia and China."

In his remarks, Brown said he would work to build on Goldfein's legacy and "look to the future to compete, deter, and if necessary defeat, challenges from Russia and China."

Brown said he was excited to work on building Goldfein's legacy.

"I am committed to joint force superiority, an increasingly lethal, capable force that will continue to be guided by the four pillars of joint force: power, presence, resilience, and global perspective. We must continue to be guided by joint force superiority, an increasingly lethal, capable force that will continue to be guided by the four pillars of joint force: power, presence, resilience, and global perspective."

"In order to do so, we must not only deliver, but also innovate, execute at a high standard, and global perspectives to we've often discussed. We must continue to develop and improve our leaders and provide the quality and skill of our Air and families can reach their full potential," he said.

"As he noted in March when he was nominat ed to be chief of staff, Brown listed those who will continue to be guided by the four pillars of joint force superiority, an increasingly lethal, capable force that will continue to be guided by the four pillars of joint force: power, presence, resilience, and global perspective."