Winter 2023

Combat Edge

Air Combat Command's Safety Magazine

NOSE TO TAIL

the FULL SCOPE of CRM

PAGE 8

TELL US YOUR STORY

The Combat Edge presents safety stories from Airmen – people just like you. If you enjoy reading their articles, you can bet they'll enjoy reading yours.

Think of it: You, a **PUBLISHED AUTHOR!** It could happen, and more easily than you think.

We welcome safety stories on all topics from across Air Combat Command. If you have a personal story, a lesson learned, or an idea you'd like to share, we would love to hear about it. Articles can be about on-duty mishaps and/or their prevention, as well as off-duty safety issues: in the home, while traveling, sports, etc.

How easy is it? I'm glad you asked. Send your story, along with any high-resolution photos that go with it to: acc.thecombatedge@us.af.mil. If you haven't done much writing, or don't know how to begin, we can help.

You have to play to win. Get in touch by contacting Richard E. Cook at 757-764-8846 (DSN 574-8846), or richard.cook.38@us.af.mil for more information.

YOUR Story Is Too Good Not To Share!

Combat Edge

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COVER PHOTO BY TSGT JOSH BUTTS

ACCent

The Power of One

Col Anthony A. Kleiger
Director of Safety

The might of the Air Force is derived from the individual efforts of hundreds of thousands of Airmen. Everyone has a role and a function. To be blunt: If your effort was not required, your position would not exist. Yes, we accomplish everything we do through teamwork, but as the saying goes *"A team is only as strong as its weakest player"*. None of us operates at peak effectiveness all day, every day. Despite our best efforts, we make mistakes. Somedays we are the weakest player on the team, and we need our fellow teammates to step up and pick up what we missed. This is where the **Power of One** comes in and how it applies to Safety.

Preventing a mishap can sometimes be determined by a single act to save yourself or one of your teammates. We don't get advanced notification via email or text stating: *"Today you will be a deciding factor in preventing a mishap,"* alerting us to pay closer attention. We must be vigilant at all times. Constant vigilance is required to notice if **something is out of place, does not look right**, or **does not feel right**. Even if it is not within your direct responsibilities.

As a young Marine Officer going through undergrad pilot training with the Navy, I was observing from inside a hangar a contractor crew chief on the ground and an instructor pilot in a TA-4 starting the engine (only 1) and going through pre-taxi checks. I noticed the crew chief had not closed a panel the pilot couldn't see, and had allowed the pilot to start taxing toward the runway. The flimsy panel was in front of the engine intake, and it would have been catastrophic had the panel ripped off in-flight and got sucked into the single engine.

I couldn't believe the crew chief had missed this obvious step. I ran out of the hangar about 100 yards to intercept the taxing aircraft, gave the pilot an emergency-stop hand signal and directed the crew chief to close the panel. At that moment, the crew chief was the weakest player on the team and as a vigilant observer I was able to cover my teammate's weakness. Although I was a fledgling aviator with little experience and still much to learn, I had noticed something was not right and acted to prevent a mishap.

Acts like mine occur every day in our Air Force. I highlight it to illustrate that it wasn't my job to close the panel; however, despite my limited experience, I knew enough to realize it should have been closed prior to taxiing, and I knew I had to act and be that last line of defense to prevent a mishap.

Do not underestimate **YOUR** Power of One—to notice something that isn't right and decisively act to correct it and save yourself or save a teammate.

Stay Safe!


Photo by Kimberly Woodruf

What Else Could Go Wrong?

BY LT COL RICHARD B. LAYMAN

After experiencing a sequence of severe malfunctions during a developmental test flight, the crew of an E-3G Sentry Airborne Warning and Control System (AWACS) aircraft harnessed time-tested training and extensive experience to safely recover the aircraft to Tinker Air Force Base, Oklahoma.

Shortly after takeoff on 28 September 2021, aircraft commander Lt Col Richard Layman, acting as pilot monitoring, noticed a low oil-pressure caution light on the number-four engine. Just as he announced the anomaly to the crew of BROLLY 1, the light went out. The pilot flying, Mr. Tyler Wickham, asked flight engineer MSgt Kamanu Fernandez about the status of the engine oil system. MSgt Fernandez reported all systems—oil pressure, temperature, and quantity—looked normal, which suggested there was a slowly-developing clog in the oil filter. MSgt Ronnie Thomas, an additional flight engineer in the observer seat, reviewed the flight manual procedure in order to prepare the crew in the event the caution light came on again.

Photo by SrA Milton Hamilton

Photo by 2Lt Ashlyn K. Paulson

Meanwhile, the Traffic Alert and Collision Avoidance System (TCAS) failed. 1 Lt Damien Goodwin, navigator, attempted to regain the system, but was unsuccessful. The crew decided to continue the mission, but would keep a close eye on the number-four engine.

Soon after, Mr. Wickham alerted the crew that the hydraulically-powered series yaw damper had failed, and called for the procedure from the flight manual. MSgt Fernandez led the crew through the procedure, coordinating with both pilots to engage the backup yaw damper. Although degraded, the aircraft was still in a condition to execute the mission, and the crew decided to continue.

Shortly afterward, the number-four engine oil pressure caution light came on again—and remained illuminated. Lt Col Layman called for the associated procedure, which the crew had reviewed earlier.

Rather than continuing to climb to FL 290, the crew was approved a lower altitude of FL 240. The altitude change expedited checklist steps, and the crew was able to extinguish the light. The number-four engine was on borrowed time, but had not yet failed.

The crew took stock of the jet's status: a failed TCAS, a failed hydraulic yaw damper, and a failing engine oil system. As the discussion continued, the crew outlined factors in favor of, and opposed to, continuing the mission. As they were about to make a decision, MSgt Fernandez declared to the crew: "We just lost all hydraulic quantity!" as hydraulic pump pressure lights illuminated on the panel.

Mr. Wickham transferred control to the aircraft commander, and called for the appropriate procedure. He then began to execute with MSgt Fernandez, as MSgt Thomas backed them up on the manual's directions and the Flight Engineer panel. Meanwhile, Lt Col Layman declared an emergency with Air Traffic Control, and worked with 1 Lt Goodwin to plan a route to the Tinker Fuel Dump Area. Kansas City Center quickly cleared BROLLY 1 on their new route.

The crew secured the components of the failed hydraulic system, and outlined the plan to recover the aircraft: recheck weather back at Tinker AFB, determine desired landing weight, manually lower the landing gear using the hand crank, dump fuel, fly an approach using the emergency electric flap system, and (finally) land. Lt Col Layman alerted the Supervisor of Flying (SOF) of their intentions.

While approaching the Fuel Dump Area, 1 Lt Goodwin and MSgt Fernandez worked together to lower the landing gear manually using the hand crank. Once they had finished with the left main landing gear, Lt Col Layman informed the crew that the gear indicator wasn't lit, indicating the gear wasn't down and locked. Mr. Wickham suspected it was a bad lamp, and replaced the light bulb no less than five times without success. The crew added a fly-by of the control tower to their to-do list, and coordinated with the SOF to inspect the condition of the landing gear.

Following the fuel dump, MSgt Fernandez reported the left dump chute had failed to retract—another malfunction. The crew ran the procedure using alternate means to secure the chute, with no effect.

During the completion of the emergency, descent, and approach checklists, the crew reviewed the systems and functions lost during the sortie. Once they had chair-flown the approach, planned low-approach, and other contingencies, BROLLY 1 executed the fly-by. SOF and tower controllers reported the landing gear appeared safe and normal.

The crew executed the planned go-around and switched back to Oklahoma City Approach. When Lt Col Layman checked in, he received no response and noticed a fault on the VHF radio. He immediately reverted to a second VHF radio, which also promptly failed—yet another malfunction.

Lt Col Layman then dialed in approach into the UHF radio. As the radio completed tuning, the crew heard a new voice say, "BROLLY 1 Emergency, Oke City Approach. I don't know if you can hear this, but you are ILS (instrument landing system) cleared to land. No need to transmit. If able, IDENT (identify)." Mr. Wickham expertly flew the final approach to touchdown. Thankfully, the brakes worked, and the aircraft stopped.

Tinker AFB Fire Department and 552d Aircraft Maintenance Squadron helped safely recover and tow BROLLY 1 to parking.

Although crippling the aircraft, none of the flight's malfunctions were critical. The experienced crew knew the jet, its redundancies, and the new remediation procedures. The crew's rapport made easier a process that all U.S. Air Force pilots and crews are taught: maintain aircraft control, analyze the situation, and land as soon as conditions permit.

E-3 manuals and regulations further divide these simple guidelines into specified lanes of operation by each crew position. Complications such as confusing clearances and radio failures created additional friction, but were overcome, since—at all times—the airplane was in control, and there was a professional, calm atmosphere on the flight deck.

Needless to say, BROLLY 1 was happy to be back on the ground.

Photo by A1C Evan J. Lichten

NOSE TO TAIL

The Full Scope of CRM

BY MAJ ADAM M. "BLUE" SEMA

This story highlights the Crew Resource Management (CRM) and emergency actions of all members of the flight crew of BUZZ 43. The crew was made up primarily of members of the 343d Reconnaissance Squadron and the 97th Intelligence Squadron, with the exception of SSgt Christopher Velasco from the 55th Intelligence Support Squadron and Capt Joshua Irvin of the 38th Reconnaissance Squadron.

On 13 July 2021, BUZZ 43, an RC-135 from Offutt Air Force Base, Nebraska, while on the boom of a KC-135, experienced a partial electrical failure in the redundantly-powered Switched DC Bus. This is a bus that supplies power to some of the more critical electrical features of the aircraft. The design of the electrical system is supposed to prevent loss of power to this bus, unless the bus itself fails.

Photo by Master Sgt. Russ Scalf

The RC-135 was in the contact position with a KC-135 tanker based out of MacDill AFB, FL, and was receiving fuel. After receiving half of their planned upload, the aircraft experienced a sudden loss of electrical power. It eliminated all engine data displays (which provide real-time information on thrust setting, center of gravity, and fuel levels on the center display screen), as well as interphone and hot mic communication. The loss of power also triggered a disconnection from the tanker boom. The crew separated to a position that allowed them to keep sight of the tanker through cumulous cloud buildup, approximately 100 feet back.

KC-135 boom operator:

I state we have good disconnect. Then I don't hear anything. I reach out to them over boom freq. 'BUZZ 43, is everything good?' Our MEP (Mission-Essential Personnel) asked me, 'Is this normal?' I laugh a little: 'I don't think so.'

The checklist directed switching to emergency battery power. The crew tried it, to no effect. This indicated a loss of the switched DC bus itself. Even though the fuel pumps still worked, fuel switches and valves could not be actuated, and fuel could not be dumped overboard. Center of gravity and TOLD (Take-Off and Landing Data) could not be calculated. Primary flight deck radios and communications control panels also were inoperative, meaning that, although several other radios were working, the crew had no ability to select them. The aircraft was heavy on fuel; however, the only accessible fuel was in the main tanks, and there wasn't enough to burn down to a normal landing weight.

Unbeknownst to the crew at the time, what had occurred was a failure of a relay associated with a 50-amp circuit breaker. The Switched DC Bus has triple-redundant power sources: the transformer-rectifier units, the battery, and the backup battery. All power must pass through a pair of 50-amp relays and their respective circuit breakers, providing in this case a total of 100 amps. With the shorting of one relay, the remaining relay and its breaker were given the full load to the bus. The breaker functioned as designed, and prevented an overload.

The navigator found the popped circuit breaker on the switched DC bus panel. He pushed it in, and systems were regained; however, in less than five minutes, the breaker popped again.

At this point, the crew decided that the aircraft should head for MacDill AFB, led by the tanker—information difficult to convey without radios. After research of aircraft Technical Orders (TO), the crew decided to try a second reset of the circuit breaker to see if the issue had been alleviated after a longer cool-down period. Once the breaker was reset, the crew was able to get a good look at the current fuel level and center of gravity, and to make some quick calls to the tanker before the breaker popped again.

KC-135:

Shortly before we lost comms with them, the crew informed me that they were going to terminate their mission. The tanker crew quickly brainstormed and asked our receiver to flash their landing lights or rock their wings to confirm they could hear us over the radio. We talked amongst ourselves, thinking it probably would be best for them to divert to MacDill. I stayed in the back to make sure the receiver wasn't trying to signal us for any reason, while the pilots coordinated with ATC up front.

Meanwhile, in the RC-135, the reconnaissance compartment had three backup radios cued. They informed Offutt of the situation, and asked for landing data calculations. The aircraft commander was able to move between the flight deck (where he could see the tanker) and the reconnaissance compartment (where the radio was located, and where he could discuss options with the crew).

KC-135:

We started picking the formation's way through building storms, requesting large deviations off-course for weather, making deliberate, telegraphed turns, and relying on our weather radar. We coordinated for the emergency return with MacDill Command Post using the aircraft's HF radios. SATCOM was inoperative for this flight.

Approximately halfway back, our receiver was able to restore radio contact with us through one of their mission crew sections onboard. They were evaluating contingencies, their loss of ability to dump fuel, and the TOLD calculations they needed in order to ensure a safe recovery at MacDill.

On the return trip, the RC-135 crew discussed all possibilities "nose to tail" with each other, and with monitors back at Offutt. With one ear out of their headsets, they shouted to each other over the engine noise. They had to send runners and meet face-to-face to ensure everyone was informed, and all sides of the issue were discussed. Pilots flew by hand, with no autopilot or auto-throttle available.

The plan was to press the circuit breaker one final time. This would allow a short amount of time for the crew to 1) de-configure the aircraft from aerial refueling, 2) set up the fuel panel, and 3) set up the comm panels in order to use all working flight deck radios. Although flaps and gear work without electrical power, the crew wanted to confirm the position indications with power on. If this plan worked, they would be set up to talk normally and land the aircraft safely after the final pop of the circuit breaker.

Each crewmember had a specific part of the cockpit to manipulate. The command came: "Ready … GO!" The circuit breaker was pushed in and everyone simultaneously got to work. This time, as everyone finished their respective actions, the circuit breaker did not pop. The reduction in electrical load on the bus allowed the power load to stay within the limits of the remaining breaker. After another quick "nose-to-tail," the crew decided it was better to land heavy with normal systems than to risk another power loss.

KC-135:

We watched them split from the formation, monitoring the approach and tower frequency. It was an exhausting trek back to MacDill. We had a team go out to their jet to make sure everything was fine once they landed. They got on the ground safely with no damage, and we landed shortly after.

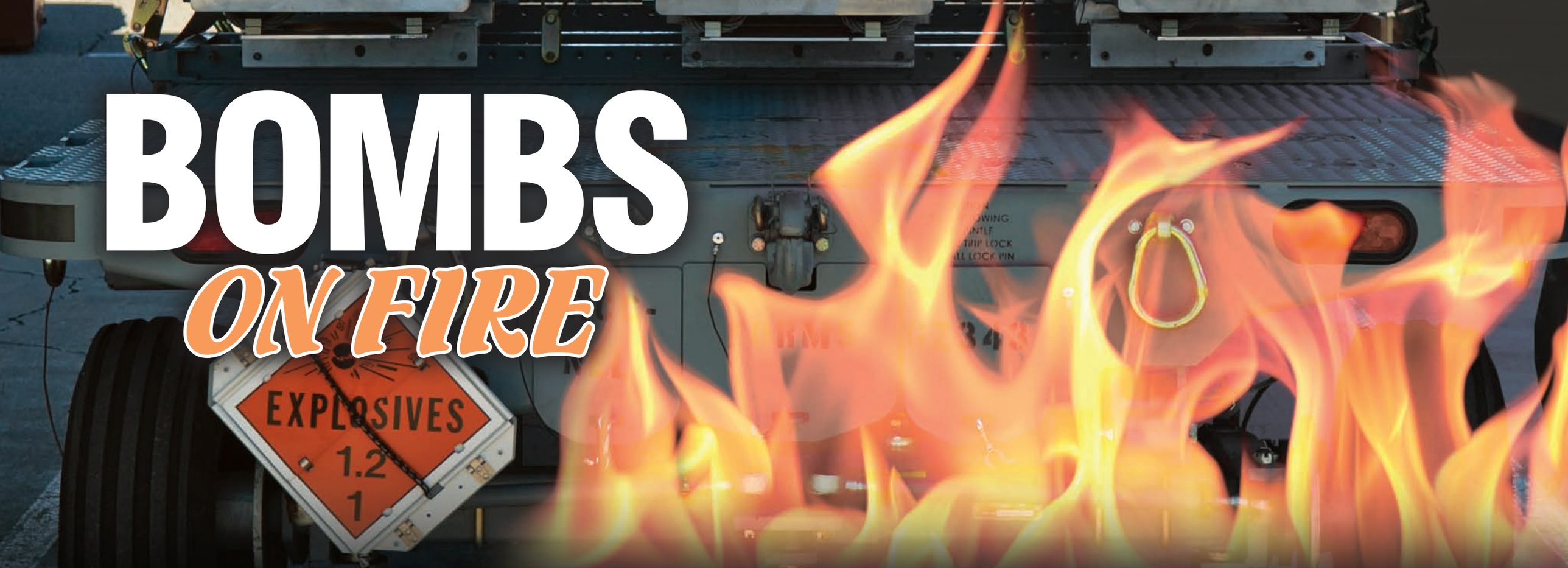
The biggest lesson learned from this emergency was a healthy respect for a popped circuit breaker. It indicates an overloaded circuit, and is a symptom—not the cause—of the issue at hand. Often, resetting a circuit breaker is only a first step. Aircrews must consider what happens if it doesn't stay in, or if it doesn't fix the issue. It's a good practice first to reduce the electrical load on the affected system prior to resetting.

CRM takes deliberate effort, and can become challenging in times of degraded communication. A large part is optimizing all available resources on the ground and in the air, rotating in fresher or more experienced people when possible.

(Author's Note: Special thanks to Col Jonathan Burdick, 6th Operations Group Commander, who met the crew at the jet and offered his support. Special thanks also to SSgt Nathan Johnston, a former RC-135 crew chief. He recently had moved to MacDill AFB, and volunteered to help with follow-on aircraft servicing, including checking hydraulics and battery level the next evening.)

Photo by Master Sgt. Russ Scalf

BOMBS ON FIRE



BY TSGT JONATHAN T. BRABANT

The November night was cool at the base somewhere in Southwest Asia. The stars were bright, and the moon was as full as the chow hall on Wing Wednesday. I was sitting where I usually could be found—counting the seconds until the new shift arrived and relieved me of my (mostly) uneventful nights—in the smoke pit. Radio in my pocket and cigarette in my hand, I chatted with my fellow day-sleepers. Nothing seemed unusual. Little did I know, a dramatic chain of events would unfold that night.

Let's back this story up 24 hours. I was in my tent, getting my day started. I was checking emails, going through the work orders for the day, etc. About an hour in to my shift, I heard a loud scraping sound coming from outside. I exited my tent, and saw an A1C towing a munitions trailer down the nearby gravel road. By "towing a trailer," I mean *dragging* a three-and-a-half ton steel *sled* at approximately 25 mph, with the wheels locked up. The A1C clearly had no idea.

I flagged him down and calmly communicated to him what was going on and what he was doing wrong. I asked him to park the trailer on the pad and let me take a look to see what was wrong. I noticed the pressure in the brake system had frozen up, and the master cylinder was not functioning properly. I manually released the pressure in the system, and told the Airman to Red X the forms, notify Control, and park the trailer on the maintenance pad. Maintenance would go through the system and permanently fix the problem when they came into work in the morning.

Fast-forward to the next night. Apparently, when maintenance inspected the trailer, they took a look at the forms and tested the brakes. Of course, they actuated normally, since I had "fixed" them temporarily the day before. They assumed the problem had resolved itself, and they greened the trailer for 2000 pound MK-84 bomb loads later that night.

The same A1C from the day before hooked up to his still-broken trailer, now configured with four high-explosive Big Boys destined for some unfortunate terrorists. He managed to get the trailer the 5-ish miles to the flight line, where he loaded two of the bombs onto a pair of F-15E War Eagle fighter jets. It turned out the mission didn't require the other two bombs. As he prepared for the trip back, with lunchtime was fast approaching, our young A1C was getting hungry. He hastily secured the unused ordnances, and rushed back to the storage area, where he knew he would get some of the best food AFCENT had to offer.

He didn't make it all the way back. Unbeknownst to him, his trailer's brakes were partially engaged, generating more heat with every yard he traveled. About 50 yards from my smoke pit, where I was going about my nightly ritual, he noticed an odd light emanating from his trailer in his rear-view. He stopped in his tracks, and exited the bobtail to investigate the mystery lights. He immediately saw that the left side of his trailer was engulfed in flames. He radioed Control and informed them that his munitions trailer was on fire, and that he was going to attempt to snuff the flames with his two 10-pound fire bottles.

As all this was going on, I was locked onto my radio, and I couldn't believe what I was hearing. Nothing like this ever happened, and yet, there I was, just listening … until he radioed his location. I jumped up and shouted to my counterparts "He's right over there!" We ran to a bunker about 50 yards away, knowing that, if the worst were to happen, the two feet of steel-reinforced concrete would offer little protection. Fortunately for everyone, A1C's plan worked. He put out the fire, and the 4000 pounds of steel and explosives were safe.

Looking back on the incident, I have a better understanding as to why rules about weapons safety are put in place, and why explosives safety training is so fundamentally important. If maintenance really had checked the brakes, the problem wouldn't have occurred. If the A1C's training hadn't kicked in, and he instead had run away, I might not be here writing this story. That's why we do a lot of this seemingly useless, monotonous training—not to be safe for the usual days, but to stay alive on the unusual ones.

Photo Illustration - Original Photo by A1C Mikaley Towle

Feet & Knees in the Breeze

BY MAJ EAMONN O'SHEA & MSGT DAVID GALINDO

(Editor's note: The following underscores the importance of Risk Assessment under conditions that do not favor hesitation. Often, the difference between *parachuting* and *falling* is measured by how adept the Airman is at making life-or-death decisions with little or no time for reflection. It is in these moments that the skills developed through the extensive training provided by 93 AGOW prove their worth.)

In the 93d Air Ground Operations Wing (AGOW), Flight Safety means parachute safety. Instead of combat aircraft Mission Design Series, rescue assets, or airlift, the largest aircraft in the wing are the T-11 and MC-6 parachutes. The 93 AGOW, established with jump billets in 2008, is a distributed wing that consists of three—soon to be four—Operations Groups: Tactical Air Control Party (TACP), Security Forces, Combat Weather, and Special Warfare Mission Support Airmen. The 93 AGOW Personnel Parachute Program Manager runs Air Combat Command's largest conventional static line program, with over 406 jump billets.

Airmen brave enough to strap into a parachute and jump out of a perfectly good airplane earn their wings at Fort Benning, Georgia. All Airborne students endure a grueling three-week training program and accomplish five static line jumps before graduating with the basic parachutist badge. Qualified TACP and Combat Weather Airmen are then assigned to the 18th Air Support Operations Group, where they provide aligned support to the 82d Army Airborne Division. These Airmen embed with their aligned Army unit, executing their specialty in exercises, contingency, and Airborne Operations.

Parachute safety is a major concern for 93 AGOW. Flight Safety Superintendent MSgt David Galindo attended the Army's semi-annual Malfunction Review Board, the most recent of which involved 48,838 military static-line jumps from October 2021 through January 2022. Of those, the Aerial Delivery and Field Services Department received 88 malfunction reports involving 6 malfunctions and 82 incidents. MSgt Galindo, along with other board members, reviewed every mishap and incident, conducted analysis, and made recommendations for corrective actions. This board's top finding had to do with an increase in the number of high and mid-air entanglements. Their recommendation was to emphasize exit procedures in training through sustained airborne rehearsals. They also advised reminding all jumpers that under-canopy parachutists should slip immediately in the opposite direction when approaching another jumper. In other words, keep a sharp look out!

Although not highlighted on the board's review, riser twists are one of the most dangerous malfunctions MSgt Galindo addresses. Riser twists are easy to correct; however, spending too much time dealing with any malfunction can result in injury or death. Jumpers can become distracted while correcting a riser twist, losing situational awareness of their altitude and rate of descent. In some cases, jumpers are left with too little time to prepare for a proper parachute fall (landing), and suffer injuries to their legs and lower spines. In the worst case, a jumper exits an aircraft with a partially-deflated chute or broken gore lines and riser twist. In this situation, the jumper would lose altitude rapidly, with only seconds to deploy their reserve parachute. If they spend too much time correcting the riser twist malfunction, the consequences could be deadly.

In the 93 AGOW, mishap response preparation and prevention includes parachute operations. Leaders are encouraged to be prepared for mishaps in order to mitigate their impact. Safety education and professional development for Air Force Special Warfare Airmen includes Risk Management, planning, preparation, and immediate responses to a mishap. The 93 AGOW works diligently to ensure their paratroopers jump safely. If you ask them, they will tell you it's a passion, and can be summed up in a quote often attributed to Leonardo da Vinci: "Once you have tasted flight, you will forever walk the earth with your eyes turned skyward, for there you have been, and there you always will long to return."

Photos by 1 Lt Katie Tamesis

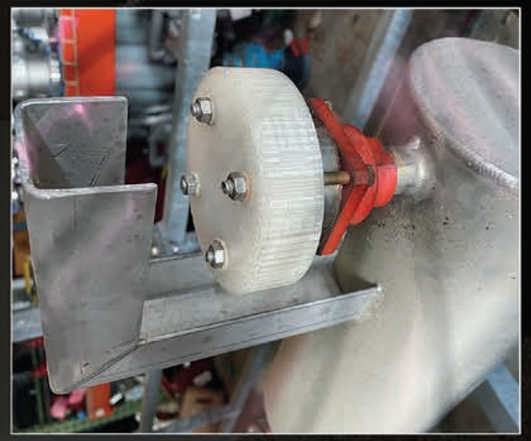
INNOVATION THROUGH 3-D PRINTING

BY SRA ZOIE COX

The coronavirus pandemic recently threatened to affect readiness in unexpected ways. For instance, the 633d Logistics Readiness Squadron (LRS) experienced a problem with obtaining a vital piece of equipment. The situation was remedied, thanks to the innovation and problem-solving ability of fuels training supervisor SrA Houston Sasser. He and two of his wingmen were able to create a replacement in order to get the mission back on track.

The component that failed was a flame arrestor cap on the high-lift, a vertical-extension platform used in refueling operations. A flame arrestor is a safety feature that prevents the fuel in an expansion tank from combusting from an exterior ignition source such as sparks, flames, or overheated aircraft brakes. It works by absorbing the heat from the flame through channels in the unit, lowering the temperature of the burning gas/air mixture below its auto-ignition point.

The issue arose during a weekly staff meeting SrA Sasser attended, during which the equipment was noted to have been out of service for some time. Leadership within the 633d Air Base Wing fosters a culture of creativity and innovation, one in which Airmen are encouraged and applauded for thinking outside the box to solve tricky problems. SrA Sasser teamed up with 633d LRS leadership to design and create a much cheaper and better-reinforced flame arrestor cap through 3-D printing, a solution which is expected to augment overall readiness and save Air Force resources.



"The unique part about the flame arrestor cap is that the part used in the High Lift is the same as the one in the Pantograph systems that we use for Hot-Pit refueling," said SrA Sasser. "In the event there is an issue with a pantograph cap, we now have the means to return them to service quickly."

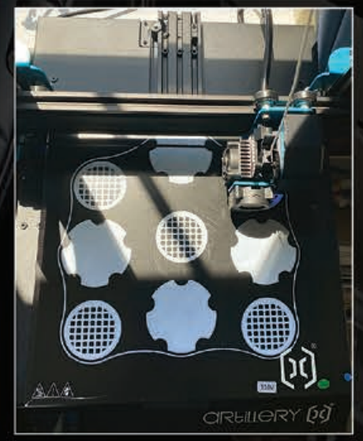
Typically, when a part breaks or needs replacement, a new one would be ordered; however, when there are no more parts, and no way to contact the supplier, one has to improvise and come up with a solution.

"I have been interested in 3-D printing for four years," said SrA Sasser. "3-D printing is truly a ground-breaking concept, because operators will be able to design unique and geometrically-accurate parts from the most sophisticated engineering perspective in a matter of hours—a fraction of the time it would take to order a replacement from a vendor. It also eliminates other problems such as overbuying or delays in logistics."

The flame arrestor took SrA Sasser only about two hours to design, and another three hours to print. The part cost only 25 cents to produce, even with added structural reinforcement. "By 3-D printing the replacement flame arrestor cap, I was able to bring the High-Lift back into service after nine months of inactivity, and to demonstrate the ease and simplicity of creating complex parts or prototypes in theoretical situations," said SrA Sasser.

SrA Sasser's ingenuity was recognized among his peers, which earned him the opportunity to brief U.S. Air Force Col Gregory Beaulieu, Joint Base Langley-Eustis commander. SrA Sasser was also personally coined by Maj Gen Michael G. Koscheski, Fifteenth Air Force commander, during his visit to JBLE.

"We are the world's greatest Air Force," said SrA Sasser. "We hold this title proudly because we are able to sustain our Airmen with the tools, reserves, and necessities needed to continue the fight."



JUST SAY IT

BY MSGT IAN WALSTON

Hot! It was far too hot to be late January. We were driving down a very dusty and damaged road, on our way back to a Forward Operating Base in Iraq. The Explosive Ordnance Disposal (EOD) team had just spent an hour inspecting a location where an Army unit had reported seeing a possible Improvised Explosive Device (IED). By the time we got to the location where the device was supposed to be, the reporting unit had moved on to other operational matters, and all we had to go on was a vague description of what they had seen.

During the previous three months, I had attended a joint training program with EOD, Intel, and the Army, learning how to conduct pre- and post-blast investigations. This was a newly-constructed venture designed to combat the rapid rise of IEDs and related deaths within the AOR. The overall goal was to identify trends in devices, provide immediate feedback to ground forces, and build databases of evidence to remove and prosecute those building and placing the devices.

In order to do this, we were responsible for collecting numerous data points and other pieces of evidence from each location to which we were to be called. For example, in a post-blast incident, we were to collect soil samples, which then would be analyzed to determine the type of explosive used. Then we would take measurements of the blast crater in order to estimate the amount of explosive used. In every instance, our focus was to determine how the device was constructed, and how it was meant to be detonated (victim-operated or command detonated). The information from a single incident could tell us a great deal, but data from multiple devices within a particular area could help build a profile that revealed source of the materials for the devices, and who was building them. This would enable the targeting of the specific supply chain, and ultimately could lead to the removal of the device-builder by kinetic or specialized means.

This was the first time our team members had been exposed to this subject matter. We were definitely not EOD personnel—who had spent years learning their jobs—and there was much to learn in only three months. After seeing the devastation that a two-pound charge of high explosives could do to a vehicle, we gained a healthy respect for EOD, and for what they had to do day in and day out. We wanted to help save lives in the volatile locations where these devices were being used, and were eager to learn. By the end of training, each five-member team felt as prepared as possible, considering the time allotted, and the fact it was outside the scope of what we had signed up to do upon joining the military.

We received our first call for assistance, and were escorted to our location along with the EOD unit to which we were assigned. We were disappointed, though, as no device was found, and we didn't get the chance to use the skills we had learned. On the return trip, I kept my eyes focused on the side of the road to see if I could spot the telltale signs of an IED. Suddenly, out of the corner of my eye, I saw a flash of red under my window! It was gone in an instant. Was that a detonation cord? Was it the nose of a munition? We were not the first vehicle in the convoy, and someone in the vehicle ahead of us surely would have seen it. As I leaned up to tell the vehicle commander what I thought I had seen, a call came over the radio from the vehicle behind us: "IED!"

We immediately took action. A cordon was set up, and EOD investigated the site. We determined that it was, in fact, an improvised device consisting of two old military-grade projectiles, with red detonation cord attached to it. In this instance, the initiator had been dislodged from the nose of the munitions, and the device would not have functioned as designed. We had driven over a device containing around 20 pounds of high explosive wrapped in a metal case that was designed to fracture into large pieces of sharp jagged fragments, and the thought sent a chilling wake-up shiver down my spine. After the device was safely detonated, we continued back to base to reset for the next time we were called out.

I carried with me a very valuable lesson which I still use to this day: Never be afraid to say something. Never assume someone saw the same thing you did, or knows the same thing you know. Being in a group of experts doesn't mean that what you have to say is any less important. In this instance, I had hesitated in shouting a warning because I wasn't confident about what I had seen. From that moment on, I made sure to point out things which I recognized as hazardous or inaccurate, even if it meant stating the obvious.

Don't assume anything. Your action may start a chain of events which ultimately could mean someone else gets home safely.

Okay, So HEAR Me Out

BY MSGT DANA D. MOORE

Here I am, in my thirties, and I have to wear hearing aids. I have what's called bilateral low frequency hearing loss and tinnitus. I can hear fairly well during normal face-to-face conversations, but it gets more difficult to hear and understand someone if they have a deep voice. It's sometimes difficult to understand people over the phone. I can't remember when my hearing started to diminish or when that annoying ringing started, but I do remember that summer night when my partner jokingly said, "I think you need hearing aids." I replied, "Huh?" It was at that moment that I realized my hearing had been getting worse over the years, especially with low tones and voices.

I started recounting all the times I had failed to wear hearing protection when I knew I should have. That time I was on the flight line during engine runs: check. That time I was doing weapons firing and was too timid to speak up about having forgotten my hearing protection: check. Then there were those times off-duty, when I just had to be in the front row of the concert, right by the speaker, so as to have the best view: triple check.

Noise-Induced Hearing Loss is irreversible, and is one of the most common work-related illnesses. According to the National Institute for Occupational Safety and Health, the maximum time-weighted average exposure level over an 8-hour period is 85 decibels (dB). For reference, a typical concert speaker can reach up to 120 dB, a chainsaw can be up to 110 dB, and a hand drill can reach 98 dB. I have been guilty of not using hearing protection in all three of those situations, especially at home.

There were times when I had ringing in my ears after one of those events, but it always would go away … until the day it didn't. My youthful invincibility had betrayed me. The audiologist can't pinpoint exactly what caused the damage to my inner ear, but, thinking back, I wish I had done more to protect my hearing.

Okay, so hear me out. You don't have to suffer my fate. In fact, if you work in an environment in which there are hazardous noises, everything you need to prevent hearing loss should be provided for you. If there is no way to eliminate or control hazardous noises, you have to wear personal protective equipment (PPE). In some cases, you may even be required to double up on hearing protection. If you are unsure, your local Bio-Environmental Office can do an assessment to let you know.

When off-duty, you have to choose whether to wear hearing protection or not. No one will be standing over your shoulder to guide you. Your local safety office won't be spot-inspecting you at home. It's your responsibility to protect yourself, to ensure that, when it's a warm summer night and your partner or friends call you out, you're only joking when you reply, "Huh?"

Mishap Statistics Scoreboard

FY22 Flight

Thru 30 Sep 2022

	Fatal	Aircraft Destroyed	Class A Aircraft Damage
15 AF	0		X3
16 AF	0	0	0
USAFWC	0	0	0
ANG (ACC-gained)	0		
AFRC (ACC-gained)	0	0	0
AFCENT (ACC-gained)	0	0	

FY22 Occupational

Thru 30 Sep 2022

	Class A Fatal	Class A Non-Fatal	Class B
AFCENT	0	0	0
USAFWC	2	0	0
12 AF	0	0	0
15 AF	5	0	2,1
16 AF	0	0	0

FY22 Weapons

Thru 30 Sep 2022

	Class A	Class B	Class C	Class D	Class E
ACC	0	0	2	4	8

Legend

Class A - Fatality; permanent total disability; property damage $2.5 million or more
Class B - Permanent partial disability; property damage between $600,000 and $2.5 million
Class C - Lost workday; property damage between $60,000 and $600,000
(Class description effective Oct. 1, 2019)

(RED) = On-duty (BLACK) = Off-duty

Symbols for Mishap Aircraft

Flight Notes

Air Combat Command Flight Safety had two Class A mishaps in the 4th Quarter of 2022, bringing the Fiscal Year (FY) total to eight—a 20% decrease from FY21. Human errors can never be eliminated; however, efforts to increase awareness in Risk Management and Human Factors can alleviate mishaps at all levels and in all platforms. Safety is everyone's responsibility. Therefore, when a safety concern becomes a hazard to Airmen and/or machines, we must identify and correct it immediately. These actions save lives, in the air and on the ground. With that said, FY23 is officially here, and so are the challenges of winter missions. Every Airman needs to remember that the first level of mishap prevention is training. Education and preparation ensure ACC keeps "safety as the number-one priority," and at the forefront of our minds. Fly safe and Check 6.

Occupational Notes

Air Combat Command Occupational Safety sustained seven class A mishaps in fiscal year (FY) 2022. Four fatal mishaps involved 4-Wheel vehicles and three involved 2-Wheel vehicles. Compared to FY21, ACC sustained one less 2-Wheel vehicle fatality; however, in FY22, there was a 100 percent increase in 4-Wheel vehicle fatalities to four. Several casual factors lead to these mishaps. Excessive speed, distracted driving, poor risk management, lack of training, and lack of seat belt usage factored into these mishaps.

While we realize we cannot eliminate all risks, we can take educated measures to decrease the likelihood of the next mishap. As we enter the winter season, there is an increased potential for vehicular mishaps while navigating the winter weather. We all need to slow down, pay attention and drive defensively.

Weapons Notes

During the fourth quarter of FY22, ACC experienced one Class C, two Class D, and two Class E mishaps. The Class C mishap investigation in ongoing where an EOD member sustained major injuries from an unintentional detonation. Both Class D mishaps were from mishandling munitions which resulted in damage to an AIM-120 and a GBU-39. One Class E was a negligent discharge due to firearm mishandling, with no injuries and only minor wall damage. The second Class E was hail storm damage to a CATM-9 guidance section. As we close out of FY22 we continue to see a rise in negligent discharges not only in ACC but in the Air Force as a whole. As a reminder, exercise caution and refer to the procedures outlined in AFMAN 31-129 when conducting weapon loading, unloading and clearing.

3rd Quarter FY22 Awards

Aircrew Safety
AQUILA1
16 ACCS
Robins AFB, GA

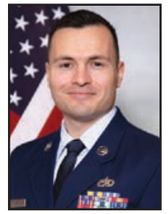
Aviation Maintenance Safety
Strike Aircraft Maintenance Unit
757 AMXS
Nellis AFB, NV

Explosives Safety
SSgt Tyler B. Boyd, and
A1C Jeffrey Rivera Anguita
74 FGS
Moody AFB, GA

Flight Line Safety
Raptor Aircraft Mainenance Unit
757 AMXS
Nellis AFB, NV

Pilot Safety
Capt Tyler N. Samp
357 FS/DOW
Davis-Monthan AFB, AZ

Safety Career Professional
TSgt Robert T. Summerville
85 EIS
Keesler AFB, MS



Weapons Safety Professional
TSgt Zachary B. Fary
325 FW/SEW
Tyndall AFB, FL

Unit Safety Representative
TSgt Curtis W. Dibble
755 AMXS
Davis-Monthan AFB, AZ

Unit Safety
Weapons Standardization
57 MXG
Nellis AFB, NV


OVER the Edge
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SURPRISE!
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Head Check: Know Your Helmet

Helmets worn when playing sports, skiing, snowboarding or riding snowmobiles do not make you concussion-proof, but they can help protect you from a serious head or brain injury.

All Helmets

- **Never wear a cracked or broken helmet.** A damaged helmet doesn't provide adequate protection.
- **Use your head.** Replace your helmet after a lot of use or if it has any visible cracks or other damage. Never alter a helmet yourself.
- **Regardless of wear and tear,** replace any helmet that's five years past the manufacture date to be sure it has all the latest safety features.

Snowmobile Helmet

Make sure your helmet has dual pane shields and breather guards to provide protection and minimize fogging.

Wear a full-face helmet with a chin bar to protect yourself from dental and facial damage.

Fit the helmet to be snug and to fasten securely. An improper fit can reduce your field of vision.

Make sure your helmet does not obstruct your view. You should be able to see forward and from side to side.

Ski or Snowboard Helmet

The helmet should cover your whole forehead without gaps and either easily accomodate goggle or have built-in goggles.

Make sure your helmet has suficient insulation to provide warmth, coverage and protection.

Make sure the fit is comfortable, with no extra space or pressure points.

Fit the helmet to be snug and fasten securely. An improper fit can reduce your field of vision.

Make sure your helmet does not obstruct your view. You should be able to see forward and from side to side.

OVER the Edge MAGAZINE

Cover Photo by Lifestyle Travel Photo/Shutterstock.com

MHS Military Health System health.mil

Health.mil/AHeadForTheFuture

Winter Safety

OUTDOORS

FROM THE CENTERS FOR DISEASE CONTROL AND PREVENTION

Try to stay indoors during extremely cold weather. Make any trips outside as brief as possible, and remember these tips below to protect your health and safety.

Dress warmly and stay dry

Adults and children should wear
- a hat
- a scarf or knit mask to cover face and mouth
- sleeves that are snug at the wrist
- mittens (they are warmer than gloves)
- water-resistant coat and boots
- several layers of loose-fitting clothing

Layer-up
Inner Layer: Wear fabrics that hold more heat and don't absorb moisture.
Insulation Layer: This helps you retain heat by trapping air close to your body.
Outer Layer: The outermost layer helps protect you from wind, rain, and snow.

Additional Tips:
- Stay dry—wet clothing chills the body quickly.
- Excessive sweating will cause you to lose heat. Remove extra layers, if needed.
- Do not ignore shivering—it's an important first sign that your body is losing heat.
- If you have asthma, talk to your doctor about how to prevent attacks when outside.

Know the signs of frostbite and hypothermia.

Hypothermia
Hypothermia (abnormally low body temperature) is a dangerous condition that can happen when a person is exposed to extremely cold temperatures.
In adults, warning signs of hypothermia include shivering, exhaustion or feeling very tired, confusion, fumbling hands, memory loss, slurred speech, and drowsiness. In babies, signs include bright red, cold skin, and very low energy.
If you notice any of these signs, take the person's temperature. **If it is below 95° F, the situation is an emergency—get medical attention immediately.**

Frostbite
Frostbite is a type of injury caused by freezing. It can lead to a loss of feeling and color in the areas it affects, usually the nose, ears, cheeks, chin, fingers, and toes. Frostbite can damage the body permanently, and severe cases can lead to amputation (removing the affected body part).
Signs of frostbite include a white or grayish-yellow skin area, skin that feels unusually firm or waxy, and numbness. **If you notice signs of frostbite, seek medical care.**

Stay off the ice.

Many injuries related to cold weather happen from falls on ice-covered sidewalks, steps, driveways, and porches. Keep your steps and walkways as free from ice as possible by using rock salt or another chemical de-icing compound. Sand also may be used on walkways.

Avoid exerting yourself, and stay safe during cleanup.

If you have heart disease or high blood pressure, follow your doctor's advice about shoveling snow or performing other hard work in the cold. If you have to do heavy outdoor chores, dress warmly and work slowly. Your body is already working hard just to stay warm; don't overdo it.

Be safe during outdoor activities.

- Let friends and family know where you will be before you go hiking, camping, or skiing.
- Do not leave any areas of your skin exposed to the cold.
- Try not to sweat or allow yourself to become too tired.
- Be prepared to take emergency shelter.
- Pack dry clothing, a two-way radio, waterproof matches, and paraffin fire starters.
- Do not use alcohol and other mood-altering substances, and avoid caffeinated drinks.
- Avoid walking on ice or getting wet.
- Carefully watch for signs of hypothermia and frostbite.

Photo by Impact Photography/Shutterstock.com

Winter Safety

INDOORS

FROM THE CENTERS FOR DISEASE CONTROL AND PREVENTION

Winter weather can be dangerous. Staying indoors as much as possible can help reduce the risk of car crashes and falls on the ice, but you also may face hazards inside your home. Protect yourself and your loved ones during winter weather by following the tips below.

Heat your home safely

- Keep at least one of the following heat sources on hand in case the power goes out:
  - Extra blankets, sleeping bags, and warm winter coats
  - Fireplace that is up to code, with plenty of dry firewood, or a gas fireplace
  - Portable kerosene heaters. Check with your local fire department to make sure that kerosene heaters are legal in your area. Provide ventilation.
- Use electric space heaters with automatic shut-off switches and non-glowing elements, and keep them away from any flammable materials, like curtains or blankets.
- Use fireplaces, wood stoves, or other combustion heaters only if they are properly vented to the outside, and do not leak gas from the flue or exhaust into the indoor air space.
- Do not burn paper in a fireplace.
- Use only the type of fuel your heater is designed to use—don't substitute.
- Never place a space heater on top of furniture or near water.
- Never leave children unattended near a space heater.
- Avoid using extension cords to plug in your space heater.

Light your home safely during a power failure

- If possible, use battery-powered flashlights or lanterns instead of candles. If you must use candles for lighting, never leave lit candles unattended.
- Use generators and other appliances safely.
- Generators should be at least 20 feet from doors or windows, out of the rain and snow.
- Protect yourself from carbon monoxide (CO) poisoning by installing a CO detector.
- Never use generators, gas or charcoal grills, camp stoves, etc. inside your home.
- Connect appliances to the generator using individual heavy-duty, outdoor-rated cords.
- Do not use the generator or appliances if they are wet.
- Do not store gasoline indoors where the fumes could ignite.

Conserve heat

- Avoid unnecessarily opening doors or windows, and close off unused rooms.
- Stuff towels or rags in cracks under doors.
- Close draperies or cover windows with blankets at night.

Make sure babies stay warm

- Do not let babies under 1 year old sleep in a cold room.
- Remove any pillows or other soft bedding that can increase the risk of smothering and Sudden Infant Death Syndrome (SIDS).
- Dress babies in warmer clothing such as footed pajamas, one-piece wearable blankets, or sleep sacks.
- If you're not able to keep your home warm, plan to stay elsewhere.
- In an emergency, you can keep your baby warm using your own body heat. If you must sleep, take precautions to prevent rolling on or smothering your baby.

Older Adults

- Older adults often generate less body heat because of a slower metabolism and less physical activity. Check on elderly friends and neighbors often.
- If you are over 65 years of age, check the temperature in your home often.

Keep a water supply

- Extreme cold can cause water pipes in your home to freeze and sometimes rupture or break. When you are expecting very cold or freezing temperatures:
- Leave all water taps slightly open so they drip continuously.
- Allow heated air to reach pipes. For example, open cabinet doors beneath the kitchen and bathroom sinks.
- If your pipes do freeze, thaw them slowly with warm air from an electric hair dryer. If you cannot thaw your pipes, or the pipes have broken open, use bottled water or get water from a neighbor's home.
- Snow can be melted if no other water is available. Boil for one minute to kill germs.

Eat well-balanced meals, and avoid alcoholic or caffeinated drinks.

- Eating well-balanced meals will help you stay warmer.
- Do not drink alcoholic or caffeinated beverages—they cause your body to lose heat.
- If you have any dietary restrictions, ask your doctor.

Photo by ANNVIPS/Shutterstock.com

SURPRISE!

BY RODNEY F. (ROBBIE) ROBINSON

It was a warm one that day—72 degrees and clear. I was getting ready for work, putting on my *Aloha* attire. You know the look: light-weight trousers, loafers, and a Hawaiian-print polo shirt. That day, like every Friday, was "Casual Friday," and as long as you didn't have a higher-level meeting you had to attend, you were allowed to wear more casual clothing. As I drank my hot chocolate and prepared for the day, I turned on the television to check out the forecast. They were calling for temperatures in the low 30s with heavy snow. You see, I was dressing for the weather inside my house and what I could expect in my office.

Well, as the story goes, my car was parked in my garage—it, too, was 72 degrees. I got in the car, put my seatbelt on, hit the garage door opener, and that's when it hit me: cold… *very* cold temperatures with blowing snow. The good news was that I was in a car that was fairly warm, since it had been in the garage all night.

As I backed out of the garage, I could see we had gotten lots of snow overnight, but I thought nothing of it. After all, I was in my warm car. What could go wrong? I turned on my radio and put Hawaiian music on to keep the *Aloha* theme going. I pulled out of my neighborhood and got on a back road, headed into the office.

As I drove down the road, I noticed a few vehicles off the road in a ditch, so I slowed down just a bit; however, as I went around a slight curve, my car started to fishtail. The next thing I knew, I was heading off the road, straight for the ditch. My car finally came to a stop, and I was able to pull myself together. I got out of my car, and could see that it wasn't damaged, but I was stuck. The problem was that I was not prepared for this situation. I was wearing my *Aloha* attire, and I didn't have flares, a snow shovel, or a chain for someone to use to pull me out of the ditch.

I did have my cell phone with me, but the service in the area was spotty, at best. I climbed up to the road and tried to call a few people I knew, but I didn't get an answer from any of them, as they probably were heading in to work. I went back to my car and put the flashers on, hoping they would enable someone to see me, since my car was well off the road. I didn't want to stand on the edge of the road, in case another car came around the turn and lost control. I got in my car, started it, and put on the heater to keep me warm. It wasn't long before another motorist stopped and provided assistance. I was fortunate, as this person was driving a large, 4 wheel-drive truck, and they were able to pull my vehicle out of the ditch.

I finally made it to work safely, having learned a valuable lesson. I should have been better prepared. Yes, it was *Aloha* Friday, but I should have had some warm clothing in my car just in case something like this occurred. The problem was that I had been doing this for years without any problem, so I never thought something like this could happen. Another problem was that I didn't have any safety items in my car like a shovel, flares, orange triangle, blankets, etc. I had been lucky this time, since another motorist stopped and provided assistance. The next time, things could be different.

My message here is that one should pay attention and think things through. Although it was *Aloha* Friday, and my car was parked in my garage, I should not have had a false sense of security that all was good. I had failed to plan, even though I knew it was cold and snowing outside. Just think: If I had been out on a longer trip and this had occurred, things could have turned out very differently.

Remember: planning only takes a minute, so slow down and think it through. As they say, we don't plan to fail, we fail to plan.

Stay Safe!

Graphic by newyear/Shutterstock.com

Prepare Your Car for Winter

FROM THE NATIONAL SAFETY COUNCIL

In addition to annual maintenance, here are some tips to winterize your car:

- Test your battery; battery power drops as the temperature drops.
- Make sure the cooling system is in good working order.
- Have winter tires with a deeper, more flexible tread put on your car.
- If using all-season tires, check the tread on your tires and replace if less than 2/32 of an inch.
- Check the tire pressure; tire pressure drops as the temperature drops.
- Check your wiper blades, and replace if needed.
- Add wiper fluid rated for -30 degrees.
- Keep your gas tank at least half full to avoid gas line freeze.
- Remember to keep your car's emergency preparedness kit fully stocked.

Before You Start Out:
- Clean your car's external camera lenses and side view mirrors so you'll be able to see what's around you.
- Remove dirt, ice and snow from sensors to allow the assistive-driving features like automatic emergency braking to work.
- In frigid weather, you may want to warm up the car before you drive it.
- To prevent carbon monoxide poisoning, never leave a vehicle running in your garage – even with the garage door up.
- If the forecast looks iffy, wait out the storm if possible; if you must travel, share your travel plans and route with someone before you leave.

How to Avoid a Crash — AAA offers the following driving tips:
- Avoid using cruise control in wintry conditions.
- Steer in the direction of a skid, so when your wheels regain traction, you don't have to overcorrect to stay in your lane.
- Accelerate and decelerate slowly.
- Increase following distance to 8 to 10 seconds.
- If possible, don't stop when going uphill.
- If visibility is severely limited due to a whiteout, pull off the road to a safe place and do not drive until conditions improve. Avoid pulling off onto the shoulder unless it is an absolute emergency. Limited visibility means other vehicles can't see yours on the shoulder.

Know Your Car's Capabilities

My Car Does What? is a national campaign to help educate drivers about the safety features built into vehicles. Go to mycardoeswhat.org, and search for your car to find out what safety features are already built in.

Traction control is now standard on most new vehicles. This function helps your vehicle maintain traction on snowy, icy or wet surfaces, particularly when accelerating from a stopped or slowed position, or when trying to make it up a slippery hill.

Anti-lock braking system (ABS) helps you steer in emergencies by restoring traction to your tires, and is standard on most new vehicles. ABS may vibrate or pulse when engaged. This is normal. Continue to press and hold pressure to the brake pedal.

Remember: You are your car's best safety feature. Take precautions to ensure you arrive safely at your destination. If you become stranded in an unfamiliar area, do not leave your car. Light flares in front and behind the car and make sure the exhaust pipe is not blocked by snow, mud or objects.

Photo by Kim Kuperkova/Shutterstock.com

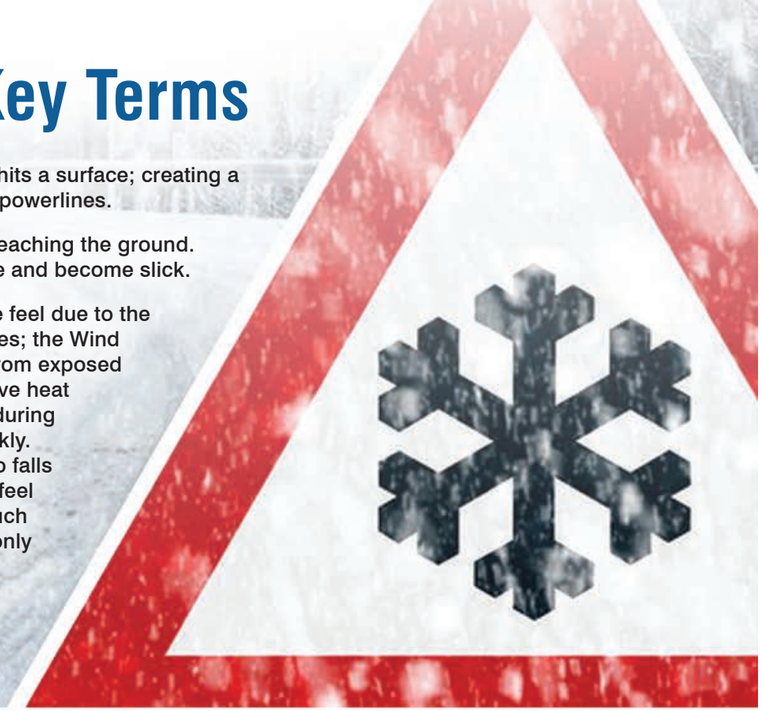
WINTER WEATHER ALERTS

Winter weather-related Warnings, Watches, and Advisories are issued by your local National Weather Service office. Each office knows the local area and will issue Warnings, Watches, and Advisories based on local criteria. For example, the amount of snow that triggers a "Winter Storm Warning" in the Northern Plains is typically much higher than the amount needed to trigger a "Winter Storm Warning" in the Southeast.

- ✔ **Blizzard Warnings**
- ✔ **Winter Storm Warnings**
- ✔ **Wind Chill Warnings**
- ✔ **Lake Effect Snow Warnings**
- ✔ **Snow Squall Warnings**
- ✔ **Blizzard Watches**
- ✔ **Winter Storm Watches**
- ✔ **Wind Chill Watches**
- ✔ **Lake Effect Snow Watches**
- ✔ **Winter Weather Advisories**
- ✔ **Freezing Rain Advisories**
- ✔ **Wind Chill Advisories**
- ✔ **Lake Effect Snow Advisories**

Winter Weather Key Terms

- ✔ **Freezing Rain:** Rain that freezes when it hits a surface; creating a coating of ice on roads, walkways, trees and powerlines.
- ✔ **Sleet:** Rain that turns to ice pellets before reaching the ground. Sleet also causes moisture on roads to freeze and become slick.
- ✔ **Wind Chill:** A measure of how cold people feel due to the combined effect of wind and cold temperatures; the Wind Chill Index is based on the rate of heat loss from exposed skin. Both cold temperatures and wind remove heat from the body; as the wind speed increases during cold conditions, a body loses heat more quickly. Eventually, the internal body temperature also falls and hypothermia can develop. Animals also feel the effects of wind chill, inanimate objects, such as vehicles and buildings, do not. They will only cool to the actual air temperature, although much faster during windy conditions.



National Weather Service

for more information visit: **weather.gov/safety/winter**

Home Fire Safety

FROM THE AIR FOCE SAFETY CENTER

Photo by r.classen/Shutterstock.com

Is your home free from fire hazards?

- ✔ Check electrical appliances for loose or frayed cords. Do not place electrical cords under rugs.
- ✔ Make sure outlets are not overloaded with plugs, including TV, computer, stereo, printer, or lamps.
- ✔ Install ground fault circuit interrupter (GFCI) outlets in your home; especially outdoors, or near sources of water like the bathroom, kitchen, and laundry room.
- ✔ Use the correct bulb wattage for home light fixtures.
- ✔ If any appliances spark, overheat, or produce an unusual odor, replace them or have them repaired by a professional.
- ✔ Lamps and night-lights should not touch any fabrics, such as bedspreads or draperies.
- ✔ Electric blankets should be unplugged when not in use. Check for frayed or loose cords, and replace if defective.
- ✔ Keep children away from the stove and microwave oven.
- ✔ Candles should be kept out of reach of children or pets, and away from curtains and furniture. Never leave burning candles unattended.
- ✔ Central heating systems should be inspected annually by professionals.

SPACE HEATERS (all kinds)

- ✔ Keep out of traffic areas.
- ✔ Keep away from children and pets; place away from beds.
- ✔ Keep flammable materials such as newspapers, magazines, and fabrics (draperies and tablecloths) at least 3 feet from heaters.
- ✔ Unplug electric heaters when not in use.

FIREPLACES

- ✔ Keep the fireplace clean.
- ✔ Use a screen in front of the fireplace.
- ✔ Extinguish all fires completely before leaving the room, especially before going to bed.
- ✔ Have the chimney cleaned professionally once a year.

KITCHEN

- ✔ Ensure that small appliances are switched off and unplugged when not in use.
- ✔ Place pots and pans on rear burners, and turn handles away from the front of the stove.
- ✔ Do not wear loose-fitting clothing while cooking.

Photo by LightField Studios/Shutterstock.com

Holiday Home Decorating Safety Tips

Trees

Live trees need water. Check and add water often.

Holiday Lights

Safe lights bear a testing lab mark and have no visible damage.

Candles

Lit candles should always be in sight and far away from anything flammable.

U.S. Consumer Product Safety Commission
CPSC Hotline: 800-638-2772
and 800-638-8270 (TTY)

To learn more visit:
www.cpsc.gov

Photo by StockImageFactory.com/Shutterstock.com

SHOP SMART, SHOP SAFE

Magnets—For children under age six, avoid building sets with small magnets. If swallowed, serious injuries and/or death can occur.

Small Parts—For children younger than age three, avoid toys with small parts, which can cause choking.

Ride-on Toys—Riding toys, skateboards and in-line skates go fast and falls could be deadly. Helmets and safety gear should be sized to fit.

Projectile Toys—Projectile toys such as air rockets, darts and sling shots are for older children. Improper use of these toys can result in serious eye injury.

Chargers and Adapters—Charging batteries should be supervised by adults. Chargers and adapters can pose thermal burn hazards to children.

NSN NEIGHBORHOOD SAFETY NETWORK

Sign up to receive FREE NSN Safety Alerts and Posters at: www.cpsc.gov

NEW LOOK for a NEW ERA

FROM THE EDITOR
DR. RICHARD E. COOK

We have celebrated the anniversaries of two important events during 2022 – the 30th anniversary of the creation of Air Combat Command (1 June), and the 75th anniversary of the birth of the U.S. Air Force (18 September). One gets the feeling that we have turned a corner. Maybe the spirit of *Accelerate Change or Lose* has taken root, and is beginning to grow. For *The Combat Edge*, a new day calls for a new look.

There are some new features coming out soon, and some will require input from YOU.

- Among the first things you'll notice is the magazine's new look. We feel it's time, and our Art Director is working on a new overall design for *The Combat Edge*, one that will retain the spirit of the Mission while looking toward the future of ACC.
- Next, we'll introduce *Call Sign*, commonly known as letters to the editor. This is your chance to write in about safety issues you believe are important and should be shared. It's also a place for you to offer thoughts on the magazine, including ideas for its improvement. We really do want to hear from you.
- Also coming will be *Safety Shorts*. These will be a collection of brief mishap stories of 100 words or so. Send us your account of a mishap, written in the spirit of the 1960s TV show *DRAGNET:* "Just the facts, ma'am."
- Finally, everything old is new again with *Voices from the Past,* an occasional feature in which we will publish reprints from earlier editions of TCE and TAC Attack. You may be surprised to discover how the message of safety has remained the same over the years.

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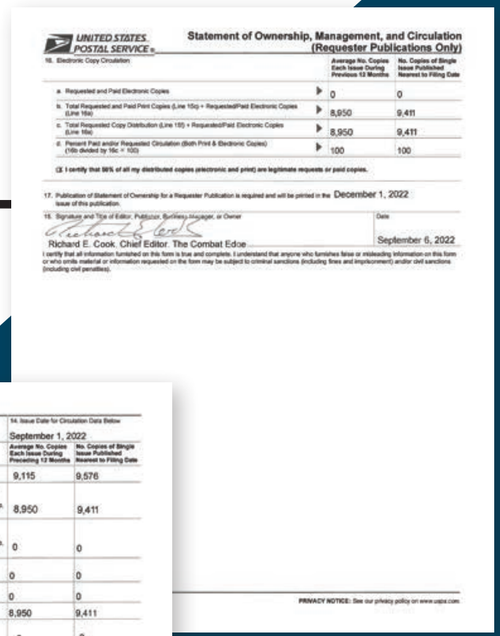

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Richard E. Cook, Chief Editor, The Combat Edge — September 6, 2022

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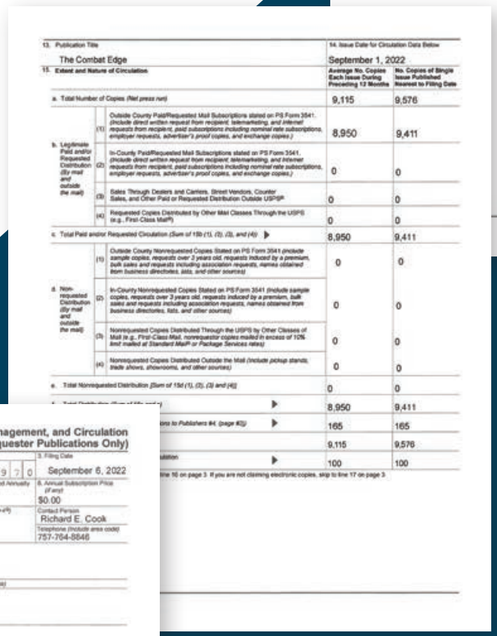

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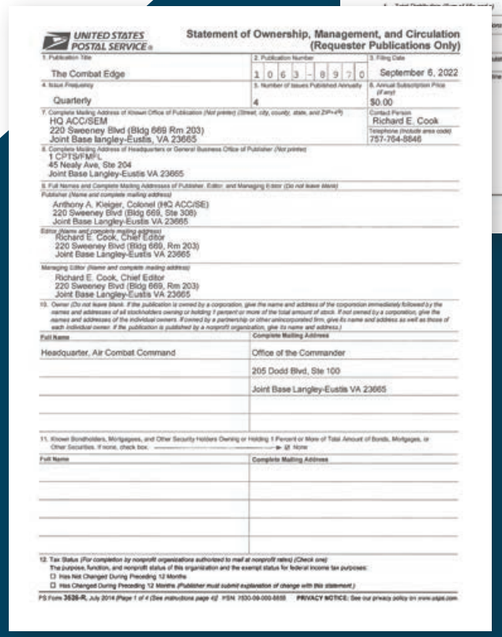

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