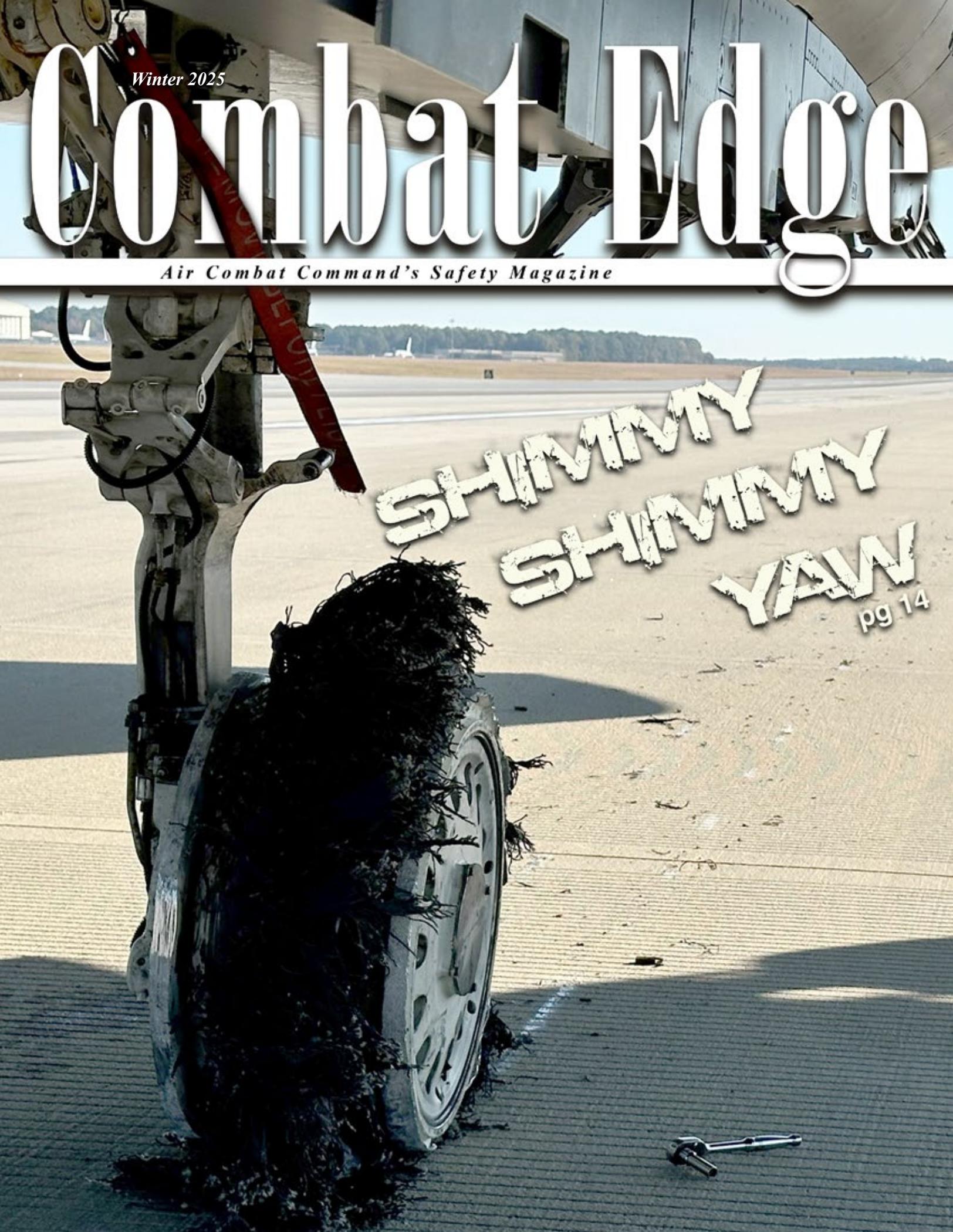


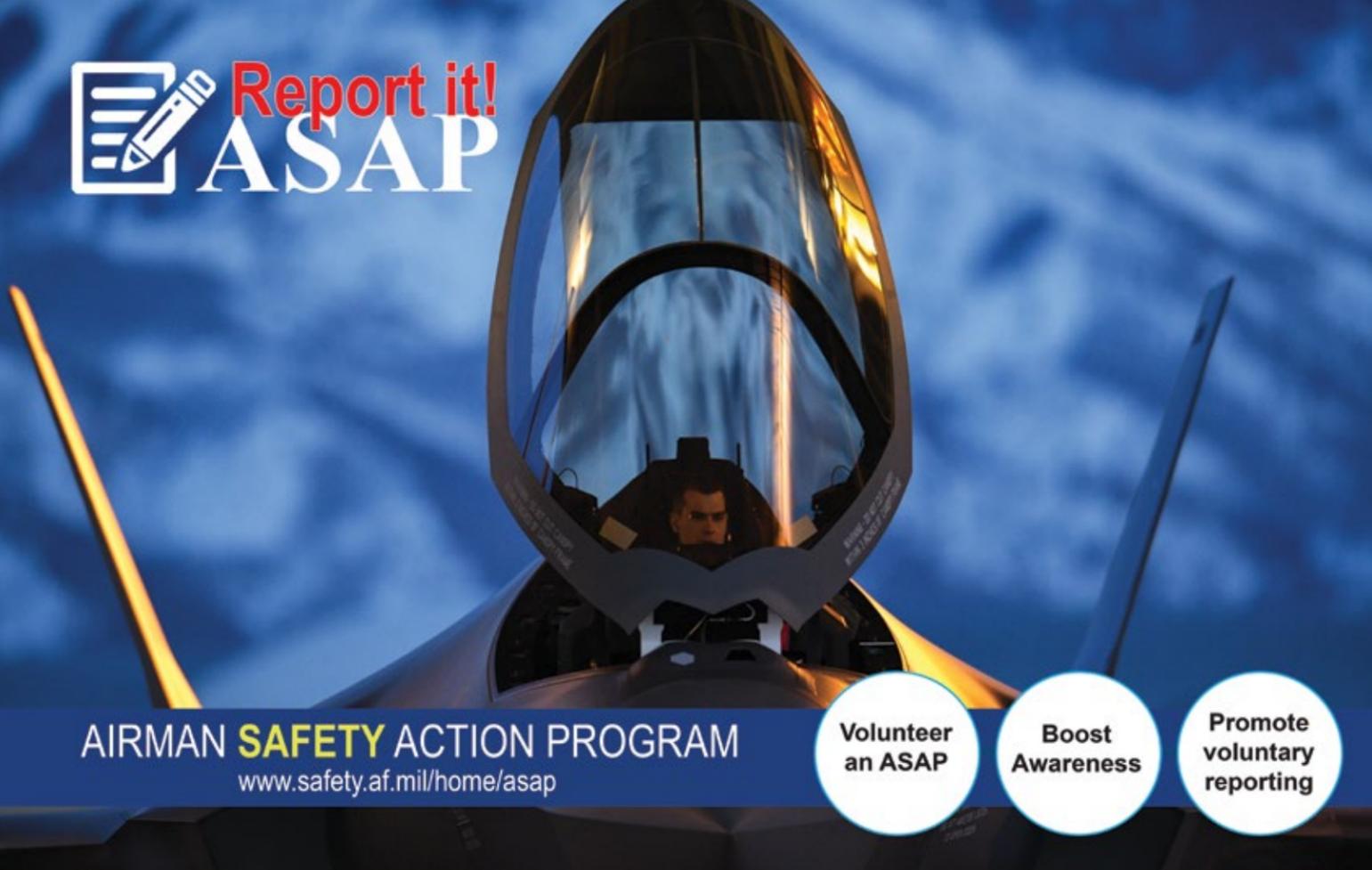
Winter 2025

Combat Edge

Air Combat Command's Safety Magazine

SHIMMITY
SHIMMITY
YAWN
pg 14





AIRMAN SAFETY ACTION PROGRAM
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Combat Edge

4 | A HOT AND HUMID HAWG
by Capt Nicholas J. "Mach" Porras
75 FS, Moody AFB, GA

8 | THE TIRE THAT WENT ROGUE
by TSgt Benjamin L. Boyette
9 AMXS/CCEP, Beale AFB, CA

10 | IT COULD HAVE BEEN ME
by MSgt Bradley A. Sutter
55 WG/SE, Offutt AFB, NE

14 | SHIMMY SHIMMY YAW
by Lt Col Sam "Moby" Eliason
4 FW/SEF, Seymour Johnson AFB, NC

18 | IT WILL ONLY TAKE A MINUTE
by TSgt Erich M. Neslund
388 FW/SEG, Hill AFB, UT

20 | WHEELS UP
by Dr. Richard E. Cook
HQ ACC/SE, JB Langley-Eustis, VA

23 | HOW TO HAVE A FLIGHT MISHAP
by Maj Don Rightmyer (retired)
16 AF/War Support Center, Torrejon AB, Spain

24 | SAFETY SHORTS: A SLIP OF THE HANDS
by SSgt Jacob Smith
325 FW/SEG, Tyndall AFB, FL

25 | SAFETY SHORTS: SAVING THE DAY
by SrA Jonathan R. Meredith
867 ATKs, Nellis AFB, NV

19 | STATS

28 | 3RD QUARTER AWARDS

GEN KENNETH S. WILSBACH
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Volume 32 Issue 4 ACC SP 91-1

THE COMBAT EDGE (ISSN 1063-8970) IS PUBLISHED QUARTERLY, BY AIR COMBAT COMMAND, HQ ACC/SEM, 220 SWEENEY BLVD (BLDG 669, RM 203), JOINT BASE LANGLEY-EUSTIS, VA 23665-2714. PERIODICAL POSTAGE PAID AT HAMPTON, VA 23670 AND ADDITIONAL MAILING OFFICES. POSTMASTER: SEND ADDRESS CHANGES TO HQ ACC/SEM, 220 SWEENEY BLVD, BLDG 669, RM 203, JOINT BASE LANGLEY-EUSTIS, VA 23665-2714.

DISTRIBUTION: F. OPR: HQ ACC/SEM. DISTRIBUTION IS BASED ON A RATIO OF ONE COPY PER 10 PERSONS ASSIGNED. AIR FORCE UNITS SHOULD CONTACT THE COMBAT EDGE STAFF TO ESTABLISH OR CHANGE REQUIREMENTS.

ANNUAL SUBSCRIPTIONS: AVAILABLE TO NON-DOD READERS FOR \$51.00 (\$71.40 OUTSIDE THE U.S.) FROM THE SUPERINTENDENT OF DOCUMENTS, PO BOX 371954, PITTSBURGH PA 15250-7954. ALL SUBSCRIPTION SERVICE CORRESPONDENCE SHOULD BE DIRECTED TO THE SUPERINTENDENT, NOT HQ ACC/SEM.

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COVER PHOTO BY LT COL SAM "MOBY" ELIASON

ACCent



Col Jesse Doyle
Director of Safety

Air Combat Command leadership recently published the command's priorities: Readiness, Modernization, Agile Combat Employment, Taking Care of Airmen and Families. At first glance, some of you may not see a connection to the USAF's safety programs, but to me, these priorities are the reason those programs exist.

The Department of the Air Force Policy Directive 91-2 states that, "leadership is committed to providing safe environments for DAF personnel and those affected by DAF operations." Make no mistake, though; the personnel of ACC can and should expect to be placed in high-risk situations. That begs the question: Can a safe environment coexist with the mission of ACC? The answer is absolutely YES!

Prioritizing readiness drives the training and support to best prepare Airmen for future conflict. Modernizing our capabilities provides a level of deterrence and enhances survivability and lethality. ACE enables the command's operational strategy. Finally, taking care of Airmen and families is foundational to readiness and builds resiliency. Combining ACC's priorities with effective safety programs result in combat effectiveness.

These priorities should drive the staff, commanders, supervisors, and Airmen on a daily basis. Challenging ourselves in a controlled environment to learn, grow, and improve not only enables a safe environment while training, but also enhances the lethality and survivability needed in the future fight. Safety is ultimately the outcome of disciplined execution and effective risk management. Do your part today and every day not only to achieve a safe environment at home-station, but also to achieve safe combat operations when called upon.

A Hot and Humid Hawg

By Capt Nicholas J. "Mach" Porras



Functional Check Flight (FCF) pilots fly aircraft that have undergone extensive maintenance before they are released to everyday line pilots. Not all pilots obtain this qualification, as it is inherently dangerous, and requires aviators to push the aircraft to its maximum allowable limits. To do this effectively, FCF pilots should be experts in their aircraft, and understand how every system works. The squadron trusts the FCF pilot to release an aircraft that is safe to fly, even for the newest pilot in that Mission Design Series.

In the fall of 2023, while deployed to Al Dhafra Air Base, our maintenance squadron finished up working on a phase jet. Phase maintenance involves tearing down an aircraft for routine maintenance, and then building it back up again. FCF pilots are required to fly phase jets before they are released to the squadron.

The day was hot and humid, as expected, around 100° with 50% humidity. Skies were clear, with a little haze at ground level. The breeze felt like a warm hair dryer. The ground operations of an FCF are detailed and lengthy, but I finished in about 2 hours, before taking off with my chase ship into the shared training airspace usually occupied by the Emirati Air Force. I took off to the north, catching a glance at the camel racing tracks just off the departure end of the runway. As I reached the working airspace, I completed the initial in-flight checks and took a quick break before continuing my checklist.

A U.S. Air Force A-10 Thunderbolt II of the 75th Expeditionary Fighter Squadron approaches for landing at Al Dhafra Air Base, United Arab Emirates, March 31, 2023. The arrival of the 75th EFS and 75th Expeditionary Fighter Generation Squadron will provide additional capabilities in close air support within the U.S. Central Command area of responsibility. (U.S. Air Force photo by Tech. Sgt. Chris Jacobs)

There are at least four checks in the A-10C FCF that are noteworthy: First is shutting down and restarting the engines, which is self-explanatory. Second is the Manual Reversion Flight Control System Test. The A-10C can fly by a pulley-and-cable system we call “Man-Rev.” It allows the pilot to retain control of the aircraft in the event both hydraulic systems are lost as a result of battle damage, etc. It’s what I imagine the Wright Brothers experienced when they flew their Wright Flyer in 1903. Third is the High-Speed Test, during which we dive at the ground at max power to get as close to over-speeding the jet as possible—without doing so. It’s not very fast in the A-10, but it certainly feels fast when the jet starts to shudder and scream at 450 knots. Lastly, the Break-X Test checks the jet’s capability to yell at the pilot to “PULL UP!” when it thinks we’re going to impact the ground. This is done with an intentional gear-up, high-speed low approach to the active runway. All four checks are never performed except during an FCF.

I began the first of the four checks. As I prepared to shut down the #1 engine, I heard some Emirati Mirage 2000s check into the adjacent airspace. After shutting down the engine, I received confirmation that it was successful. After letting the

rpms settle, I flipped the switch to motor the engine before reintroducing fuel for a restart. I actuated the switch, but there was no motor. I did a sweep of my cockpit to see what I missed, but noticed nothing wrong. I tried again, but there still was no motor, not even a slight bump in rpm. I wondered “Okay, what am I doing wrong here?” I tried bringing the #1 throttle to idle, with no luck.

My chase ship happened to be another FCF pilot, and I turned to him for advice. There was only so much that could be done to help from another cockpit, but we did our best. “Maybe it’s the Auxiliary Power Unit (APU).” I tried a cross-bleed start using my #2 motor pushed up on power, assuming there was something wrong with the APU. Still no change. At this point, it was safe to say we should go home. I’d rather not lose my other engine and end up landing in the desert.

I coordinated our return as an emergency. While turning toward the base, I began a descent and opened up the applicable checklists for landing with a single engine. In most conditions, the A-10 flies well on one engine. In the Middle East in August—not so much. I descended from 15,000 ft at an aggressive rate. My chase ship recommended I decrease the descent in order to save energy. As they say: In all aircraft, altitude and speed are

life. I was vectored around for a straight-in landing because visibility had dropped to just a few miles. I reached 2000 ft, and wanted to hold at least 200 knots. My jet was completely clean: no stores, and no rounds in the gun; however, the airspeed was ticking down by the second. It was so hot and humid it was as if the jet was swimming in a soup, trying to stay airborne. Losing the left engine meant I also had lost the hydraulic system controlling the landing gear and flaps. I planned to configure the gear using the auxiliary (emergency) gear handle.

I completed the checklist and lined up on final approach for landing. I configured the landing gear, and it dropped successfully. I saw a glimmer off the Abu Dhabi skyline buildings as I began my descent. At least I could hold my approach speed in a descent.

At that moment, a thought crossed my mind: I had never shot a landing approach from which I couldn’t go around. If a van full of Chipotle burritos were to drive onto the runway, or I got into a bad landing position and needed to go around, I wouldn’t be able to raise the gear while attempting to climb away. I could barely maintain altitude and airspeed with the gear up, and it was therefore likely that I couldn’t climb away from the ground with the gear down. We had spent a great deal of time

analyzing takeoff data for the A-10 because of our lack of power and potential for a heavy loadout, but I had never thought about the need to go around at this density altitude with the gear down.

I had heard stories about people who had emergencies in the air, and it turned out that’s when they had the best landings. Butter soft, didn’t even feel like you had landed. No, that’s not what I experienced. I was quite confident I had landed when I slammed my tires onto the runway. I had no intention of taking that jet back up in the air. I hope the Emirati F-16s holding short of the runway appreciated the aircraft-carrier-like landing.

Minutes after shutdown, maintenance discovered the engine starter had shredded itself. It was fixed and ready to fly again within a day. Because of the deep sense of trust developed between the pilots and maintainers, I was confident to fly it again. Though it wasn’t a successful FCF, in which the jet passes all checks, I was happy to have found the issue then, rather than when an actual mission could be affected. -ATTACK! 🗡️



Shredded Engine Starter



The first U.S. Air Force A-10 Thunderbolt II takes off on the first A-10 sortie at Al Dhafra Air Base, United Arab Emirates, April 6, 2023. Since its creation in 1975, the A-10 has provided air support to ground troops, destroying adversary forces and infrastructure as the first aircraft designed specifically for close air support. (U.S. Air Force photo by Tech. Sgt. Chris Jacobs)

The Tire That Went Rogue

By TSgt Benjamin L. Boyette

The day on the flight line at Aviano Air Base in Italy began normally, with both squadrons flying their normal training lines. The alert came over the radio: “Inflight emergency.” All of us held our breath, anticipating the worst. The expeditor rolled up to our spot and said “Get inside, it’s one of ours. We have to take shelter!” Everyone on the line ran to the building. The break room was bustling with chatter. Everyone was on edge, especially because we couldn’t get any more information. All we knew was that the aircraft experienced an unusual takeoff, and would be performing a flyover in order

to work with ground control in identifying the problem. The Production Superintendent and Expeditors were all crammed into the office, waiting for word. The call came: A tire was lost on takeoff. Everyone began thinking through the next steps. The pilot, U.S. Air Force Maj. Brady Augustin, an F-16 Fighting Falcon fighter pilot assigned to the 555th Fighter Squadron, was at the stick of the aircraft, and would have to make a belly landing.

The risks were numerous. The aircraft was loaded with an Electronic Countermeasures Pod, mounted at the bottom center of the aircraft. This meant the aircraft was in danger of toppling upon touchdown.

With emergency crews standing by, Maj Augustin began a very slow approach. The F-16, with its nose in the air, touched the

very beginning of the runway. As it balanced atop the pod, the nose lowered, and began to slide down the center of the runway. Maj. Augustin kept the flight controls steady, keeping the wings level like he had done the emergency landing numerous times before. The aircraft came to a stop three quarters down the runway, and gently tipped to one side, resting on the left external wing tank.

The emergency crews rushed in as the engine stopped and the canopy opened. Maj Augustin was assisted from the cockpit and led away from the aircraft. The emergency crew ensured the



Maj Brady Augustin expertly performs a belly landing in an F-16 Fighting Falcon after losing a wheel during take-off.

aircraft was safe, and placed a cordon around it.

During the next 24 hours, a safety investigation was begun, and the aircraft was fitted with a temporary wheel and towed to a secluded hangar. The aircraft’s forms were locked up, and the Integrated Maintenance Data System files were frozen to prevent them from being altered. All individuals who had performed maintenance related to the tire within the last 30 days were questioned. One individual was only days away from a Permanent Change of Station, and was

worried he would be held back because of the investigation.

In the following days, information made its way through the world-famous, highly respected, Triple-Nickel, 555th Aircraft Maintenance Squadron like high-school gossip. Stories were told of how, on take-off, the tire had left the landing gear, and had bounced down the runway, across a Security Forces Humvee that was performing a perimeter check, and came to rest in the perimeter fence at the end of the runway.

The mishap investigation revealed that the brake, hubcap, and retaining washers had experienced a catastrophic failure. It was the steady hand of Maj Augustin and his expert skill that enabled him to safely land, thus preventing any major damage to the aircraft. It also saved his life. In the world of Flight Safety, a cool head is often the best asset.

(Editor’s Note: In recognition of his actions during this mishap, Maj Augustin was awarded the Koren Kolligian, Jr. Trophy by the Department of the Air Force.)



Air Force Chief of Staff Gen. David W. Allvin poses with Maj. Brady Augustin after presenting him the 2022 Koren Kolligian Trophy during a ceremony at the Pentagon, Arlington, Va. Feb 7, 2024 (U.S. Air Force photo by Eric Dietrich)



It Could Have Been Me



By MSgt Bradley A. Sutter

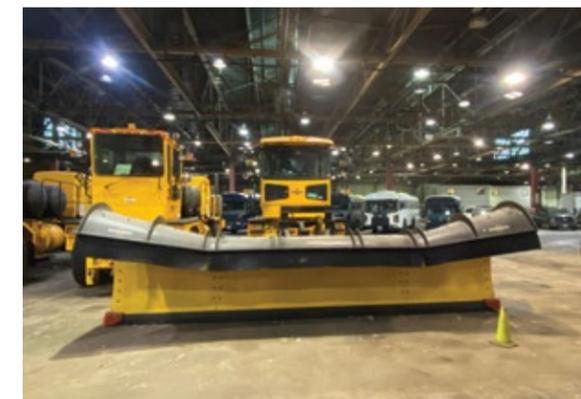
In January of 2015, I was a Senior Airman at Ellsworth AFB, assigned to the Base Fuels Laboratory as the supervisor for that section. It was a small section of the Fuels Management (POL) Flight, but it was great to be in it. At any time, any Airman from any section of the flight could be called upon to assist the Distribution (Distro) section. Distro is the lifeblood of every POL shop. The Airmen assigned there are literally fueling the mission, both Air and Ground. Every POL Airman is qualified there first, and takes pride in the effort they put into the job. Little did we know that disaster was just around the corner.

This winter at Ellsworth was typical: dangerously freezing temperatures, violent winds, and unrelenting snow and ice. Everyone everywhere was clearing snow and ice, especially the Snow Barn. The mission doesn't stop because of the winter holidays, but neither does the weather. That shop was busy, which meant the POL shop also was busy providing refueling support for the snowplows. It went on around the clock.

One early morning, fuel support was called upon to provide diesel to the hungry snowplows. Those machines are absolute behemoths; they must be, considering the work we need them to do. Three mid-shift POL Airmen went outside to establish a mobile refueling point for the snowplow fleet. They followed their checklists and followed proper procedures, but it didn't save them from disaster.



C-300 Fuel Truck



Snowplow

A 28th Logistics Readiness Squadron fuels vehicle is tested by a preventative maintenance team before it goes out for the day at Ellsworth Air Force Base, S.D.
U.S. Air Force photo by Airman 1st Class James L. Miller

One of the snowplows inadvertently crashed into a refueling truck at a moderate speed. One of the POL Airmen was on top of the refueler (in accordance with procedure), and was knocked off as the truck spun from impact. He fell headfirst approximately 8 feet, shattering his jaw and fracturing his skull. Another POL Airman was pinned at the arm between the blade of the plow and the fuel truck. His arm was mangled beyond repair, and had to be amputated. Mercifully, the third POL Airman was not injured during the mishap. No one died that day, but we lost four Airmen from that single mishap.

The cause of the mishap was fatigue. Several plows had been

recalled by their control center to refuel at the mobile refueling point POL had established to support them. The mishap snowplow was heading towards the refueler for refueling when the operator fell asleep at the wheel. He did not stop, and instead crashed into the fuel truck.

The reaction from my flight was tremendous, as would be expected, and ran the gamut of emotions. We were grieving for our brothers. Initially, no one was sure as to the extent of their injuries, and there were whispers that the worst could come to pass. People expressed their emotions through tears, lashing out, or even indifference. All of us had signed up during a time of war, and we knew death was a

possibility; however, we expected it to come from combat, not routine tasks.

Every one of us was qualified to do that job. Every one of us had done that job. Any number of circumstances could have placed any one of us there, instead of those involved in the mishap. We were down in the dumps. It felt as though luck had kept us safe, but had allowed them to be injured. I remember thinking "It could have been me," and it was the first time in my career I felt fear. I had felt anxious, nervous, or displeased, but this was different. I was scared to go to work. I was afraid I might become seriously injured or die at work. I began to see gaps in our safety protections everywhere.

Eventually, my brothers recovered enough from their injuries to be discharged from the hospital, though they were changed forever. One was missing an arm, and left Active Duty. He returned to part-time service in another Air Force Specialty Code. The other suffered traumatic brain injury, and was medically discharged. The third experienced post-traumatic stress so severe that he declined reenlisting, and left the service. A fourth Airman, who was coordinating that morning in

our control center, also declined reenlistment and left the service.

There is a two-fold lesson to be learned from this mishap. The first, and more obvious, has to do with sleep deprivation and its effects on job performance and safety. The second, and perhaps more important, lesson has to do with the impact our actions have on others. In this instance, one member caused a mishap that resulted in the loss of four Airmen. Considering the ripple effect of consequences, it is important for to us to realize

that what we do matters to everyone—in a very real way.

This event was a contributing factor in my decision to cross-train into Occupational Safety. It made me aware of the importance of Air Force Safety, and continues to inspire me to protect all Airmen and Guardians. The mission can't be accomplished without the people; the mission is the people. We all deserve to go home at the end of the day in the same condition as when we arrived at work. ✈️

"It is important for to us to realize that what we do matters to everyone—in a very real way."

What Workers Can Do to Avoid Fatigue

- Plan your off-duty activities to allow enough time for adequate sleep.
- Get enough sleep (7-9 hours each day). If fatigue persists after adequate sleep, get screened for health problems that may be affecting your sleep, such as sleep apnea.
- Create a sleeping environment that helps you sleep well: a dark, quiet, cool room with no electronics.
- If you feel fatigued while driving: pull over, drink a cup of coffee, or take a 15-30 minute nap before continuing. The effects are only temporary – the only "cure" for fatigue is sleep.
- Watch yourself and your peers for fatigue-related symptoms.
- Report instances of fatigue in yourself and others to your direct supervisor, who can help to determine the safest course of action.
- Speak honestly if you are questioned about a fatigue-related incident. Fatigue is a normal biological response – it is not a reflection of how well you do your job.

<https://www.cdc.gov/niosh/motor-vehicle/driver-fatigue/>



SHIMMITY
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YAWN

By Lt Col Sam "Moby" Eliason

"You don't have time to think up there. If you think, you're dead." Maverick—Top Gun

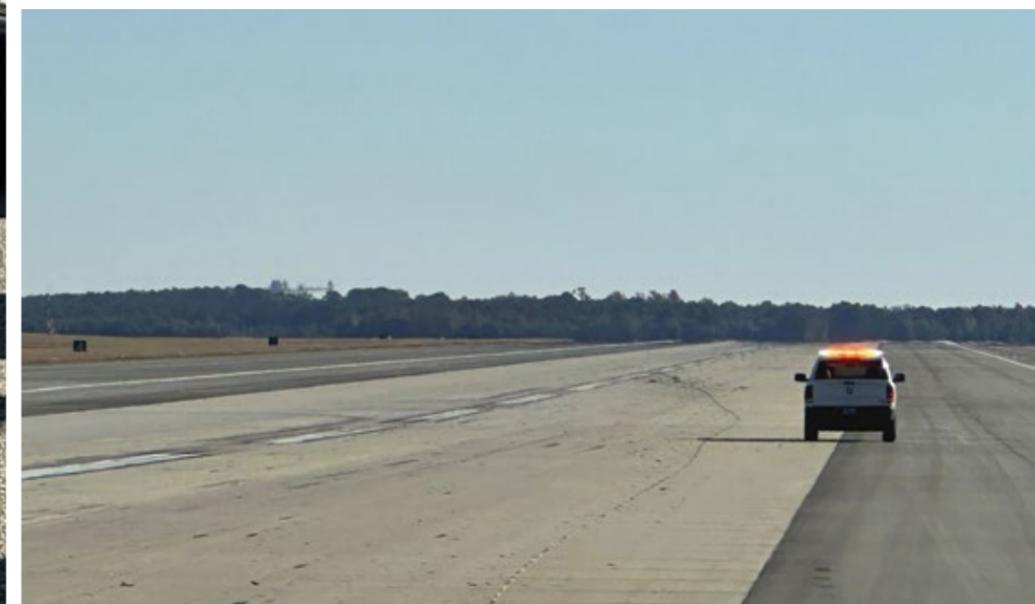
This was a routine red air sortie. I was flying on the wing as an evaluator for the flight lead for his instrument/qualification evaluation. Our ground operations were uneventful leading up to the runway, and my crewmate and I noted nothing out of the ordinary during our pre-flight walkaround of our F-15E.

Just before we taxied onto the runway, we did what we always did and reviewed the Before Takeoff checklist, ensuring our ejection seats were armed and reviewing our Takeoff and Landing Data. During 650 takeoffs in the F-15E, I can count the times on one hand I have aborted a takeoff, and never close to our takeoff refusal speed ("Max Abort"). That day would be different.

At 110 Knots Calibrated Air Speed (KCAS), or about 130 miles per hour, just below my takeoff refusal speed for the day, my F-15E began violently oscillating left and right. Without thinking, I ripped the throttles to IDLE while my crewmate, Capt Richey "Breaux" Menard, began calling "ABORT, ABORT, ABORT."



Shredded tire on F-15E
Photo by Lt Col Sam "Moby" Eliason



Skid mark left on runway from blown tire
Photo by Lt Col Sam "Moby" Eliason

Shredded Tire
Photo by Lt Col Sam "Moby" Eliason

Our refusal speeds are calculated to include pilot reaction time, engine spool down time, and maximum aerodynamic and wheel braking. That meant we continued to accelerate after we started our abort, accelerating up to 127 KCAS. As I applied full aft stick to conduct our aerodynamic braking maneuver, the violent nose oscillations to the left and right returned. Bringing the stick to neutral or slightly forward

dampened the oscillations and allowed me to regain aircraft control, but it also meant we were slowing down much less quickly. The jet settled and started leaning left, which was an indicator of a blown tire on takeoff. I attempted to begin maximum wheel braking, but the brakes were not slowing us down. With the left lean, I suspected a blown tire, and ran the Blown Tire on Takeoff checklist, disengaging

our anti-skid braking system. As the tire shredded and the rim contacted the runway, our F-15E began to veer left, aiming to depart the runway. I was able to regain control about halfway between runway centerline and runway edge. With the anti-skid system disengaged and metal rim grinding on the concrete, we now were slowing down effectively and quickly. When at last we came to a complete stop, our wingman

asked us "2, are you okay?" All I could respond with was "We're alive." Our maintenance squadron later determined that the Nose Wheel Steering Unit, designed to dampen Nose Wheel Shimmy, had a broken bushing. That explained why what we experienced was such a violent nose wheel shimmy, and why applying backstick pressure during our aerodynamic braking

made the shimmy worse. The whole ordeal only lasted 33.5 seconds from the time we initially lost control until we were sure we would not go off the side of the runway. Although I had never conducted a high-speed abort in the aircraft, I fortunately had practiced at least 100 times in the simulator, including annually during my Emergency Procedure Evaluations. In the moment, there was no

time to think or analyze; however, due to simulator practice, instinct took over. I went back to the pilot training basics: prioritizing regaining and maintaining aircraft control, and taking what action I could to support that. The instincts that were deliberately developed through repetition in the simulator ultimately saved the aircraft, my life, and the life of my crewmate. ✪

It Will Only Take a Minute

By TSgt Erich M. Neslund

How often have you taken a shortcut when completing a task because “it will only take a minute?” If everyone were honest, most, if not all, would raise their hands; however, what if the worst were to happen? The question becomes increasingly important as the risks become greater. Try to carry too many dishes, and you risk dropping one or more. Attempt to walk across an icy surface because you want to avoid being late for work, and you may slip and fall, and break your arm. Use a cigarette lighter near a gas pump, and you risk causing a fire or explosion.

Many people tempt fate, encouraged by success. Some believe they’re lucky enough to “get away with it.” Others simply are willing to take unnecessary risks and suffer the consequences. The question is this: Where do we draw the line? The question underscores the importance of following established procedures and regulations. In the safety community, we are accustomed to saying regulations are written in blood. Unfortunately, there are innumerable examples demonstrating how this is, quite literally, true.

The mishap occurred at Al Dhafra Air Base. I was not at the installation when it happened, but I served there while everyone was still picking up the pieces afterward. In 2018, an Airman lost his life after descending more than 20 feet down a sanitary maintenance hole where lethal levels of hydrogen sulfide gas were present. The worst part of this fatality was that it was completely avoidable. The individual had been trained to work in confined spaces, and knew the danger of hydrogen sulfide. The team knew that tests were required for such spaces, and permits had to be issued before anyone could enter.

Problems arose when personnel attempted to demolish a fiberglass manhole cover, but

accidentally allowed the debris to fall to the bottom of the hole. The team was concerned that the pieces of the cover would impede the flow of wastewater. The mishap individual descended into the hole, assuming the retrieval “would only take a minute.” No one on the team had performed any atmospheric testing, and no permits had been issued. Everyone had assumed “it would only take a minute.” The Airman was overcome by the gas, and died.

If the shortcut operation had been successful, it would have saved several hours of testing, and would have eliminated the need to call outside organizations such as safety, fire, and bioenvironmental to evaluate the space further; however, is saving a few hours really worth a life? It is not cool or exciting that unsafe acts occasionally can be performed with little or no consequences. Eventually, the piper must be paid. Sometimes, he is paid right away, and at other times he is paid by the next generation, trained from the experiences of those who came before.

In the end, cutting corners is not worth the potential cost. Your spouse, child, mother, or father will not be satisfied knowing you got the job done slightly faster if it cost you your (or anyone else’s) life. It is never an inconvenience to get the job done right. 🗡️



“Everyone had assumed it would only take a minute.”

A person is seen from behind, operating a red and black forklift in a factory. The background is a blurred industrial environment with warm lighting.

Wheels Up

By Dr. Richard E. Cook

No, this isn't about a questionable takeoff. Let me tell you about the time I turned a forklift upside down. Back in the late 1970s, I had a summer job at the local paper mill where my father worked. It was a summer program for college students in rural southeastern North Carolina, where options were few. The pay was good, and it was a good way to earn some money for college.

The mill was a dangerous place. I was assigned to the pulp mill, the dirtiest and most dangerous place of all. Even if you tried to avoid danger, it found you. On the first day, we were taken on a short tour, the point of which was to show us where *not* to go. The foreman would gesture to an area or large machine, and describe how people had been maimed or killed as a result of going where they weren't supposed to be.

There were two pulp machines, each producing a sheet of pulp about 3/16 of an inch thick, and 12 feet wide. Occasionally, the sheet would break, and the whole crew would come running when the alarm sounded. The floor would be covered by a huge pile of pulp, called *broke*, that had run out onto the floor before the machine could be stopped. We would restart the machine, and someone would have to haul away the broke to be recycled in a 2-story version of a Waring blender called a *hydrapulper*.

“Most jobs are dangerous enough without our making them more so through inattention and complacency.”

That was my job one day. I was on a forklift much larger than the little ones that ran on propane. Mine had a gasoline engine, and was twice the size of the others. In place of tines, it had flat, moveable jaws that grabbed large amounts of broke. The other guys in the crew would pull a pile out from the machine and leave it on the floor for me to collect. I would grab about 200 pounds of it and head for the hydropulper, roaring down the hallway in reverse.

Everything was going well. I had made four or five trips to the hydropulper. Each time, I would reach the bottom of the conveyor belt at the base of the machine, raise the boom on my forklift, lean it out over the belt, and drop the load into the hopper. It was easy work, and I was glad to be off my feet for a change.

On about the fifth trip, things took a turn. When I reached the conveyor, I realized I had taken too big a load, and couldn't lean it out far enough to reach the hopper. I decided to drive around to the side and load from there—a move I had seen another employee do several times.

As I backed out and started up the left side of the conveyor, 2 things conspired to bring about disaster. First, the floor was completely covered with scrap paper/pulp. Not a square inch of the floor was visible—neither was the maintenance hatch at the foot of the conveyor that someone had left open. Second, I had failed to lower the mast on the forklift, and was driving around with hundreds of pounds of load 15 feet in the air. As I slowly got into position, the left front wheel dropped into the open hatch. With the mast all the way up, the vehicle's center of gravity was very high. Slowly, the giant forklift rolled over the conveyor railing and onto the floor, ending up on its roof.

As the saying goes, "There I was ..." That's right: wheels in the air, engine still running, with me inside. I remember it seemed to take place in slow-motion, but without any detail. The scene was surreal, as though the forklift was lying down for a nap. I don't remember much about how it happened. I only remember becoming aware that I was sitting on the roof inside the cage.

I shut off the engine and got out. I looked up to see my buddy driving toward me as fast as he could. It wasn't long before every supervisor and foreman in that part of the mill showed up. It took a crane and two cherry-pickers to get the forklift turned right-side-up again. Fortunately, I was not injured. Unfortunately, I was not allowed to drive a forklift anymore.

There were at least four ways in which I could have handled things better:

Situational Awareness – I should not have driven into an area where I could not see the floor. There might have been obstructions or other hazards. There certainly was a hole.

Technical Order – TOs are everywhere, even in civilian construction. The maintenance hatch should not have been left uncovered in the first place. Someone working in the area left a safety hazard for the next guy – me.

Complacency – I had only made about four trips, but I was 18 and cocky. I thought I had everything under control, and I had become too comfortable working in a dangerous environment.

Training – I had none. Forklift drivers were required to complete a short training session in order to obtain a license. There was a breakdown in communication: The supervisors assumed I had the license, but I was never told about it.

There have been many times when I have wondered how I survived my youth. It was almost a miracle I wasn't seriously injured or killed in that accident. Since then, I have developed a much greater respect for industrial machinery and workplaces. Most jobs are dangerous enough without our making them more so through inattention and complacency. Keep alert, and stay safe! ✈️



Illustration by John k studio/shutterstock.com

How to Have a Flight Mishap

By Maj Don Rightmyer (retired)

(Editor's Note: The following article appeared in the USAF publication Air Scoop in the 1990s)

Just about every flying safety article I've ever read somehow or the other works in a checklist of things to do in order to avoid a mishap. If you've had all those kinds of checklists you can stand, give this one a gander.

1. Don't adequately plan the mission. You can play it by ear once you get "wheels in the well."
2. Don't listen to the flight briefing. It's the same old "standard" stuff, anyway.
3. Disregard published flight discipline guidelines and rules. They're just written for the "weak sticks."
4. Ignore the briefed and prevalent weather conditions. You're an all-weather type of pilot in an all-weather jet. You can handle whatever comes.
5. Don't worry about whether you're current in the events you're planning to do on the sortie.
6. Don't worry about where your other flight members are in the formation or along the low-level route. You've got enough on your mind with your own problems.
7. Fly the mission the way you think best. You don't need the flight leader in order to know what to do.
8. Try some new, innovative ideas whenever they come to mind. There's no better time than the middle of a sortie to delve into unexplored tactical territory.
9. Give the folks on the ground a good show. They love it when fighter pilots buzz them and make a lot of noise.

10. Use your before-takeoff and airborne time to sort out family and work area problems. The quiet and solitude of the cockpit allow a lot of productive thinking time.
11. Don't worry about learning too much detail about your jet. The new computers and sophisticated technologies practically fly themselves. It's all automatic. Dash-Ones are just written to support the lumber/paper industry.
12. If you're the flight leader, don't worry about the qualifications or skill levels of your flight members. They're "big boys," and can take care of themselves.
13. Don't worry about taking it slow when you get "back in the saddle" after leave, holidays, or TDY. You're just as sharp after a couple of weeks away from the cockpit as the day you last flew.
14. When you make a mistake or have a problem during a sortie, keep it to yourself. Everybody else thinks you're perfect, so why deny them that impression? It'll never happen again, anyway.

See yourself in any of those? If not, you could be kidding yourself. Remember: If you don't want to have a flight mishap, work to make sure the bullets above don't apply to you. ✈️



Illustration by mijatmijatovic/shutterstock.com

A Slip of the Hands

By SSgt Jacob Smith

One day, in the world of public works, I found myself knee-deep in a trench, replacing a water line. My left leg dangled over the edge of the 6 ft deep trench as I worked continually, focused on the task at hand. Little did I know, a split-second mistake was about to teach me a lesson in safety I would never forget.

As I labored away for nearly ten hours, the steady rumble of the backhoe echoed through the air, the operator expertly maneuvering the heavy machinery nearby. With each scoop of dirt, the hole grew deeper, and I focused even harder on my work, determined to get the job done and go home.

Everything changed in an instant. The backhoe jolted suddenly. Before I could react, my leg was nearly crushed by the backhoe bucket against the

trench box. Caught off guard and surprised, I took a moment to fully realize what had happened. The pain was manageable, but still concerning.

Looking up, I saw the backhoe operator throw his arms up away from the controls, realizing with horror what had just happened. It was a simple mistake—a slip of the hands—but the consequences were still serious.

As I took stock of the situation, I knew I needed to be more cautious moving forward. I had always prided myself on being safety-conscious; however, in that moment, I had been complacent and let down my guard. I knew the backhoe operator very well, and I could tell he was more distraught over the incident than I was. If he had hit the stick any harder the boom of the backhoe could have very easily done much

more damage. From that day forward, the operator was adamant about the strict enforcement of trench safety.

In the days that followed, I made sure to always keep a watchful eye out for potential hazards on the job site. The backhoe operator took the mishap extremely seriously, realizing he should not have allowed me in the trench while he was digging. I also took the opportunity to speak to my coworkers about the importance of safety awareness, sharing my own experience as a cautionary tale.

While the minor bruises I suffered were temporary, the lessons I learned were invaluable and permanent. I came to know safety as more than just a set of rules to follow; it was a mindset to embrace, a commitment to make to protect myself and those around me from harm.

As I reflected on my journey, I knew that the mishap had been a turning point for me, pushing me to confront my own complacency, and to strive for a higher standard of excellence. It was a lesson learned the hard way, but it made me a better, safer, and more conscientious worker. ✈️



Photo by Joseph Bruton



Photo by SSgt Daniel Herman



Saving the Day

By SrA Jonathan R. Meredith

On 18 January 2024, Capt Stuart Leonard and I were instrumental in safely recovering an MQ-9 that encountered inclement weather while transiting international airspace to the target area.

Upon reaching the working altitude for the mission, we encountered weather and heavy icing conditions. We acted immediately, coordinating with Air Traffic Control (ATC) on radios that were three by five at best, to depart the icing conditions and descend to a lower altitude where we previously had noted clear air. After clearing the icing, we continued the sortie toward the target area, but soon lost radio contact with ATC, and again encountered icing conditions while seeking to complete our transit.

We coordinated a plan, attempting to climb out of the icing conditions. Still, because of the aircraft's being too heavy with ice buildup on the wings, we were required to execute boldface and command landing configuration, forcing Capt Leonard to keep

the nose up to prevent further descent into far worse weather and maintain the assigned altitude. We again attempted to reach ATC, but could not establish a good two-way. While continually trying to contact ATC, we again detected an icing condition. The angle of attack began to increase as the additional weight and loss of lift exceeded aircraft performance. This prompted Capt Leonard to descend to a new altitude and deviate from the approved flight plan route for the safety of the flight.

Throughout the emergency, he continued to make radio calls in the blind with position and altitude to alert other aircraft in the vicinity and changed the aircraft's squawk to "7700" to notify the air traffic controller of the emergency and facilitate deconfliction with other traffic.

Remaining ahead of the emergency, I elected to swing the Multispectral Targeting System (MTS) aft of the aircraft to prevent icing of the lens for later utilization when needed. We attempted

to rely only on the nose camera; however, it accumulated moisture while descending and maneuvering to exit the icing conditions. It began to ice over, and became inoperable.

Again, the MTS was required to find clear air space and sublimate ice while Capt Leonard maneuvered around clouds. After reaching clear air, and still with no working radios, we devised a way to communicate with ATC. We utilized the "ident" function of the transponder, thus communicating the situation to ATC without radio communication. ATC diverted all air traffic from our flight path. Once the aircraft was in clear air, we jettisoned fuel to decrease the total weight. This facilitated a climb above the weather and the return to base. The aircraft landed without damage or further incident.

Our ability to identify the correct emergency procedures, along with excellent crew resource management and swift actions, led to a safe aircraft recovery and deconfliction from civilian traffic. ✈️



MQ-9 Pilot and Sensor Operator
Photo by SrA Deanna Muir

What's Your Story?

With age comes wisdom. Share yours with us.

You've spent years training to be a member of the world's greatest Air Force. Not only do you have skills, but you also have experience—and the wisdom that comes with it.

There have been countless times when you were confronted by challenges you met, obstacles you overcame. Each of them made you grow as an Airman.

Share a tale from your experience. Tell us about the time when _____. Write a "There I was ..." account of a mishap. Help other Airmen learn and grow. Give us the benefit of your wisdom.

Throughout the long history of our safety magazine, from TAC Attack (1961) to The Combat Edge (1992), the message of safety has remained the same. Help keep it current by telling it in your own, unique way. Write your safety story and send it to us at thecombatedge@us.af.mil.

You have something to say, and we're listening.



Mishap Statistics Scoreboard

FY24 Flight Thru 30 Sep 2024			
	Fatal	Aircraft Destroyed	Class A Aircraft Damage
15 AF	0	✈ ✈ ✈	✈ ✈
16 AF	0	0	0
USAFWC	0	0	✈
ANG	0	0	✈
AFRC	0	0	0
CONTRACT	0	0	0
COCOM	0	0	0

FY24 Occupational Thru 30 Sep 2024			
	Class A Fatal	Class A Non-Fatal	Class B
AFCENT	0	1	0
USAFWC	2	1	0
12 AF	0	0	0
15 AF	2,1	1	1,1
16 AF	4	0	2

FY24 Weapons Thru 30 Sep 2024					
	Class A	Class B	Class C	Class D	Class E
ACC	0	0	7	4	10

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

ACC had one Class A mishap during the fourth quarter and has seen a total of seven Class A mishaps for this fiscal year. Aircrew must understand their systems, and mitigate risk with thorough mission planning and coordination. If incidents do occur, reporting is the first step to future mishap prevention. When in doubt of reporting criteria, remember the adage "Dumb, Dangerous, or Different."

Occupational Notes

During the fourth quarter of FY24, ACC sustained four Class A off-duty fatal mishaps and one Class B off-duty permanent-partial disabling mishap. The first Class A fatal mishap occurred when a 4WL PMV was struck head-on by another 4WL PMV. The next two Class A mishaps involved 2WL PMVs, and the fourth mishap involved a jogger who was struck by a 4WL PMV. The Class B mishap involved a member who was lighting fireworks when it exploded in his hand. As we look back on FY24, ACC sustained four 2WL PMV mishaps (all fatal), five 4WL PMV mishaps (four fatal and one permanent-total disabling injury), two Property Damage mishaps, and one Sports and Recreation mishap. As we move into FY25, we need your help in preventing these mishaps. With the use of sound risk management and the Wingman concept, we can make an impact. As we move into the fall months, keep in mind that, even though the weather might get cooler, the same mishap probabilities may exist if we fail to use good judgment and sound risk management when making decisions. Remember: The key to your safety starts with YOU.

Weapons Notes

ACC added a total of nine incidents during the fourth quarter of FY24: three Class C, one Class D, four Class E, plus an uncategorized incident. The Class C incidents consisted of personnel injuries that occurred during weapons loading operations. The Class D incident was a back injury during a CATM-9 download. The Class E incidents consisted of a flare module dropped during delivery, a fuze damaged during a bomb build, 30 MM TP ammunition damaged when the load equipment malfunctioned, and a GBU control group damaged by a MJ-1. The odd incident involved a Navy F/A-18C aircraft at AMARG in which the ejection seat parachute rocket motor spontaneously ignited and shattered the canopy. No personnel were injured, but easily could have been. Please keep in mind that small things can often prevent bigger and more severe things from happening. Attention to detail, awareness of your surroundings, and practicing good body mechanics can prevent costly, painful damage. Your dedication to the ACC Weapons Safety community is greatly appreciated.

3rd Quarter FY24 Awards



Aircrew Safety Award

Crew of NOVA 55
963 AACs, 552 ACW
Tinker AFB, OK



Explosives Safety

SrA Owen F. Prasko
358 FS, 495 FG
Whiteman AFB, MO



Flight Line Safety

SSgt Andrew M. Blair
1 ERS, 9 RW
APO AE



Pilot Safety

Capt Brent M. Healey
30 RS, 432 WG
Creech AFB, NV



Unit Safety

332 ECES Operations Flight
332 AEW
APO AE



Unit Safety Representative

TSgt Adrian A. Quintana
355 AMXS, 355 WG
Nellis AFB, NV



Safety Career Professional

TSgt Clement M. Bouloiseau
332 AEW/SEG
APO AE



Weapons Safety Professional

SSgt David A. Miller
366 FW/SEW
Mountain Home AFB, ID



Aviation Maintenance Safety

A-10 Repair & Reclamation
355 EMS, 355 WG
Davis-Monthan AFB, AZ

Congratulations



OVER ^{the}
Edge
MAGAZINE



PAGE 4

Embracing the

FROST:

YETI

Guides Airmen Through Winter's Grasp

Be Ready! Winter Weather

Weatherproof your home to protect against the cold.

- Install a smoke detector and carbon monoxide detector in your home.
- Have your chimney or flue inspected every year.
- Make sure the batteries are working!
- Insulate walls and attic.
- Caulk and weather-strip doors and windows.
- Never leave lit candles or other flames unattended.
- Bring your pets indoors as temperatures drop!

Check out more tips on winter weather indoor safety.

Prepare yourself for exposure to winter weather.

- Dress warmly and limit exposure to the cold to prevent frostbite.
- Avoid getting wet to prevent hypothermia.

If power lines are down, call your local utility and emergency services.

Make sure your car is ready for winter travel.

- Check antifreeze level and have radiator system serviced.
- Replace worn tires and check tire air pressure.
- Keep gas tank full to avoid ice in tank and fuel lines.
- Make a winter emergency kit to keep in your car.

Never touch the car or power lines.

www.cdc.gov/phpr/infographics.htm

Annual Statement of Ownership

We are authorized by the U.S. Postal Service to use Periodicals postage to distribute *The Combat Edge* magazine. Certain users of this rating are required to publish their Statement of Ownership, Management, and Circulation annually.

UNITED STATES POSTAL SERVICE® Statement of Ownership, Management, and Circulation (Requester Publications Only)

16. Electronic Copy Circulation

Requested and Paid Electronic Copies (Line 16c) + Requested/Paid Electronic Copies (Line 16d)	Average No. Copies Each Issue During Preceding 12 Months	No. Copies of Single Issue Published Nearest to Filing Date
0	0	0
9,455	9,364	9,364
9,455	9,364	9,364
100	100	100

17. Publication of Statement of Ownership for a Requester Publication is required and will be printed in the issue of this publication.

18. Signature and Title of Editor, Publisher, Business Manager, or Owner

Richard E. Cook, Chief Editor, The Combat Edge

August 6, 2024

13. Publication Title: The Combat Edge

14. Issue Date for Circulation Data Below: September 1, 2024

15. Extent and Nature of Circulation	Average No. Copies Each Issue During Preceding 12 Months	No. Copies of Single Issue Published Nearest to Filing Date
a. Total Number of Copies (Net press run)	9,577	9,475
b. Legitimate Paid and/or Requested Circulation (By mail and outside the mail)	0	0
c. Total Paid and/or Requested Circulation (Sum of 15b(1), (2), (3), and (4))	0	0
d. Total Paid and/or Requested Circulation (Sum of 15c(1), (2), (3), and (4))	9,455	9,364
e. Total Non-Requester Circulation (Sum of 15d(1), (2), (3), and (4))	111	111
f. Total Non-Requester Circulation (Sum of 15d(1), (2), (3), and (4))	100	100
g. Total Distribution (Sum of 15c and 15f)	9,555	9,465
h. Total Copies (Sum of 15g and 15a)	9,577	9,475
i. Copies not Distributed (15a minus 15g)	100	100

OVER the Edge MAGAZINE

- 4 | **EMBRACING THE FROST: YETI GUIDES AIRMEN THROUGH WINTER'S GRASP**
by SSgt Jacob B. Wood
319 CONS, Grand Forks AFB, ND
- 6 | **THE WORLD IS READING US**
by Dr. Richard E. Cook
HQ ACC/SE, JB Langley-Eustis, VA
- 7 | **STOP WINTER FIRES PSA**
- 8 | **HOW MANY DECISIONS DO I NEED TO MAKE?**
by Rodney Robinson
HQ ACC/SEG, JB Langley-Eustis, VA
- 10 | **WINTER SAFETY USDA PSA**

UNITED STATES POSTAL SERVICE® Statement of Ownership, Management, and Circulation (Requester Publications Only)

1. Publication Title: The Combat Edge

2. Issue Frequency: Quarterly

3. Issue Date for Circulation Data Below: August 6, 2024

4. Number of Issues Published Annually: 4

5. Annual Subscription Price (if any): \$0.00

6. Complete Mailing Address of Known Office of Publication (not printing office, city, county, state, and ZIP+4®): HQ ACC/SEM, 220 Sweeney Blvd (Bldg 669 Rm 203), Joint Base Langley-Eustis, VA 23065

7. Complete Mailing Address of Headquarters or General Business Office of Publisher (not printer): 1 CPT/AFM/L, 45 Teedy Ave, Site 204, Joint Base Langley-Eustis VA 23065

8. Full Name and Complete Mailing Address of Publisher, Editor, and Managing Editor (Do not leave blank):
 Publisher (Name and complete mailing address): Jesse S. Dwyer, Colonel (HQ ACC/SE), 220 Sweeney Blvd (Bldg 666, Site 306), Joint Base Langley-Eustis VA 23065
 Editor (Name and complete mailing address): Richard E. Cook, Chief Editor, 220 Sweeney Blvd (Bldg 666, Rm 203), Joint Base Langley-Eustis VA 23065
 Managing Editor (Name and complete mailing address): Richard E. Cook, Chief Editor, 220 Sweeney Blvd (Bldg 666, Rm 203), Joint Base Langley-Eustis VA 23065

9. Owner (Do not leave blank. If the publication is owned by a corporation, give the name and address of the corporation immediately followed by the names and addresses of all stockholders owning or holding 1 percent or more of the total amount of stock. If not owned by a corporation, give the names and addresses of the individual owners. If owned by a partnership or other unincorporated firm, give its name and address as well as that of each individual owner. If the publication is published by a nonprofit organization, give its name and address.)

10. Full Name and Complete Mailing Address of Headquarter, Air Combat Command: Office of the Commander, 205 Dodd Blvd, Site 100, Joint Base Langley-Eustis VA 23065

11. Known Bondholders, Mortgagees, and Other Security Holders Owning or Holding 1 Percent or More of Total Amount of Bonds, Mortgages, or Other Securities. If none, check box: [X] None

12. Tax Status (For completion by nonprofit organizations authorized to mail at nonprofit rates. Check one):
 The purpose, function, and nonprofit status of this organization and the exempt status for federal income tax purposes: [X] Has Not Changed During Preceding 12 Months
 Has Changed During Preceding 12 Months (Publisher must submit explanation of change with this statement.)

PS Form 3526-R, July 2014 Page 1 of 2 (See instructions page 42) PSN 1500-06-000-8000 PRIVACY NOTICE: See our privacy policy on www.usps.com

Embracing the **FROST:** **YETI** Guides Airmen Through Winter's Grasp

By SSgt Jacob B. Wood

As the amber hues of autumn faded, the stark reality of winter descended upon Grand Forks AFB, North Dakota. Adapting to the harsh contrast from my temperate years at Beale AFB in California, I felt as though I had stepped onto an alien landscape. The shift was more than climatic: It impacted one's lifestyle, mindset, and emotional well-being. Against this, the Year-End Training Initiative (YETI) briefing emerged as an essential guide, preparing Airmen and their families for the winter months.

YETI was our compass, a singular session that offered life-saving knowledge in an accessible and engaging manner. It guided us through preparations for the physical and psychological challenges that came with snow and ice. The briefing delved into recognizing the signs of hypothermia, the science behind layering clothing for efficient body heat retention, and the critical role of an emergency kit for the car.

These practical insights were not just tips—they were necessary tools for survival.

An important benefit of YETI was that it gave us an understanding of the mental toll the monochromatic winter landscape could take on one's psyche. The initiative stressed the importance of community and mental well-being. It highlighted the importance of regular check-ins, open dialogues, and shared experiences, and how they foster a sense of belonging and mutual support—essential for combating Seasonal Affective Disorder.

We realized the power of YETI when a routine drive turned treacherous during a sudden snowstorm. The road became an icy trap, and required all the control I could muster. It was then that the YETI-prepared emergency kit in my vehicle shone as a beacon. The kit, coupled with the exercise of swift, calm decision-making, was pivotal in navigating the chaos.

From this experience, my lessons were clear:

Never succumb to complacency. Always respect nature's power, and heed weather warnings.

Embrace preparation. Whether through assembling an emergency kit with essentials like blankets, snacks, and first-aid supplies, or understanding the crucial nature of proper winter attire, readiness can turn potential disasters into manageable situations.

Prioritize mental well-being. The winter blues are real, and recognizing the signs of emotional distress in yourself or others could save lives. Work to create an environment of support, and engage in morale-boosting activities. Never underestimate the value of a simple check-in conversation.

Cultivate community strength. Share your stories, your tips, and your knowledge. We are our strongest when we lean on each other.

My experience underscores the importance of YETI in fostering adaptation and resilience. By including these survival guidelines into our daily routines, we empower ourselves and those around us. We aren't just surviving the winter; we are thriving, taking charge of our experiences, and emerging stronger together.

In the face of the challenges of winter, our preparation, both physical and emotional, acts as our shared defense. It ensures not only our individual survival, but also the well-being of our entire community. Let's carry these lessons forward, in order that we all may welcome the spring as stronger, wiser individuals. ❄️



The main gate at Grand Forks Air Force Base, North Dakota, operates during a spring blizzard on April 12, 2022. In less than a day, the base received a foot of snow. (U.S. Air Force photo by Senior Airman Dakota C. LeGrand)



Airmen assigned to the 319th Reconnaissance Wing attend the year end training initiative brief Oct. 7, 2022, at Grand Forks Air Force Base, North Dakota. Topics briefed during the YETI included proper winter clothing, snow removal, safe winter driving and winter car kits. (U.S. Air Force photo by Senior Airman Phyllis Jimenez)



THE WORLD IS READING US

Each quarter, The Combat Edge is shipped to over 1,400 USAF addresses around the world. Its pages are filled with articles from Airmen who share their first-hand accounts of mishaps to over 63,000 readers. Copies of the magazine are found everywhere from back shops to front offices.

It doesn't stop there.

Since 2022, articles from The Combat Edge have appeared in the safety magazines of the following:

Hungarian Defense Forces
Air Operation Command and Control Center

UK Royal Air Force Safety Center
HQ Air Command

Royal New Zealand Air Force
Directorate of Air Force Safety and Health

Canadian Armed Forces
Directorate of Flight Safety

That's right: The Air Forces of other nations contact our office for permission to reprint your excellent articles. Would you like your story to be appreciated at home and abroad?

It begins here.
Send it in.

Dr. Richard E. Cook
Chief Editor, The Combat Edge



Put a **FREEZE** on Winter Fires

Home fires occur more in winter than in any other season. As you stay cozy and warm this winter, be fire smart!



Half of all home heating fires occur in December, January and February.



Heating equipment is involved in 1 in every 6 home fires and 1 in every 5 home fire deaths.



Keep anything that can burn at least 3 feet from any heat source like fireplaces, wood stoves, radiators or space heaters.



Keep portable generators outside, away from windows, and as far away from your home as possible.



Install and test carbon monoxide alarms at least once a month.



Plug only 1 heat-producing appliance (like a space heater) into an electrical outlet at a time.



Have a qualified professional clean and inspect your chimney and vents every year.



Store cooled ashes in a tightly covered metal container, and keep it outside at least 10 feet from your home and any nearby buildings.



For more information on how to prevent winter fires, visit usfa.fema.gov/winter and nfa.org/winter.

How Many Decisions Do I Need to Make?

By Mr. Rodney Robinson

“Skiing is one of the most thrilling winter sports I know, and can be enjoyed by nearly everyone, provided they take safety seriously.”

Not a day that goes by that each of us has to make a decision or two, and some are more critical than others. As I prepare for a ski trip out west, I must take a good look at many things and make sure I’m ready for the trip.

The first thing I look at is myself. Am I ready to go skiing? Is my body in some sort of shape? I know: Round is a shape, but you know what I mean. Do I feel I have the endurance to ski for five straight days (8 am – 4 pm)? If not, what risk am I taking if I don’t get myself into shape? Perhaps I need to change the number or length of days I ski.

Next, I need to make sure my ski gear is right for the type of skiing I will be doing each day. This is easy for me, since I rent my ski equipment (ski, boots, and poles) through a local vendor near the mountain,

all tuned up and prepared for me the day before I begin skiing. The good news is if I have problems with my equipment (and I have in the past), I can just go to the vendor’s location at the ski slope, and they will repair it for me.

The third consideration is whether I have the right gear (PPE), such as pants, jacket, gloves, and helmet. Since I ski just about every year, I have the jacket, pants, and gloves. They may be a few years old, but they still do the trick in keeping me warm. The one item we need to make sure is in good shape is the ski helmet. You can always rent them with the ski equipment, but I have my own helmet and it’s in good shape—and yes, I wear it.

Now we’re ready to hit the slopes, where more decisions will need to be made. What level of skier are you? This is the time to

be brutally honest with yourself, or things can go south quickly! There is nothing wrong with hanging out on the beginner slopes until you are ready to move on to the intermediate slopes. This might be a great opportunity to take a lesson or two before you move up. I have been skiing for 40 years, and I still tend to hang out on the intermediate or beginner slopes. I have come to realize that at my age (60-ish), it’s not worth the pain if something happens. Don’t get me wrong: I have been down a black diamond or two over the past few years, but I don’t rush to the slopes looking for them. I enjoy skiing safely, and I’m not looking for an accident...nor am I looking to run someone else over.

Skiing is one of the most thrilling winter sports I know, and can be enjoyed by nearly everyone, provided they take safety seriously.

Throughout the article—and as I have said before—some decisions are more critical than others. Keep these three in mind:

- 1) Am I in shape?
- 2) Do I have the right equipment?
- 3) Do I know my level?

Have fun out there, and STAY SAFE! 🐻

WINTER RECREATION Essentials

BEFORE YOU GO

Always check weather and snow conditions prior to your trip. Plan accordingly.

Check road conditions and be prepared for winter driving.



Research the area and route you'll use. Some roads are not maintained in the winter. Bring a paper map and don't rely solely on GPS.

Tell someone where you're going and when you'll return. Check in when you get back.



Pack water, high-energy meals, and snacks. Pack more than you think you'll need.

Dress in layers of warm, waterproof clothing. Bring extra layers.



ONCE YOU'RE THERE

Maintain situational awareness, follow your map, and know where you are at all times.

Stay on safe routes and avoid steep or dangerous terrain.



Be respectful of others and share the "trail." When snowshoeing or hiking, avoid walking in ski tracks.

Leave no trace. Pack out all trash, leftover food, and waste.



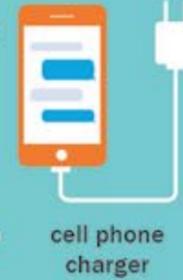
Be sure to hydrate and eat frequently throughout the day.

Pay attention to weather conditions and be prepared to leave quickly if conditions change or worsen.

READY, SET, SNOW! TURN THE PAGE FOR MORE WINTER RECREATION TIPS AND VISIT [HTTPS://GO.USA.GOV/XD89G](https://go.usa.gov/XD89G)



WINTER DRIVING ESSENTIALS



blankets or sleeping bag



LAYERING BASICS

1

Base Layer
wicks sweat off your skin: thermal underwear top and bottom, avoid cotton clothing

2

Middle Layer
retains body heat to protect you from the cold: fleece, sweater, hoodie, down jacket

3

Outer Layer
shields you from wind and rain: waterproof, breathable shell



4

Protect Your Extremities
cover your head and hands: wear a hat that covers your ears, and waterproof gloves or mittens

5

Suitable Footwear
wear warm socks (wool or synthetic) and waterproof boots with good tread to prevent falls

6

Accessorize
wear sunglasses and apply sunscreen to exposed skin