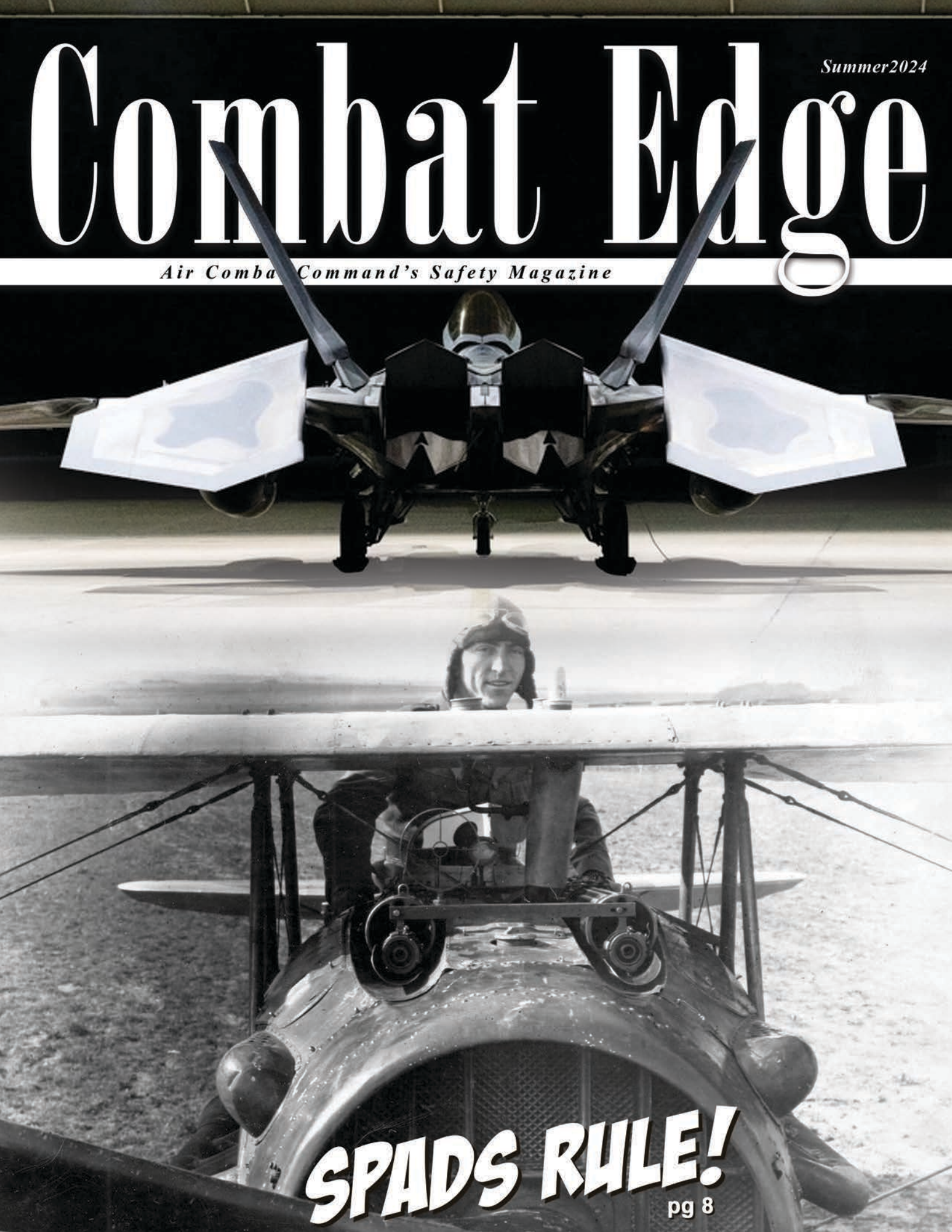
Combat Edge

Summer2024

Air Combat Command's Safety Magazine



SPADS RULE!

pg 8

Combat Edge

Gen Kenneth S. Wilsbach
Commander

Col Joseph R. Augustine
Director of Safety

Richard E. Cook
Editor

Kurt Reilly (ret)
Art Director

Mica Mitchell
Guest Art Director

Volume 32 Issue 2 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.

CONTRIBUTIONS:
PLEASE SEND ARTICLES WITH NAME, RANK, DSN PHONE NUMBER, E-MAIL, COMPLETE MAILING ADDRESS AND COMMENTS TO ACC/SEM COMBAT EDGE MAGAZINE:

THECOMBATEDGE@US.AF.MIL
TELEPHONE: 757-764-8846
DSN: 574-8846
FAX: 757-764-8975

THE EDITOR RESERVES THE RIGHT TO EDIT ALL MANUSCRIPTS FOR READABILITY AND GOOD TASTE.

OOPS … IN OUR SPRING 2024 ISSUE, WE INCORRECTLY LISTED THE AUTHOR OF "TACOS, ANYONE?" THE ARTICLE WAS WRITTEN BY TSGT ALEXANDER J. HALL. WELL DONE, "MR. CLEAN!"

COVER PHOTOS - F-22 AWAITING TAKE-OFF TO POWIDZ AB, POLAND, BY SRA CHLOE SHANES
WWI EDDIE RICKENBACKER, US AIR FORCE PHOTO

ACCent

Operationalizing Risk Management

Col Joe Augustine
Director of Safety

Greetings, fellow practitioners of combat power. As we dive into the 101 Critical Days of Summer, I urge you to think about the importance of training and inculcating risk management instincts at all levels of leadership. This is especially important as we spend more and more time outdoors, in the water, on motorcycles, and while storing and operating firearms. As the Air Force prepares for Gloabal Power Competition and the introduction of increasingly complex and distributed operations, the rational evaluation of risks should be an instinct deeply embedded in the psyche of all Airmen.

I also take this opportunity to thank and congratulate Mr. Kurt Reilly, our *The Combat Edge* Art Director from 2008 to 2024, on his retirement, culminating an impressive career serving the Air Force both now and previously as an Active Duty Air Force Veteran. Thanks to Dr. Cook and Mr. Robinson for letting me plagiarize their words about Kurt…

Kurt came to us as a highly-regarded graphic designer, having served previously as photographer/graphic artist for the USAF Thunderbirds. While at ACC, Kurt took *The Combat Edge* to a new level, winning several awards for design and content, including the Blue Pencil & Gold Screen Award from the National Association of Government Communicators. In 2010, Kurt designed the "Over the Edge" portion of *The Combat Edge*, a new and important development. This portion focuses on the off-duty environment, and is critical to the Occupational Safety mishap prevention program.

Kurt has many loves in his life, but his biggest has always been his family (Wife and two daughters), along with three grandkids. Kurt also likes trucks, motorcycles, tractor-pulls, and camping. He plans to enjoy them all in his retirement.

As they say, a picture is worth a thousand words. Kurt has a real knack for pairing images to the text of an article, making for an engaging story. Kurt will be missed, not only within the ACC/SE Directorate, but also the command as a whole.

Thanks, Kurt, for taking us to the next level! Best wishes on your retirement!

Photo courtesy of Josh Vaughn Photography

COMPOUNDING EMERGENCIES

By Capt Truman M. Smith

On a hot summer day in Oklahoma in 2023, I was scheduled to fly an E-3 on a training sortie to and from an orbit over Dyess AFB, Texas. These sorties are common, and the profile was nothing special. We were going to orbit for a few hours in order for the mission crew to get some training manipulating the radar feed from the large rotodome for which the E-3 is known. The crew consisted of Air Battle Managers (ABM) and radar and communication technicians. At the end of the sortie, the flight deck would get some training doing practice approaches.

When I arrived at the jet, I noticed from the forms that one of the E-3's four navigation sources was inoperative. According to our guidance and the mission set, we were allowed to take the aircraft up in that configuration. Ground operations were normal; however, on climb out, as we were about to enter a layer of clouds forecast to produce icing conditions, one of the engine anti-ice systems failed. Since we were prohibited from operating in such environments without working anti-icing systems, I coordinated to level off below the cloud deck, and was able to navigate to the orbit without entering any icing conditions.

Photo courtesy of Josh Vaughn Photography

Just before entering the orbit, two of our eight generators experienced malfunctions, kicking themselves off and losing their redundancy. This normally would not have been an issue, but those two particular generators provided power to two of the four navigation sources. Had they failed completely, I would have been down to only one navigational system that provided information only for heading and attitude.

While I was working with the flight engineer to fix the generator malfunction, I noticed that my Attitude Director Indicator (ADI) was not matching the co-pilot's. After comparing mine with standby instruments, I realized that my ADI had become completely unusable, and was giving inaccurate pitch and roll indications. The system providing data to the pilot ADI was the backup to the system that had been written up as inoperable while on the ground. This meant all the pilot's avionics were unusable.

I decided to end the training mission at that point and start our route back to Oklahoma. I swapped seats with the other pilot so I could perform the landing in the co-pilot seat. Just as we were leaving the orbit, an amber caution light illuminated, which meant my third navigation source was running only on battery power, and could fail within 30 minutes. If this system had failed, I would have been forced to navigate back to Tinker visually, using some traditional navigational aids.

About halfway back to Tinker, I saw a quick movement on my left. The Pilot's seat locking mechanism snapped, and the co-pilot fell to the floor in his seat. As he was unable to reach the flight controls, I was the only pilot able to fly the aircraft—from the co-pilot's seat.

So … with a broken anti-ice system, two failed navigational sources, another one that could fail in 30 minutes, half of my avionics broken, electrical systems that were kicking themselves off, and a pilot who couldn't reach the flight controls because of a broken seat, we limped back to Tinker.

I performed the descent and landing, and I was able to coordinate the taxi back to parking by controlling the brakes, while the pilot in the left seat steered the aircraft. When we arrived in our parking spot, Maintenance notified us that one of our brakes was smoking. This appeared to be because a brake probably had locked up on landing. I had Maintenance quickly bring up the airstairs, and had the crew egress the aircraft, in case the brake caught fire.

Our airframes are getting older, and are finding new and clever ways to break that sometimes are outside the Technical Order guidance. I sometimes hear old people say the problem with getting older isn't one thing breaking after another—it's everything breaking all the time. Before every flight, I make sure to talk to my crew about this, and warn them that they are not allowed to be complacent. Our profession is inherently dangerous, but we mitigate those risks through thorough planning, crew resource management, training, systems knowledge, and sometimes just luck. Currency does not equal proficiency: The more we train, the better prepared we will be for the next time the aircraft throws us something new.

E-3 cockpit with broken pilot's seat

SPADS RULE!

By MSgt Ronald J. Simons

KILL FLANKERS! The unofficial battle cry for the SPADs' combat deployment to Eastern Europe evokes memories of the Cold War. Recently, a combined force comprised of members from the 94th Fighter Squadron, the 94th Fighter Generation Squadron, the 1st Maintenance Group, and the 192d Maintenance Group mobilized as an Immediate Response Force. We were destined for Powidz AB, a remote and minimally-equipped air base in eastern Poland. The base, much of which was built before the fall of the Berlin Wall, immediately presented significant safety concerns. Its all-but-condemned facilities, lack of an explosive safety plan, and lack of hazardous material disposal procedures meant the location was not equipped to meet the extreme demands of a fleet of combat-loaded, fifth-generation fighters.

Recognizing the potential danger these shortfalls presented, the unit quickly began working to create the safest possible environment from which to operate. The first challenge was the lack of permanent munitions storage areas and the unkempt, decrepit alert apron. The SPAD munitions team resurrected three munitions storage facilities and restored them to acceptable levels for live ordnance operations. The team worked in their new home to create space in which to store the large number of munitions that had been shipped in from the U.S. and in-theater. The process included disposing of hundreds of pounds of debris, some of which had been onsite for decades.

The next hurdle was security. Cleaning and lubricating the rolling doors' rail system was necessary before the Ammo team could properly secure the $94 million worth of munitions onsite.

Adequate and reliable power also was an issue, as the structures had not been utilized consistently, and the electrical systems had not been modified or updated. Exposed wires and faulty circuits routinely presented the risk of shock and power outages. Modern portable generators were brought in to provide the necessary light and power required to maintain the extensive arsenal.

Two Polish Mig-29s accompany an F-22
Photo by SrA Reese Toler

The next problem to be overcome was the location's lack of an explosive safety plan. Powidz AB had not hosted fighter aircraft on a semi-permanent basis in decades, and basic safety procedures were not in place to handle the mighty Raptor's firepower. For example, the base had no aircraft parking plans. These allow for safe distance between the types and amounts of munitions used, and include procedures for governing explosive safety incidents. Working closely with the Polish command team, senior Army leaders, Explosive Ordnance Disposal units, and local emergency responders, the SPADs made the necessary preparations to accept the fleet prior to its arrival. Sometimes going so far as to use a 30-ft carpenter's tape measure, the team established aircraft parking locations in line with published guidance for safe distances between aircraft loaded with explosives.

F-22 at Powidz AB
Photo by SrA Reese Toler

Polish Mig-29 at Powidz AB
Photo by SrA Reese Toler

F-22s at Powidz AB, Poland
Photo by SrA Reese Toler

They also developed local emergency action checklists, and specified primary and alternate emergency parking areas located far enough away from other aircraft and structures to minimize damage in the event of an inadvertent detonation. All these plans then were combined to form the first ever F-22 Explosive Operating Instruction for Powidz.

Finally, the SPADs dealt with handling the accumulation and disposal of hazardous materials, specifically Low Observable (LO) material. Most people know that the F-22 is stealthy, and the LO troops are the ones who make it happen. Going above and beyond, the LO section worked with Polish and U.S. Army counterparts to implement procedures for hazardous material use and disposal that surpassed even home-station and OSHA requirements. Securing two enclosed hangar areas, the unit was able to complete 1,000 stealth repairs while reducing chromium exposure risks.

Innovation and collaboration across the entire team were impeccable. Their combined efforts enabled immediate combat operations upon the arrival of the fleet. In total, during their 122-day deployment, the SPADs conducted seventy-two live munitions loading operations with zero incidents. They also facilitated round-the-clock alert status which produced thirty-two rapid response combat sorties, safeguarding thirty billion dollars in Ukrainian supply-chain assets. Additionally, the deployment validated Air Combat Command's Agile Combat Employment (ACE) initiatives, producing the first expeditionary European ACE from the 1st Fighter Wing. Multi-Capable Airmen from multiple AFSCs selflessly embraced tasks outside their respective career fields, recovering, refueling, and relaunching 45 sorties without a single safety mishap or lost line. The adaptability and safety culture mindset of the 94th enabled them to complete 52 joint nation interoperability sorties, training 9 allied countries, solidifying international ties with 31 NATO partners, and fortifying Europe's eastern borders.

Through their flexibility, knowledge of standards, and commitment to safety, the SPADs overcame all obstacles they faced. They were able to complete their trip with ZERO explosive or hazardous waste incidents, thereby protecting the American and allied troops stationed in the vicinity of Powidz AB. Overall, the deployment was a resounding success, cementing the 94th Fighter Generation Squadron's recognition as Air Combat Command's Safety Unit of the 3rd Quarter. WHO RULES? … SPADS RULE!

Editor's note: The 94th Fighter Generation Squadron's lineage dates back to the 94th Pursuit Squadron, when Eddie Rickenbacker and his peers threw their "hat in the ring" during WWI, even before the United States had officially entered the conflict. The SPAD was one of the first aircraft the squadron operated. Since that time, the aircraft has been its namesake.

SPAD S.XIII flown by Eddie Rickenbacker in WWI
Photo Illustration created from US Air Force Photos

When Sparks Fly

"Pilot, sparks, left side engine!"

By Capt John N. Lee

Our E-8C Joint Surveillance Target Attack Radar System (JSTARS) aircraft was configured for landing and established on the Instrument Landing System approach to runway 23R at Kadena. This was a familiar approach that we had flown repeatedly over the past four months while conducting missions in the Indo-Pacific.

On this particular night, we had returned to base as an emergency aircraft, with the no. 1 engine shut down as a precaution for a bleed-air issue. Earlier in the sortie, an electrical problem had caused the no. 1 engine bleed-air circuit breaker to trip. We therefore could not control that engine's bleed-air valve, nor monitor for overheating, overpressure, or leaks. We had completed all normal and emergency checklists, adjusted gross weight, briefed the crew, coordinated with external agencies, and arranged for fire trucks to meet us upon landing. As we started the approach, we maintained a sterile cockpit and focused on the three-engine approach.

Breaking the silence, on the headsets came the words, "Pilot, sparks, left side engine!"

It took me a second to process those words, and a quick exchange of glances with the co-pilot and flight engineer confirmed that we all had heard the same thing. I had felt no change in thrust or yaw, consistent with the engine instruments' indicating that the three remaining engines were operating normally. I looked outside, and could not see anything unusual with the engines.

I queried the Mission Crew Commander (MCC) for details on what they saw, and on which engine. Instead of the MCC, Lt Ballew, an Airborne Weapons Officer, responded, describing what he saw and confirming that sparks were shooting out the no. 2 engine tailpipe. He sounded cool and collected, but there was no mistaking the sense of urgency in his voice.

E-8C JSTARS Cockpit
Photo by A1C Bailee A. Darbasie

A jet engine mechanic with the 461st Air Control Wing inspects an engine inlet on a E-8C JSTARS
Photo by SMSgt Roger Parsons

Editor's Note: The E-8C airframe was introduced in 1991, to aid in Operation Desert Storm. It was retired on 21 September 2023.
Photo by TSgt John Lasky

It was difficult to tell exactly what was causing the no. 2 engine to shoot sparks. We might have had a bird strike, although it was unlikely, since it was well past midnight. We also might have ingested ice or suffered foreign object damage. Perhaps there was deeper trouble with the aircraft. As improbable as any scenario seemed, sparks coming from the engine indicated the high likelihood of internal mechanical damage.

Fortunately, we had ample time to run checklists and consider contingency plans while we adjusted gross weight. One of the contingencies we considered was losing yet another engine, which potentially could drive us to either the "Three-Engine-Rudder-Boost-Out" or the "Two-Engines-Out-on-One-Side" scenario. Key considerations in the case of losing two engines on one side on the E-8C JSTARS were: 1) we would not have the performance to execute a go-around unless we were light enough and configured appropriately; and 2) higher approach speeds and the associated landing-distance and brake-energy needs. In addition, the loss of one engine-driven pump meant we would have degraded hydraulics. This was a classic "bad day" compound-EP scenario that we had table-topped and practiced in the simulator regularly, and I had encountered one on my annual EP simulator check ride before this deployment.

Having discussed the options, we made the call to adjust gross weight to normal landing weight and configure accordingly, rather than going down to a target gross weight for a potential 3-Engine RBO/2-Engines out on one side landing. I reasoned that retaining an additional 42,000 pounds in fuel would be preferable in that the extra fuel would allow for holding and diverting. I also knew we still had the option of restarting the no. 1 engine if we lost another engine.

With the runway in sight and the aircraft already on a stabilized approach, I decided the best course of action was to continue the approach to landing. We were too heavy for a two-engine go-around. We did not have enough time to attempt restarting the no. 1 engine, which could destabilize the approach. I announced my intention to continue the approach to a full stop on the two remaining two engines plus whatever thrust the no. 2 engine would continue to provide. As I brought the engines to idle in the flare, engine no. 2's low RPM light illuminated, confirming our suspicions of a mechanical problem. We shut down the troubled engine and taxied off the runway.

Maintainers discovered metal shavings inside the engine, and we later learned that the 14th-stage stator vane had broken off at the root because of fatigue cracking, causing domestic object damage.

Looking back on this event, I am thankful to my crew and their airmanship and professionalism in handling this situation. Communication is among the most important—and difficult—elements of crew resource management to execute well in large crews. Taking the time to discuss contingency scenarios with the crew before the second emergency occurred helped everyone remain calm and collected. Furthermore, communication was efficient. The standard flow on the E-8C JSTARS would have been for Air Weapons Officer to report to the Senior Director, who would then report to the Mission Crew Commander, who would then speak with the Aircraft Commander on a dedicated net. In a time-sensitive situation during a critical phase of flight, our crew exercised great airmanship and judgment in deviating from this standard and shortening the communication chain between the crew member with the best vantage point and the pilot.

This experience also reaffirmed that everyone on the aircraft must maintain vigilance, and must actively seek to stop the chain of events before we slip through too many holes in Dr. Reason's Swiss cheese model. The sparks had illuminated the crew compartment with a noticeable orange glow against the night sky, and the crew was able to spot it immediately. If the same incident had occurred in the daytime, during a busy mission, it may have taken more time to identify.

E-8C JSTARS aircraft takes off from Kadena AB, Photo by TSgt Rey Ramon

Most importantly, thanks to the culture of safety we had fostered, the crew was able to be in the best position to recover the aircraft safely. With the divestment of the JSTARS platform underway and with the inactivation of the 5th Expeditionary Airborne Command and Control Squadron scheduled just a week later, this was one of the last operational JSTARS missions in the Indo-Pacific.

While the team was "go-oriented" and motivated to finish strong in the AOR, leadership at all levels consistently emphasized the importance of maintaining a strong safety culture.

After more than 30 years in service, the E-8C JSTARS had zero aircraft crashes and suffered no service-member fatalities during its life. This is a testament to the culture and safety-of-flight mindset with which this team and the teams before it flew.

Makin' a List–Checkin' It Thrice

By SSgt Cherish Hall

In the Jet Engine Intermediate Maintenance Section at Shaw Air Force Base, we handle inspections and repairs of F100-GE-129 engines, from simple tasks to complete teardowns and overhauls. As a maintenance shop, we are directed to use Technical Orders (TOs), which provide step-by-step instructions on how to complete all maintenance tasks. A single TO sometimes can contain hundreds of steps that can be challenging to decipher; assembling an engine can involve thousands of steps and parts. It would be easy for even the most experienced technician to make mistakes, but errors are unacceptable in our line of work. They can have deadly consequences.

In order to ensure reliability, we use several checklists for every step when working on an engine. When an engine arrives at the engine back shop, we use a receiving checklist to see if additional maintenance is required. We even use a checklist to ensure that the transportation trailer on which the engine came is serviceable for continued use. The engine maintenance documentation includes several more checklists that help us verify that every inspection is completed, and that every part is correct and fair. After all maintenance is completed, there are more checklists to ensure that the engine is ready and safe to be tested, as well as checklists to ensure that the test facilities are operational and ready for engine testing.

After all engine check requirements are performed, there is a final checklist to verify once again that the engine is completely serviced and that every part is correct, serviceable, and installed properly. Each checklist also provides for multiple people to confirm everything has been completed. A Quality Assurance Inspector then verifies that all our maintenance is complete and documented. If an error is found or a step is missed, we backtrack and accomplish all required tasks.

Checklists are invaluable tools that provide a structured approach to completing the mission and enhancing our efficiency. By outlining crucial steps, they serve as tangible reminders and reduce the chance of any mistakes or oversight, ensuring that our engines are safe and ready.

Checklists are a great resource in everyday aspects of life, too. Whether managing the day's agenda, tackling homework assignments, preparing for a road trip, or maintaining your home, checklists serve as indispensable resources. By providing a structured approach, they assist in prioritizing and organizing tasks effectively. They help break down complex endeavors into manageable steps, thus ensuring no crucial details are overlooked. Checklists contribute to a sense of order, making tasks manageable, and reducing the risk of forgetting essential elements.

Photo by TSgt Ryan Labadens

Background photo by TSgt Alexander Huff

Better SAFE than SORRY

By SSgt Morgan E. Strausser

Whether it's a consolidated tool kit, a processing table, or another piece of equipment that requires transportation but doesn't have standardized tie-down procedures, we can guess the extent to which airmen will go when securing (or not securing) the cargo. Unfortunately, complacency and oversight get the better of us when we're faced with simple, repetitive tasks. The following is the story of a time when complacency got the better of my team.

We had to transport a 20 mm processing table to another location to be serviced for a routine inspection. The most proficient way is to throw it into a 6-pack truck and tie it down. That's exactly what we did: We secured the table in the truck, and we were ready for the trip … or so we thought. As the driver pulled out and accelerated toward the road, she braked just as we departed the tent. It turns out the truck wasn't the only thing departing. As the driver pumped the brakes, the table came loose from the tie- downs. It slid into the cab of the truck, shattering the rear window.

All of us were briefed after the incident to ensure the same thing wouldn't happen again. We studied how the incident report was to be completed, reviewed the importance of double-checking our work and that of our shotguns, and talked about the consequences of our actions when complacency becomes routine. We knew we were fortunate that the only thing broken was a rear window, and not an Airman.

Of course, accidents will happen. The good that can come from them are the lessons to be learned. If an accident happens on your watch, your mishap becomes a lesson for those who follow you. The rotation of Members who came after us were briefed on our incident, and learned the importance of ensuring safety when transporting cargo.

The most important lesson to be learned from this and other incidents is "better safe than sorry." After experiencing (and witnessing) mishaps like this, I always use extra tie downs to secure oddball equipment. Taking a few extra minutes to ensure additional measures are in place will save time, energy, money, and people. Even the simplest tasks we perform daily should be done properly.

A similar situation is sure to arise in the future. When it does, I will pass on the lessons learned from the crew's mishaps to my junior airmen, thereby doing my part to train the next crew to be safer, stronger Airmen.


Photo by SrA Nicholas Larsen

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.

Photo by GAS-photo/Shutterstock.com

FY24 Flight

Thru 31 Mar 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 31 Mar 2024

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

FY24 Weapons

Thru 31 Mar 2024

	Class A	Class B	Class C	Class D	Class E
ACC	0	0	2	3	4

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

During the second quarter, two MQ-9 aircraft were destroyed while another was damaged. Additionally, an F-16 was also damaged in a mishap. As ACC is rapidly executing investigations, these mishaps are a reminder that prevention starts with thorough mission planning and coordination. From drafting mission objectives and reviewing emergency procedures to pre-flight communication with outside agencies, all activities before stepping to the jet contribute to the safety in the sky. While there could always be more mission preparation, aircrew are reminded there should never be less!

Occupational Notes

ACC sustained four Class A mishaps in the second quarter FY24, one on-duty and three off-duty. In addition, a previous on-duty Class B from the first quarter was upgraded to Class A. ACC also experienced one Class B off-duty mishap, and a previous Class C mishap was upgraded to Class B. The on-duty Class A mishap involved fire damage to a warehouse in the AOR. Two of the three off-duty Class A mishaps involved motorcycle accidents, and the other mishap involved a car that was struck by another car. All three were fatal. The off-duty Class B mishaps involved a member who lost a fingertip when it was crushed in a door, and a member involved in a car accident who sustained severe injuries. Our mishaps for the first half of the fiscal year match where we were last FY. As we move forward into the spring and summer months, everyone must take it upon themselves to stay alert to their surroundings, and to use good judgment and sound risk management when making decisions. Remember: You are the key to your own safety and the safety of your family, friends, and coworkers.

Weapons Notes

In the second quarter of FY24, ACC experienced a total of four incidents, including one Class C, one Class D, and two Class E mishaps. The Class C incident arose from a member placing their hand on a hot gun barrel, resulting in burns to the left hand. The Class D incident occurred when a member dropped two GBU-38s while loading them onto a trailer. The initial Class E event transpired when a missile lid made contact with the missile radome, causing it to crack. The final Class E mishap unfolded when the guidance control section of an AIM-9 was damaged during an upload. Although these mishaps may seem minor in the broader context, it is imperative that we remain vigilant in addressing even the smallest issues to avert more significant accidents. Let's prioritize attention to detail and ensure that tasks are completed correctly the first time. Your dedication to the ACC Weapons Safety community is greatly appreciated.

1st Quarter FY24 Awards

Aircrew Safety Award
Capt Michael J. Notti & SrA Jaxon T. Manes
46 EATKS, 432 WG
Ali Al Salem AB, Kuwait

Aviation Maintenance Safety
SSgt Igor Ganchenko
41 RGS, 23 WG
Moody AFB, GA

Explosives Safety
SSgt Douglas E. Meekins
38 RQS, 23 WG
Moody AFB, GA

Flight Line Safety
MSgt Joshua M. Coop
494 EFGS, 332 AEW
APO AE

Safety Career Professional
SSgt Anthony A. Utreras De Souza
57 WG/SEG
Nellis AFB, NV

Pilot Safety
Maj Matthew L. Neelon
99 RS, 9 RW
Beale AFB, CA

Weapons Safety Professional
Taighlor M. Savage
NTTR/SE
Nellis AFB, NV

Unit Safety Representative
TSgt Damian M. Perez
379 ECES, 379 AEW
Al Udeid AB, Qatar

Unit Safety
Lighting Aircraft Maintenance Unit
57 AMXS, 57 WG
Nellis AFB, NV

OVER the Edge
MAGAZINE

101 Critical Days of Summer

PAGE 8

Beat the heat.

Stay cool.
Stay in an air conditioned place or go to a pool.

Stay hydrated.
Bring a reusable water bottle.

Summer clothes.
Wear lightweight, light colored clothes.

Seek shade.
Bring a hat or umbrella.

Never leave pets or children alone in cars.
Hot cars can be deadly.

Help others.
Check in on those at risk.

Source: weather.gov/dlh/beattheheat

OVER the Edge MAGAZINE

Cover–Photo by A1C Cheyenne Powers

Check Out Healthy and Safe Swimming!

Look at inspection scores

Before heading to a public pool, hot tub/spa, or another place with treated water, **check to see if the latest inspection results are online or onsite.**

Do your own inspection

Before getting into any treated water, do your own inspection.
Check the following items if they pass your inspection.

☐ **Water's pH and free chlorine or bromine concentration are correct.***
Proper pH and disinfectant levels help stop the spread of germs in the water. CDC recommends pH 7.2–7.8. The free chlorine concentration should be at least 1 ppm in pools and at least 3 ppm in hot tubs/spas. The free bromine concentration should be at least 3 ppm in pools and at least 4 ppm in hot tubs/spas.

☐ **Drain at the bottom of the deep end is visible.**
Crystal-clear water allows lifeguards and other swimmers to clearly see swimmers underwater.

☐ **Drain covers at the bottom appear to be secured and in good repair.**

☐ **Lifeguard is on duty. If not, safety equipment, such as a rescue ring or pole, is available.**

If you find any problems during inspection, do NOT get into the water.
Tell the person in charge so the problems can be fixed.

U.S. Department of Health and Human Services
Centers for Disease Control and Prevention

CS264300-B

*Use test strips to test pH and free chlorine or bromine concentration. Most superstores, hardware stores, and pool-supply stores sell test strips. Follow the manufacturer's directions.

Ride of Your Life

By TSgt Alec W. Smith

One warm summer afternoon in New Jersey, I took the opportunity to hop onto my motorcycle and enjoy the nice weather on two wheels. I put on my protective gear and rushed out the door, eager to embrace the freedom I always felt when riding. Little did I know that the day's ride would change my perspective on the importance of motorcycle safety, training, and education.

All geared up, I got on my Honda. I turned the key, and off I went. Listening to the exhaust and feeling the wind at my chest were the only things on my mind, as I rode down the backroads of the New Jersey streets. It was peaceful—an experience hard to describe to those who have never felt the freedom of travel outside the metal frame of an automobile. It was my brief escape from the stresses of day-to-day life. Unfortunately, it was all too short on that beautiful, warm summer day.

I remember it vividly, as the experience was burned into my mind. Toward the end of my ride, I came to a four-way stop, and signaled for a left turn. As I turned, I accelerated to ensure I was out of the intersection and safe from oncoming traffic. I failed to notice I was crossing a painted crosswalk. This particular crosswalk consisted of rectangular sections that were painted white. I didn't realize the painted parts were slippery, and my back tire lost traction as I crossed one. The tire slid, and then regained traction when it reached asphalt.

In less than a second, I was headed in a completely different direction. I was headed straight toward a concrete median only about 10 feet in front of me. In that moment I didn't think; I reacted, and applied both brakes. I braked too hard, though. I hit the barrier and flew over the handlebars.

Illustration composited from Siberian Art/Leka Sergeeva/stockphoto mania/shutterstock.com

I remember rolling head over heels for what felt like an eternity, helpless. I could only listen to the sound of my helmet smacking the asphalt and my Honda tumbling behind me. I was just hoping that any traffic was able to stop in time and not collide with me. Luckily, when I finally came to a complete stop, I was able to collect myself. I assessed my injuries and the damage to my motorcycle. I was fortunate, nothing got past my protective gear. My helmet was ground down quite a bit, and my pants and jacket were worn down to threads. My motorcycle was cracked and broken in several places, and most of one side of the frame was ground down.

Several witnesses helped get me and my bike off the road, and I was able to walk away from the incident without injury. I realized at that moment the importance of my PPE and safety training. My PPE and training saved me from significant injury. Additional training may have equipped me to avoid the accident altogether.

I am blessed with the opportunity to work in a wing safety office, where I see first-hand the benefits of the motorcycle program. Motorcycle accidents are one of the leading causes of fatalities in the USAF, I urge not only riders but also supervisors at all levels to learn the requirements and benefits of the motorcycle safety program. There is no reason not to remain current in one's training. It's FREE, from riding courses and specific classes taught on base, to reimbursement of fees for courses taken off base. There are even safety briefings/ mentorship rides. Training like this can be what allows you to walk through your front door at the end of a ride.

"I realized at that moment the importance of my PPE and safety training."

Motorcycle safety equipment, Ellsworth AFB, SD. Several safety precautions to take before getting onto a motorcycle is to wear sturdy over-the-ankle footwear, long pants, a long sleeve shirt or jacket, full-length finger gloves, shatter-resistant eye wear and helmet that is Department of Transportation approved.
US Air Force photo by A1C Quentin K. Marx

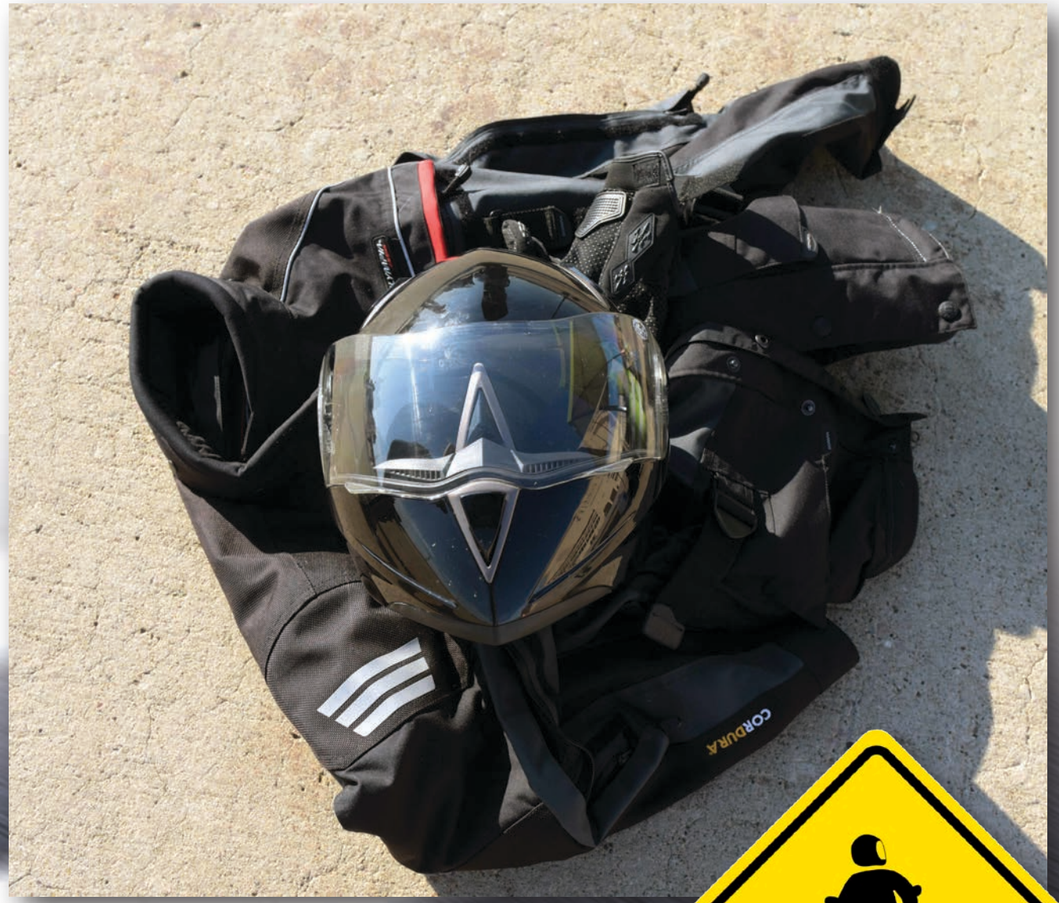


Illustration composited from Leka Sergeeva/ shutterstock.com

Photo by LCpl Kensie Milner

101 Critical Days of Summer

By Robbie Robinson

It's hard to believe but it's that time of year again … summer and the start of 101 CDS. This year, 101 CDS runs from Friday, 24 May, through Monday, 2 September. Our goal is to make it through this time frame without experiencing a serious preventable mishap or loss of life. This is where we need help … from each of you!

During the summertime, you will have many opportunities to get out and explore. We have more hours of daylight, warmer temperatures, and the kids are out of school. Many of us will make plans to go on a vacation, go hiking, spend time on the water, or just relax at home with family and friends. If each of us slows down just a bit and uses good decision-making when doing whatever we are doing, we all will be much safer.

Photo by Cpl Christian Lopez

Every year, it seems like we lose someone needlessly due to a mishap. What will you do to make this year a little safer? Will you drive a little slower and be more patient in traffic? Will you develop a plan for taking breaks when driving? Will you make sure you have a life vest in your boat before you head out onto the water? These all seem trivial, but they can make a huge difference. Look at the adjacent activities and see if you're prepared.

Cruises: Have you done some research on your cruise line? Do you plan to attend the safety meeting that is held at the start of the cruise? Do you have a common meeting point in case you get lost or separated on the ship? Do you have rules for when you disembark the ship at ports?

Beaches: Do you know how to swim? Do you know the meaning of the beach flags that are displayed by the lifeguards? Do you know how to react in the event you are caught in a rip current?

Jet Skiing: Have you operated a jet ski before? Are you familiar with the controls? Do you know where the emergency shut-off for the jet ski is located? Do you have a life preserver, and do you plan to wear it? Do you have a plan to stay within eyesight of others in case something happens?

Hiking: Do you have a plan to lay out your hiking route using a map? Do you plan to leave a copy of that map with friends or family? Do you plan to have a cell phone (with a fully-charged battery), water, and a first aid kit? Are you planning to check the weather before you go out on the hike? As you are probably aware; weather conditions can change quickly: Will you have a way to monitor current weather conditions while out on the hiking trail? Although you may have a well-thought-out plan, hiking can be unpredictable … are you mentally and physically prepared for the unexpected?

Automobiles: Is your vehicle in good mechanical condition and ready for the summer? Do you plan to check the belts, hoses, brakes, oil, coolant, and other fluids? Are your tires in good condition? Are all lights working properly? Do you have an emergency roadside kit?

Motorcycles: Do you have a valid motorcycle license? Do you have the proper personal protective equipment? Is your motorcycle in good mechanical condition? Motorcycle operations involve ever-changing riding and traffic conditions … are you mentally and physically ready and able to operate your motorcycle?

This year, let's redouble our efforts to reach our goal of having a mishap-free 101 CDS. Let's put all the tools we have to use. Let's slow down and think before we do something, get training ahead of time if needed, and use sound Risk Management when making decisions. Stay safe and see you at the end of 101 CDS, my friends!

Photo by Mark Rankin

USE POOL CHEMICALS SAFELY

Protect yourself and swimmers from the thousands of preventable injuries that occur each year.

BEFORE YOU USE POOL CHEMICALS

- Get trained in pool chemical safety (for example, during an operator training course).
- Ask for help if you are **not** trained for specific tasks.
- Read entire product label or Safety Data Sheets (SDS) before using.
- Learn your pool's Emergency Chemical Spill Response Plan and practice steps (for example, evacuation).

USING POOL CHEMICALS SAFELY

- **Wear appropriate safety equipment (for example, safety goggles and gloves).**
- **Read product label before each use:**
  - Handle in a well-ventilated area.
  - Minimize dust, fumes, and splashes.
  - Measure carefully.
  - Open one container at a time and close it before opening another.
- **Never mix:**
  - Chlorine products with acid; this could create toxic gases.
  - Different pool chemicals (for example, different types of chlorine products) with each other or with any other substance.
- **Only pre-dissolve pool chemicals when directed by product label**
  - If label directs pre-dissolving, add the pool chemical to water. NEVER add water to the pool chemical because a violent (potentially explosive) reaction can occur.

Always respond to pool chemical spills immediately. Follow your pool's Emergency Chemical Spill Response Plan, and be sure to contact the proper authorities and management.

Pool Address and Phone Number: _____

Emergency Response Phone Number: _____

Local Health Department Phone Number: _____

U.S. Department of Health and Human Services
Centers for Disease Control and Prevention

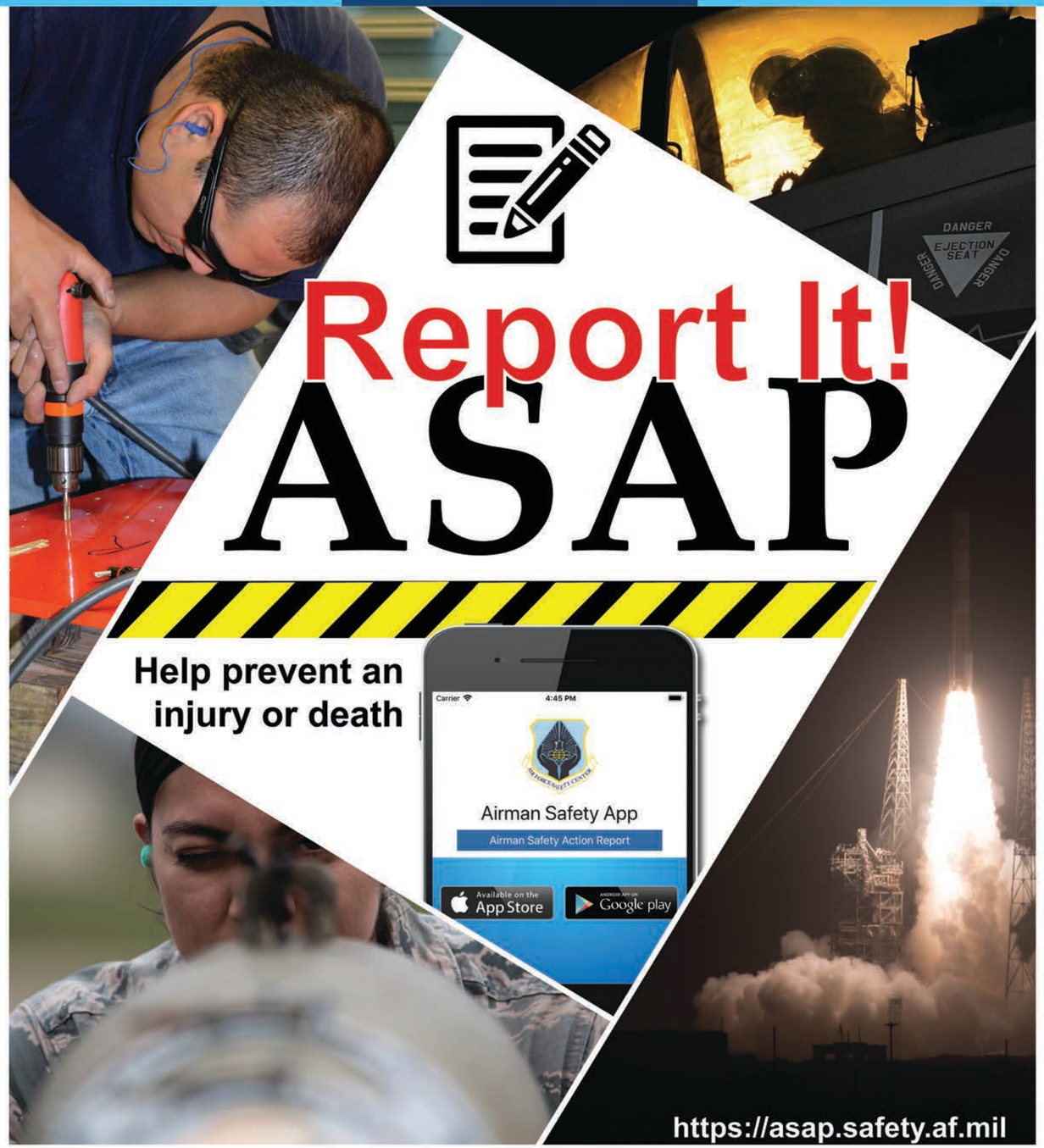
www.cdc.gov/healthywater/swimming/aquatics-professionals

CS317109-B

Help identify and change an unsafe procedure or fix a hazard

U.S. AIR FORCE

Help improve workplace morale and strengthen your unit's safety culture



The Airman Safety Action Program is specifically designed for Airmen to identify hazard and offer risk mitigating solutions - anytime, anywhere using the Airman Safety App

HARDWIRED for SURVIVAL

By TSgt Stephen V. Hansen

Throughout history, humans have endured. We have overcome threats to our existence, learning lessons along the way. We have learned that the world, while beautiful, can be a dangerous place. We also have learned to succeed despite the danger, by assessing risks and preparing for them—by practicing risk management. Today, risk management takes many forms, such as wearing seatbelts, employing preventive medicine, and utilizing GPS and other technologies. We use risk management in order to survive because human beings, like all animals, are hardwired for survival.

My own ability to apply risk management has been put to the test on numerous occasions, including the time my dad and I travelled to Jackson, Wyoming to go whitewater rafting. Our guide was experienced, and was built like an NFL Linebacker. We all knew we were in good hands. Before we hopped onto the raft, our guide's voice boomed over the rapids: "All of you are going to have an awesome time today, but before we get to that, you need to follow some important rules. First, always wear your life jacket and helmet. Second, if you get knocked out of the raft, don't panic. I need you to stay calm in the river. Third, have a good time."

As we roared down the river, we encountered a rapid so powerful it knocked me and a few others into the river. I remember feeling powerless as the current pulled me under the raft, making me feel like a piece of laundry thrown into Nature's washing machine.

Photo by SSgt Emily Kenney

As I was dragged underwater, I thought "this could be it." My lungs felt like they were filled with hot coals, and for a moment I thought I might die. I remembered the words of the guide: "Don't panic. I need you to stay calm in the river." I tried to relax, get my bearings, and resist fighting the current. A moment later, a pair of hands yanked me from the water like a fish and threw me into the raft. My father and the guide had saved me, but risk management in the form of a life vest and a safety briefing had made all the difference.

Applying risk management in a situation like the one above is a testament to the same spirit that has enabled mankind to survive ice ages, countless wars, famines, and plagues. Whether you fasten your seat belt before you drive, take medicine to lessen health risks, or utilize GPS so you don't get lost, you are practicing risk management. Even a simple life vest or a safety briefing can serve as an example of risk management.

Illustration by SaveJungle/shutterstock.com

"First, always wear your life jacket and helmet. Second, if you get knocked out of the raft, don't panic. I need you to stay calm in the river."

Photo by Ron Hilton/shutterstock.com

Photo by Edward Johnson

Operation Stay Afloat

By SSgt Parker Diehl

Water-skiing is a popular recreational activity for many, providing an exhilarating experience that can be enjoyed by people of all ages. While water-skiing can be a great deal of fun, it also can be dangerous if proper safety precautions are not taken. Take a moment to consider the importance of water-skiing safety, and remember the following tips in order to ensure that everyone stays safe while enjoying this exciting activity.

First, it is important to wear the proper safety gear while water-skiing. This includes a properly-fitting life jacket. It not only will help keep you afloat in case of an accident, but also will provide additional protection against impact injuries. A life jacket or vest should be worn at all times while in the water and on the boat. For sizing a life jacket, use this rule of thumb: If you can fit three fingers in the gap between your shoulder and the life vest, your vest is too big. Additionally, an approved safety helmet will help protect your head from injury.

Next, always have a designated spotter on the boat. I always have told people that the spotter and the water-skier should communicate signals before starting to avoid any miscommunication. The spotter's job is to watch the skier, and communicate with the driver of the boat if there are any issues or if the skier falls. The spotter must pay attention to the skier, and not become distracted by anything else, as even a momentary distraction can lead to an accident.

In addition to a spotter, it is important to ensure that the boat driver is experienced and knowledgeable about water-skiing safety. The driver should operate the boat only at a safe speed appropriate for the skier's skill level. The driver also should look for any potential hazards in the water, such as rocks or other boats, and be sure to avoid them. They should never leave the boat running when the water-skier is exiting or entering the boat. The spinning propeller can injure the skier or catch the rope and drag them under the water.

Always ski in designated areas, and learn the boating regulations for your area. Stay away from shallow water or other places that may contain underwater obstacles.

Finally, always check the weather forecast before heading out onto the water. If the weather is poor or a storm is approaching, it is best to postpone your water-skiing plans until conditions are favorable.

Water-skiing can be a thrilling and enjoyable activity, but it is important to remember that it also can be dangerous if proper safety precautions are not taken. By following these tips, you can help ensure a safe and memorable water-skiing experience.

Boy Scout to the Rescue

By TSgt Matthew C. Arbor

On a hot summer day, my friend Aaron and I, along with our Boy Scout troop, headed to the camp pool for a refreshing break from the heat. As Boy Scouts, we had learned essential water safety skills. The pool was filled with laughter and conversations as we splashed around, enjoying our time in the water. Amidst the fun, Aaron noticed something strange happening in the deeper end. He saw Dustin, a boy around our age, struggling and gasping for air.

Without hesitation, Aaron remembered the water safety lessons we had learned during our time in the Boy Scouts. Dustin's distress sent Aaron into action. He had to act fast, so he called out for help. Unfortunately, his voice got lost in the poolside commotion, and the adults nearby didn't seem to notice the seriousness of the situation. But Aaron didn't panic. He remembered the Reach-Throw-Row-Go** technique that he had learned during our water safety training. Since there were no life-saving ropes around, he decided to go for the "Go" option. Without hesitation, he bravely dove into the water to help Dustin.

Swimming over to Dustin, Aaron remained calm and collected, just as he was taught. Drowning victims often will try to climb onto their rescuer, pulling them underwater. Aaron approached Dustin from behind, so Dustin wouldn't grab onto him in fear. With steady hands, Aaron kept Dustin's head above water as he began to swim back towards safety.

Finally, the adults noticed what was happening, and they rushed to the poolside to assist. With their help, they pulled Dustin out of the water. He was frightened but safe, thanks to Aaron's quick thinking and the water safety knowledge he had acquired as a Boy Scout.

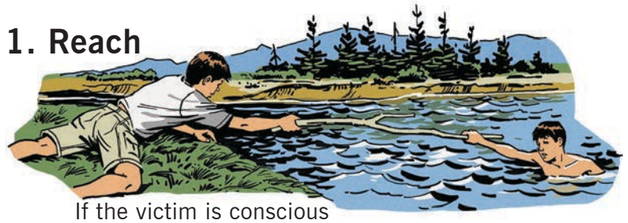
The Scoutmaster praised Aaron for his bravery and composure during the emergency. He emphasized the importance of the training we had received, and how it had played a vital role that day. From that moment on, Aaron's confidence soared. He realized that the knowledge he gained as a Boy Scout wasn't just for show – it had real-life applications that could make a difference. His quick and decisive actions proved that the values and skills we learn are practical tools that can be used to help others.

Airmen can learn from this mindset of internalizing the training and values of being prepared and looking out for others. It could make all the difference when faced with an emergency. In the end, Aaron's experience at the pool that day reinforced the significance of being a Boy Scout. We were more than just a group of young boys in uniforms – we were a team of trained individuals. And as Airmen we are more than just a group of men and women in uniforms.

***https://scoutlife.org/outdoors/178557/reach-throw-row-go-learn-more-about-the-4-water-rescue-techniques/*

Reach, Throw, Row, Go! Learn the 4 Water Rescue Techniques

1. Reach

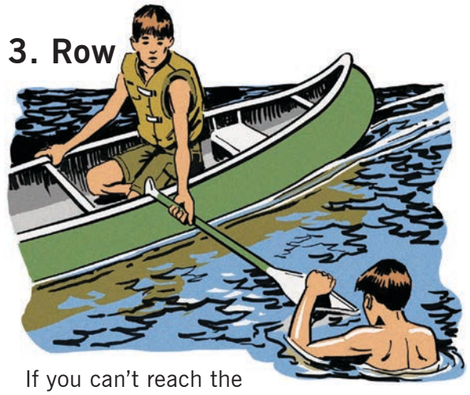


If the victim is conscious and close to the shore, look for a long stick, pole or paddle to perform a rescue.

2. Throw

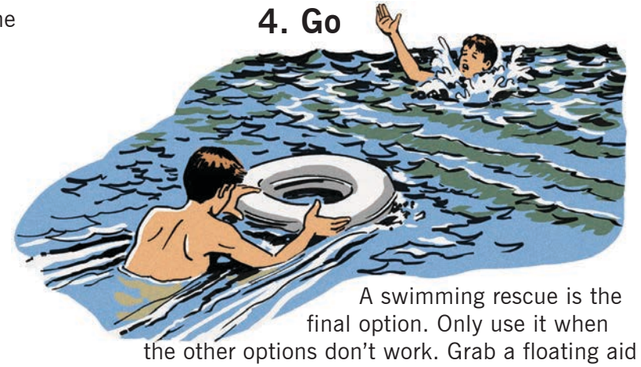
If you can't reach the victim, try throwing a buoyant object to them.

3. Row



If you can't reach the victim and the victim is unable to grasp a buoyant object, race to the victim in a boat.

4. Go



A swimming rescue is the final option. Only use it when the other options don't work. Grab a floating aid and have the victim grab it. Make contact with the victim only if absolutely necessary. Never use this rescue option unless you are a strong swimmer.

National Weather Service

THUNDERSTORM SAFETY FOR YOU AND YOUR FAMILY

BEFORE A THUNDERSTORM

- ✓ **Be Weather-Ready:** Check the forecast regularly to see if you're at risk for severe thunderstorms. Listen to local news or a NOAA Weather Radio to stay informed about watches and warnings. Preparation is key to staying safe and minimizing impacts.
- ✓ **Sign Up for Notifications:** Know how your community sends warnings. Check media severe thunderstorm alerts available in your area.
- ✓ **Create a Communications Plan:** Have a family plan that includes an emergency meeting place. Pick a safe room in your home such as a basement, storm cellar or an interior room on the lowest floor with no windows.
  Get more details at ***ready.gov/make-a-plan***
- ✓ **Practice Your Plan:** Conduct a family severe thunderstorm drill regularly so everyone knows what to do if damaging wind or large hail is approaching. Don't forget pets.
- ✓ **Prepare Your Home:** Keep trees trimmed near your house. If you have time before severe weather hits, put away loose objects, close windows and doors, and move valuable objects inside or under a sturdy structure.
- ✓ **Help Your Neighbor**: Take CPR training so you can help if someone is hurt during severe weather. Conduct a drill with elderly or disabled neighbors.

Sit down with your family or friends and develop a communications plan. Photo NOAA

DURING A THUNDERSTORM

- ✓ **Stay Weather-Ready:** Continue to listen to local news or a NOAA Weather Radio to stay updated about watches and warnings.
- ✓ **At Your House:** Go to your secure location if you hear a severe thunderstorm warning and damaging wind or large hail is approaching. Take your pets if time allows.
- ✓ **At Your Workplace or School:** Stay away from windows if you are in a severe thunderstorm warning. Damaging wind or large hail could blow a heavy object at windows. Do not go to large open rooms such as cafeterias, gymnasiums or auditoriums.
- ✓ **Outside**: Go inside a sturdy building immediately if severe thunderstorms are approaching. Sheds and storage facilities are not safe. Taking shelter under a tree can be deadly. The tree may fall on you and you are at risk of getting struck by lightning.
- ✓ **In a vehicle:** Being in a hard-topped vehicle is safer than being outside; however, if you have time, drive to the closest secure shelter.

AFTER A THUNDERSTORM

- ✓ **Stay Informed:** Keep your NOAA Weather Radio or portable radio with you in your safe place/shelter, so you can listen for updates on watches and warnings and know whether the threat has passed.
- ✓ **Contact Your Family and Loved Ones:** Let your family and close friends know you're okay so they can help spread the word. Power may be out and phone lines may be down.
- ✓ **Assess the Damage:** After you are sure the severe weather threat has ended, check your property for damage. When walking through storm damage, wear long pants, a long-sleeved shirt and sturdy shoes. Contact local authorities if you see power lines down. Stay out of damaged buildings. Be aware of insurance scammers if your property has been damaged.
- ✓ **Help Your Neighbor:** If you see someone injured, call 911. Then, if you are trained, provide first aid until emergency responders arrive.

For more information, visit weather.gov/safety/thunderstorm

United States
Consumer Product Safety Commission

Fireworks Injuries & Deaths

2021 REPORT

#CelebrateSafely

Fireworks Safety Tips

- ★ Never allow children to play with or ignite fireworks, including sparklers.
- ★ Make sure fireworks are legal in your area before buying or using them.
- ★ Keep a bucket of water or a garden hose handy in case of fire or other mishap.
- ★ Light fireworks one at a time, then move back quickly.
- ★ Never try to re-light or pick up fireworks that have not ignited fully.
- ★ Never use fireworks while impaired by alcohol or drugs.
- ★ More Fireworks Safety Tips: **cpsc.gov/fireworks**

Spike in Fireworks Injuries

over the Last 15 Years

25% Increase in fireworks injuries between 2006 & 2021

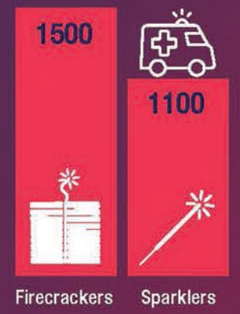
11,500 people were **treated in ERs** for fireworks injuries in 2021

Deaths from Fireworks

2018	6
2019	20
2020 (During pandemic lockdown)	26
2021	9

How & When Injuries Occurred

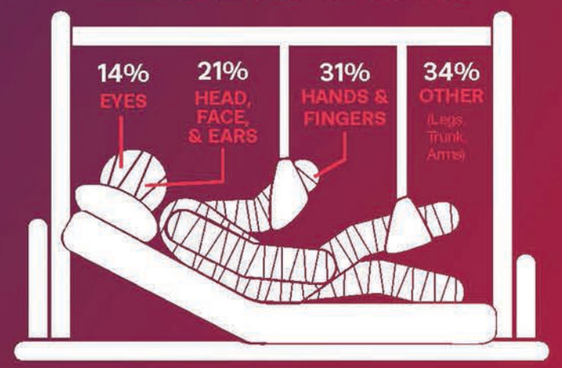
2021 Injuries by Firework Type



74% of injuries occurred in the weeks before & after the July 4th holiday

Most Injured Body Parts

32% of the injuries were **burns**



Source: *U.S. Consumer Product Safety Commission 2021 Fireworks Annual Report*

NSN NEISS-WORK-SAFE NETWORK NSN-11-082022

CPSC.gov USCPSC