

Combat

Spring 2021

Air Combat Command's Safety Magazine



SPLIT-SECOND DECISION

ON RUNWAY 31

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U.S. Air Force graphic by David Perry

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GEN MARK D. KELLY
COMMANDER

COL ANTHONY A. KLEIGER
DIRECTOR OF SAFETY

RICHARD E. COOK
EDITOR

KURT REILLY
ART DIRECTOR

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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

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COVER PHOTO BY SSGT JUSTIN PARSONS

ACCent



Failure to Comply

In my role as Director of Safety for ACC, I see investigation details of many mishaps, and I am astounded by the frequency of catastrophic consequences that resulted from "Failures to Comply." I will say that all mishaps can be traced, either directly or indirectly, to a "Failure to Comply" at some level. Failures to Comply include manufacturers' not meeting AF-approved engineering specifications; they also include Airmen not following Technical Orders (T.O.s), MAJCOM, Wing, Group, or Squadron guidance; as well as posted speed limits, local laws, equipment operating limitations, and weather warnings, to name a few. In nearly every on-duty or off-duty mishap, there was clear guidance available; however, it was not followed.

Most of us are the not the first to be doing the jobs before us. We are not on the frontier, like the Wright Brothers, performing trial-and-error experiments and discovery learning on the job. Many have come before us, and have spent enormous amounts of money, time, and energy performing engineering assessments to develop processes and procedures. Others have contributed by personally learning costly lessons that ended up as steps in a T.O. or other guidance – hence, the phrase: "T.Os. are written in blood" and should be changed to: "T.Os are written in blood *and treasure*."

T.Os. are written in blood *and treasure* refers to T.O. warnings, cautions, or notes, all of which originated with someone's not following the T.O., and ended with their damaging equipment, or getting injured or killed. The concept seems pretty simple: 1) Follow the T.O., published guidance, etc.; 2) the mission gets accomplished or I enjoy my time off doing something fun; and 3) life is good. If it is so simple, why do some refuse to follow?

First, a complacent mindset is obviously a major hazard that enables bad things to happen. We may have performed a task (with many steps) so many times it becomes routine. We think we do not need to refer to the T.O., only to find out later that steps had been changed or deleted after we induced a mishap. Per COMACC's guidance, Airmen in ACC are charged to "Execute Ordinary Tasks – Extraordinarily Well." I will go further and say some of ACC's "ordinary tasks" are quite extraordinary and hazardous, if not precisely executed in accordance with the T.O.

Beyond complacency, I believe Airmen wrestle with *misperception*. Airmen's misperceptions – of Commander's Intent, Time Constraints, Mission Requirements, Supervisory or Organizational Metrics/Goals – create the *illusion* that it is acceptable to disregard published guidance. If you were to ask any commander or supervisor when it is acceptable disregard a T.O. or established guidance, I am confident they would say: "never." Did I mention T.Os. are written in blood *and treasure*?

Do not misunderstand. Precisely following (*insert guidance here*) will not prevent all mishaps. Publications do have flaws which are also revealed during investigations; however, following publications will eliminate mishaps 98% of the time, or more. Some guidance is very specific and clear (e.g., Technical *Orders*, not Technical *Requests*). Other guidance requires interpreting the spirit and intent behind it. Understanding the *spirit* and *intent* of what the guidance is striving to achieve is the mature, professional way to approach situations that are not clear. Abandon the mindset of: "It does not say I can't", therefore, "I can." Commanders depend on Airmen to think when the guidance is not crystal clear.

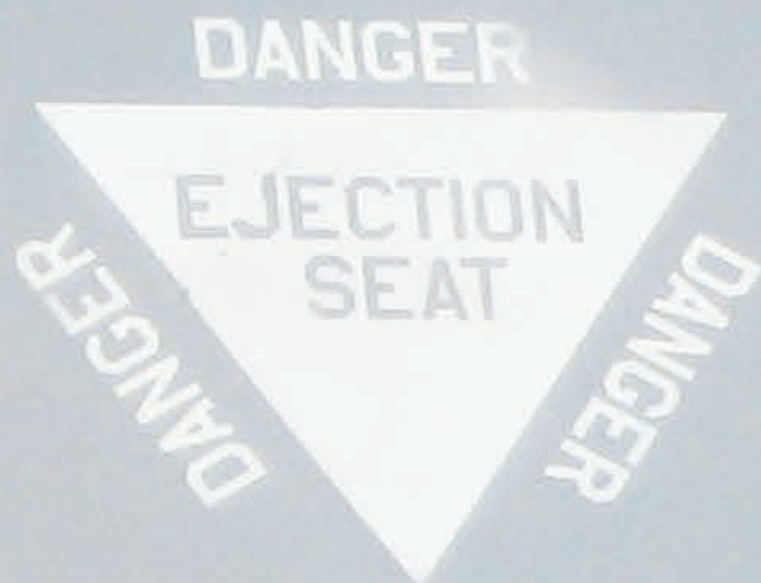
ACC expects your commitment to "Compliance" in order to keep yourself safe and get our mission accomplished. Compliance is the most effective way individual Airmen can reduce risk in our hazardous business. "Failures to Comply" do not belong in the business of defending our nation.

~ Col Kleiger



Col Anthony A. Kleiger
Director of Safety

TRUST, BUT VERIFY



ANONYMOUS

Aircraft maintenance is a multi-faceted job. In addition to restoring a component that *did* work, and ensuring that other components *do* work, we also must check to make sure that still other components *will* work. As part the 36-month inspection of the ACES II ejection-seat, we perform pull-checks on the seats' handles to ensure the force needed to initiate the explosive is within limits. One of these tests is for the backup manual-parachute-deployment handle. In the event of an ejection, if the primary mortar cartridge for the pilot's recovery parachute does not fire, the pilot would manually pull the backup parachute handle, located on the side of the ejection seat. This would fire the emergency power supply mechanically, which would send an electric signal to initiate the secondary mortar cartridge, and deploy the pilot's parachute. Proper completion of this task requires that the emergency power supply and recovery parachute not be installed, for obvious reasons.

One night, Airman Snuffy was doing his pull checks, as he had done many times before. Both he and his counterpart were qualified to perform this routine task, and neither had any concerns about it. They needed to ensure the required force did not exceed 45 pounds, in accordance with the technical data. They hooked up the force gauge to the manual parachute handle, pulled away, and BOOM! The emergency power supply pin was pulled, and the backup mortar cartridge was initiated to deploy the parachute. Luckily, the parachute was not installed at the time, and neither of the Airmen was hurt. Except for the loud noise from the cartridge, nothing serious took place. They couldn't believe what had happened, since it was such a simple task. Neither of them had been aware that the emergency power supply had not been removed.

The situation came down to this: The two airmen did not follow the technical data step-by-step. More importantly, they had become complacent. Each person had assumed the other had completed the task. Fatigue also had played a role in the incident, because it had occurred on midshift. This is why the Demand-Response concept is vital to any egress-explosive operation. *Demand* refers to the person reading the tech data, and *Response* refers to the person performing the maintenance. Working in this way eliminates the possibility of leaving any task incomplete.

There is a saying: "Trust, but verify." I have heard it many times while I have been in the Air Force, and I try to do exactly that when performing explosive maintenance. There have been countless situations in which I have put my trust in someone else's work, only to go back to verify it and find something to be incorrect.

When working with explosives, it is important always to follow the tech data, and never to become complacent or too comfortable. I remember working on live explosives for the

first time, and how I exercised extreme caution while performing explosive operations. I always double-checked each step before completing the next, making sure everything was done properly. I

believe this is the mentality that everyone should have at all times when working with munitions.

With experience, you will become more confident about working with explosives; however,

don't let confidence lead to complacency. The moment you become complacent, the likelihood of an explosive mishap occurring increases. Remember always to check your work, and

never to assume that the previous tasks have been completed. By doing so, you could save a life – even your own. ✈️



Photo by A1C Patrick S. Ciccarone



SPLIT-SECOND DECISION

ON RUNWAY 31

BY TSGT JERMIE HUNT

The day began like any other: hot, and deployed in a far-off region of the world. The air-conditioning carts already were pumping cold air into the cabin of the E-3, as the crew prepared for another sortie of twenty hours or more – this time, for radar detection and to secure assets on the ground. Once the maintainers released the aircraft, the crew taxied to the runway for takeoff. The engines reached maximum power, and the jet screamed down the pavement. As the aircraft neared V1 (the speed at which the pilot has to decide to stay on the ground or get airborne), the readout of the fuel quantity totalizer jumped by twenty-five thousand pounds. In that instant, the crew had to make a decision that could mean the difference between life and death. Which would it be: jump on the brakes and stop, or fly the aircraft?

The entire E-3 fleet had gone through Depot years earlier, and had received upgrades to its mission systems and fuel displays. One of the upgrades was the replacement of the older, analog fuel gauge with the new Fuel Quantity Indicator System (FQIS). The FQIS was new technology, providing instant readouts with a digital display.

Back to our story. A few nights earlier, the same E-3 had landed successfully after a long mission, and received post-flight maintenance check and refueling for the next sortie. During refueling, the jet took on quite a bit more fuel than was expected. An entire truckload of fuel was emptied into the aircraft without registering on the FQIS, but this went unnoticed by the maintainers. The standard fuel load was 120 thousand pounds, and generally required two trucks. This time, it took three.

The maintainers had thought it was unusual for a refueling to take three full trucks, but they continued to prep the jet for the next flight. Although the FQIS didn't indicate a problem with the total amount of fuel,

something seemed off. Before takeoff on the day of the flight, the FQIS indicated to the crew a *bit light*, meaning a potential fault; however, bit lights were common, and the usual practice had become “reset and go.” The maintainers reset the light, the crew accepted it, and the E-3 rolled towards Runway 31 to begin the mission.

As the aircraft started down the runway, the bit light for the center wing tank flashed on again. At the same time, the reading on the totalizer had increased from 120k to 145k, a leap of twenty-five thousand pounds! The crew had very little time to diagnose the situation and put a plan into action. As the aircraft approached V1, the crew unanimously decided it would be better to take off than to try to bring the 350-thousand-pound aircraft to an abrupt halt. The pilot pushed the throttles to maximum, and, with very little runway left, the aircraft lifted off the ground. Once airborne, the crew immediately flew to a safe zone to dump fuel, and then landed the aircraft back onto Runway 31.



Photo by SrA Brian J. Ellis



Photo by MSgt Scott T. Sturkol

The crew had handled the situation and averted a disaster; however, as with many mishaps, there had been warnings that, if heeded, could have prevented the problem. First, the maintainers should have raised their concerns about the need for an extra fuel truck. If they had followed the technical orders, and had multiplied the amount of fuel serviced from the trucks by the weight, they would have realized the aircraft was overfilled. Instead, they had relied on the reading of a gauge that proved to be faulty.

Next, maintainers had fallen into the habit of ignoring frequent bit-lights because of their history of giving false warnings. They

should have checked the issue thoroughly, and made sure there indeed was no discrepancy. Instead, the specialist disregarded the light as a common occurrence, and gave the go-ahead to fly. Was it fatigue, or loss of focus, or complacency that had caused them to overlook the warnings? Whatever the reason, it was quick thinking by the aircrew that had prevented a disaster – and saved the lives of 25 personnel aboard the aircraft.

Following the mishap, the entire fleet implemented new mitigation efforts concerning the FQIS. After each refueling, we made sure the amount of fuel shown to be in the tanks matched exactly with the amount serviced from the trucks.

We also double-checked by using drip-sticks in the tanks to ensure calculations were correct. Finally, maintainers continuously checked and replaced probes that falsely illuminated bit lights.

When you are in a rhythm, and everything repeatedly works as it should, it's easy to become complacent in your work, and settle into a pattern of using shortcuts and ignoring signals that most likely will lead to a mishap. If you do it right the first time, and continually follow the guidance set forth, the probability of something going wrong is drastically diminished. Always stay focused, and abide by the rules. ✖



ANOTHER DAY

in a 60-Year-Old Jet

BY LT COL ANDREW MAUS

On 10 September 2020, I was scheduled to fly a routine CT sortie in an OC-135B Open Skies aircraft out of Offutt AFB. The crew consisted of three pilots (including myself), a navigator, and seven sensor maintenance technicians (SMT). SMTs are career enlisted aviators who maintain the aircraft's suite of optical cameras. Our training profile included air refueling, a simulated observation leg, and pattern-work back at Offutt. This was to have been a routine flight; however, it proved to be anything but that. We were faced with a partial hydraulic failure, a problem that would require the entire crew to work together in order to get home safely.





Photo by Charles J. Haymond

The preflight, departure, and climb to cruise altitude that morning had been uneventful - at least as uneventful as is possible in an aircraft that was built six decades ago. The situation changed after leveling off in the sunny blue skies above the clouds. I noticed the hydraulic fluid quantity in the left system appeared to be low, showing only about two-and-a-half gallons instead of four to five. There were no other indications of trouble. The system pressure was normal, there was no indication of hydraulic pump failure, the quantity did not appear to be decreasing further, and a visual scan of the wings by the SMTs proved negative. The hydraulic quantity gauges in our museum-piece-of-an-aircraft were not the most reliable, and false low-quantity readings routinely were chalked up to "air in the system" or "super-cooled hydraulic fluid."

We suspected a leak, and took appropriate action according to the aircraft's Technical Order (TO). We immediately depressurized, then momentarily re-pressurized the left hydraulic system. Upon re-pressurizing, neither of the warning lights that would indicate a leak in the engine-driven hydraulic pumps was illuminated. Also, fluid quantity was still holding steady.

Based on guidance in the TO, the crew elected to continue with the left hydraulic system depressurized and shorten the mission to accomplish only critical training requirements.

The rendezvous with the tanker went as planned. We re-pressurized the left hydraulic system and affected a brief but successful contact. While backing away from the tanker, I noticed the No. 1 hydraulic pump light had begun to flash, and the gauge indicated only one gallon.

Both the boom operator in the tanker and our SMTs were able to confirm the visual presence of hydraulic fluid on the left wing. With a leak now confirmed and the system once again depressurized, we headed home and again consulted the TO. From that point, getting home safely would require our working together to recover the aircraft safely.

Our next task was to isolate the affected engine-driven hydraulic pump. In the OC-135B, this

process involves opening two circuit breakers, pulling the engine fire switch (yep, you read that correctly), opening another circuit breaker, resetting the engine fire switch, then closing the first two circuit breakers. We accomplished this en route to home field, triple-checking each circuit-breaker to ensure we wouldn't inadvertently shut down an engine, and thus compound our emergency.

Once back over the airfield and established in a holding-pattern, we needed to lower the landing gear. There was a small chance that residual pressure in the system would be enough to get the gear down. We pressurized the system and gave it a shot, with no luck. With no remaining hydraulic power in the system, we had to extend the gear manually. This process requires three concurrent actions to be accomplished in three separate locations: 1) open the landing-gear doors; 2) unlock the gear and allow it to fall; and 3) lock the gear in place.

One final detail remained: landing. We did not have anti-skid braking protection to prevent

blown tires, and therefore had to rely only on the reserve braking system. The reserve pressure only allowed for three applications of the brakes. Of course, it was still 300 overcast and raining. We used the time in holding to carefully review the procedure in the TO for Landing Without Normal Hydraulic System Pressure. With our ducks in a row, and with emergency crews waiting (just in case), we departed the fix, shot the ILS and broke out just above minimums. Landing was uneventful and we brought the aircraft to a complete stop with 3,500 feet remaining. Safely back on Mother Earth, we were thankful to shut her down and wait for maintenance to tow us back to the ramp.

The key to our success on that mission was effective Crew Resource Management (CRM). As our fleet of aircraft continues to age, operating them safely becomes more challenging. On that day in September, our crew had to work through multiple, complex procedures. One misstep could have resulted in the inadvertent shutdown of an engine in flight or the inability

to extend the landing gear, either of which would have put a safe recovery in serious jeopardy. In the end, our ability to communicate, coordinate, and manage tasks effectively—all core tenets of CRM—allowed us to get home in once piece. ✈️

The USAF maintains and operates 2x OC-135B aircraft with aircrew from the 45 Reconnaissance Squadron at Offutt AFB, NE. The aircrew, along with members from the Defense Threat Reduction Agency, conduct aerial observation missions over Russia and other participating parties of The Treaty on Open Skies. The two aircraft were modified in 1996 from existing WC-135B inventory. Major modifications include the installation of four cameras in the rear of the aircraft, along with equipment to maintain and transport up to 40,000 feet of wet film imagery.



Photo by A1C Perry Aston



Photo by Josh Plueger

Doing Ordinary Things Extraordinarily Well

From The **EDITOR**

The office of *The Combat Edge* publishes articles that contain safety lessons or messages, usually on a single topic such as complacency, situational awareness, or following Technical Orders. A typical article often focuses on a mishap (or near-miss), its causes, and recommendations for how to prevent its recurrence. Some mishaps can seem dramatic when written as a story, and the actions of the Airmen can appear to be heroic. This makes for entertaining reading, and we hope it helps to communicate the message. While it is good to celebrate heroism, I am certain that, if asked about their accomplishments, all Airmen would reply that they were just doing their jobs. The following story is an example of this mindset - an Airman “doing ordinary things, extraordinarily well.” The message in the story is this: never underestimate the importance of your actions. Excellence doesn’t have to be heroic; it just has to be your best.

Richard E. Cook, Editor



BY MSGT JOSE A. CALDERON III



When an F-16 aircraft crash-landed at Shaw AFB, SC in the summer of 2020, TSgt Eric Holcomb did not hesitate to respond to the disaster. TSgt Holcomb gathered a five-member response crew that was charged with collecting and preserving Aircraft documents, tools, and equipment. With chaos all around, TSgt Holcomb safely and efficiently coordinated with multiple agencies to collect and preserve all of the aircraft’s historical data, including all forms and log books, as well as electronic documentation systems. He also ensured the proper impoundment of seven tool boxes, as well as five important pieces of equipment that previously had been used to perform maintenance on the aircraft. TSgt Holcomb’s expedient efforts in the preservation of equipment and information allowed the Safety Investigation Board (SIB) to begin operations in under 12 hours.

Time and again, TSgt Holcomb has proven his skills in identifying unsafe conditions. Once, while performing an inspection on the engine of an F110-GE-129B, he discovered 12 cap-screws were missing from a forward support assembly. His vigilance and action prevented the frame from detaching from its support assembly, and thereby prevented the destruction of a portion of the aircraft. TSgt Holcomb also identified the improper installation on different aircraft of several components, including a tension strut wire harness clamp, a landing gear actuator jam nut, and a T4B fuel line. His keen eye for safety and superior maintenance knowledge prevented combined losses of 125 million dollars’ worth of Air Force assets. TSgt Holcomb’s continued dedication to Flight Line Safety ensures the 20th Fighter Wing always will be ready to meet the Air Force mission to “fly, fight, and win in air, space and cyberspace.”



Personal Weapons Storage

BY SSGT KINTREY GATES-TAYLOR

Weapons and Explosives safety is an essential aspect of operations in any Security Forces unit across the Air Force. As a member of the unit at Beale AFB, my responsibilities include maintaining explosive licenses for the Armory and the Installation's Combat Arms training complex. Daily operations involve issuing 1.4 to 1.2.2 class explosives (such as hand grenades and rifle cartridges) for use in a wide variety of missions, including Protection Level-1 security, flight-line operations, and law enforcement. To ensure proper equipment functionality and use, I take inventories frequently, and conduct inspections during issue and turn-in. I also oversee the appropriate separation of munitions from all accumulated hazardous waste, as an additional safety measure, and to ensure that environmental compliance requirements are met.

Recently, I was able to develop a long-term solution to two significant problems faced by the Weapons and Explosive Safety program. First, the Wing Weapon's Safety Manager had

observed that the original storage system used for the 40MM High Explosive Rounds was not up to Air Force standards. The system did not allow for the rapid deployment of munitions during duty, and the additional time spent re-securing the cartridges after turn-in meant increased man-hours within the armory. After researching different ammunition cans and sizes, I worked with the Munitions Squadron, the Wing safety office, and the Logistics Readiness Squadron. Together, we developed a low-cost option that was compliant with Defense Explosive Safety Regulations, and addressed our mission requirements.

The second issue had to do with creating effective policies and procedures for the storage of personal weapons. On one occasion, a First Sergeant contacted me about the possibility of securing an Airman's firearms for safe keeping. Before I had taken over Armory responsibilities, the requirements related to firearms storage were unclear and outdated. After reviewing our policies, I realized there was a serious need for safe storage procedures

involving the firearms of Airmen who were dealing with difficult personal situations, and who possibly could pose a hazard to themselves or others. The earlier process had created unwanted long-term storage, mainly because of problems in determining who owned the firearm *versus* who was responsible for it. I created templates for all the required documents, along with a Memorandum For Record (MFR) for the First Sergeant and Commanders. The MFR recorded the name of the person who turned in the weapon, and the name of the owner. I explained how to fill out all the forms in order that the owners would be able to retrieve the items upon coordination and approval from their unit leadership.

Just a short time later, a reserve Commander contacted me with the same concerns involving three additional First Sergeants. In total I stored eleven personal firearms and \$3,200 in ammunition for Beale AFB Airmen. All the members sought professional help, and voluntarily stored their weapons in the Armory. As a human being and an Airman, I am proud to offer my support to them. 🇺🇸

“As a human being and an Airman, I am proud to offer my support to them”





PASS



EFFECTIVE



BY CAPT STEVEN “THUD” METZGER

On a hot July day in North Carolina, I (an F-15E Student Pilot) was flying with Capt Macomber (Instructor Pilot) to recover an F-15E Strike Eagle (call sign Crispy 32) to Seymour Johnson AFB. As part of the 333rd FS Jousty Lancers, the mission of the squadron is to train the next generation of combat-ready Strike Eagle pilots and Weapons Systems Officers (WSO). This particular flight was my third as a pilot in the F-15E. The objective of the sortie was to demonstrate proficiency in emergency pattern and procedures, in order for me to be cleared to fly with a student WSO on my next sortie.

After lowering the landing gear in the traffic pattern, my aircraft experienced a Jet Fuel Starter (JFS) Low caution light. While there is no specific emergency checklist for this indication, it is abnormal under most conditions. The caution indicates the jet doesn't know how much hydraulic fluid/pressure is left in the

accumulator bottles – necessary in the event emergency braking is required. The indication normally occurs after using the JFS to start the engines, lowering the gear via emergency means, or using emergency braking/steering. I executed a break-out from the traffic pattern to de-conflict from other aircraft traffic, while Captain Macomber began to review the checklist.

During the breakout maneuver, the aircraft displayed additional warning indications a utility hydraulic system Alpha (UTL A) failure, as well as a left-inlet caution. This emergency results from lowering the landing gear via the emergency gear handle, but in this case we had elected to leave the gear down from the first indication of trouble, in anticipation of possible follow-on emergencies. A utility hydraulic failure also results in a loss of braking capability, in which the checklist directs to catch the approach-end arresting gear cable with the tail hook in order

to stop the aircraft. We declared an emergency with air traffic control, coordinated for a battle-damage check from our flight lead (Crispy 31), and ran three emergency checklists with my instructor pilot. We extended the tail hook in anticipation of the cable engagement, and cleared off Crispy 31.

Five minutes after the UTL A indication, the jet displayed a utility hydraulic system Bravo (UTL B) caution, indicating a pending total utility hydraulic system failure. This is one of three tech-order-directed land-as-soon-as-possible emergencies in the F-15E. This produces the same results as a UTL A failure, with the additional losses of the emergency generator and gun. These indications, in addition to the JFS low caution, could mean there would be no emergency braking available in the event we missed the approach-end cable. After quickly coordinating with my IP, we decided to turn immediately to a 10-mile straight-

in approach for runway 26, while communicating the escalating compound emergency to the supervisor of flying (SOF).

While on a five-mile final approach to land, our utility hydraulic pressure depleted to 0 psi, indicating that the jet indeed had lost all utility hydraulic fluid. If we missed the cable, we would have to use emergency braking, which might be not available with the JFS Low caution. Now on three-mile final, the jet was starting to exhibit additional indications of pitch-ratio and roll-ratio failure of the flight-control system, causing it to oscillate and become difficult to control. I had to compensate continuously for the induced climb of the aircraft by applying forward stick pressure, while moving the pitch and roll ratio switches to an emergency position, which I hoped would alleviate the oscillation. Continuing the approach, we made a successful approach-end cable arrestment, bringing the jet to a stop.

After landing, shutting down the engines, and coordinating with emergency services, we recognized pooling hydraulic fluid below the left main landing gear. 333rd Maintenance personnel discovered that a JFS accumulator bottle had exploded in flight, causing a compound hydraulic failure of both utility hydraulic systems and subsequent failure of the control stick boost pitch compensator (Power steering for airplanes). The decision to keep the landing gear down after the first abnormal indication allowed for a quicker response to the other malfunctions, since we already were in a landing configuration. Additionally, we may not have been able to get the gear down if we had brought it up, since the JFS accumulator bottle had exploded. This could have created a situation in which we would have had to eject.

Despite the relative inexperience in the front cockpit (me), we still were able to handle a multitude of compounding, time-sensitive,

critical aircraft system failures, enabling the safe recovery of a \$64M combat asset. I realized the importance of preparation in chair-flying different emergency scenarios, practicing effective crew coordination, and maintaining a calm cockpit.

Looking back on it, the sortie had many characteristics of an emergency procedure simulator, in which your instructor throws many different emergencies at you, including some that very rarely are experienced. The quick but deliberate action by all involved had resulted in a safe and uneventful recovery. After landing, my PI leaned over, and said:

“Well, we’re alive. I guess you demonstrated proficiency in emergency procedures.”

4th Quarter FY20 Awards



Aircrew Safety
Crew of COBRA 43
45 RS/SE, 55 WG
Offutt AFB, NE



Crew Chief Safety
TSgt Tyler Kurtz
367 FS/MXGQ
Homestead ARB, FL



Explosives Safety
SSgt Kintrey Gates-Taylor
9 SFS, 9 RW
Beale AFB, CA



Flight Safety
Capt Andrew Garrett
23 WG/SE
Moody AFB, GA



Flight Line Safety
TSgt Eric Holcomb
20 MXG, 20 FW
Shaw AFB, SC



Pilot Safety
Capt Steven Metzger
333 FS, 4 FW
Seymour Johnson AFB, NC



Safety Career Professional
TSgt Michael MacLeod
85 EIS/SE, 688 CCW
Keesler AFB, MS



Unit Safety Representative
TSgt Matthew Ballard
4 OSS, 4 FW
Seymour Johnson AFB, NC



Unit Safety
Det 4, 2nd WS
557 WW
Holloman AFB, NM



Weapons Safety
Armory/Combat Arms Team
20 SFS, 20 FW
Shaw AFB, SC



Congratulations

ACC Annual Safety Awards – FY20 Winners

ACC Outstanding Airmanship Award*

Capt Taylor J. Bye
23rd Fighter Group
Moody AFB, GA

ACC Safety Special Achievement Award*

Lightning Aircraft Maintenance Unit
57th Aircraft Maintenance Squadron
Nellis AFB, NV

ACC Safety Senior Noncommissioned Officer of the Year Award*

MSgt Jason Bowers
4th Fighter Wing Safety Office
Seymour Johnson AFB, NC

ACC Outstanding Achievement Award for Weapons Safety*

MSgt Ricardo Perez
Weapons Safety Office
Eglin AFB, FL

ACC Outstanding Achievement Award for Occupational Safety – Category II*

20th Fighter Wing Safety Office
Shaw AFB, SC

ACC Outstanding Aircrew Award*

Capt Andrew Svecz
336th Fighter Squadron
Seymour Johnson AFB, NC

ACC Outstanding Aircrew Award*

1st Lt Attila Zsigmond
336th Fighter Squadron
Seymour Johnson AFB, NC

ACC Aviation Maintenance Safety Award*

5th Reconnaissance Squadron
Beale AFB, CA

ACC Commander's Award for Safety

16th Air Force Safety Office
JB San Antonio-Lackland, TX

ACC Wing Safety Program of the Year Award

9th Reconnaissance Wing Safety Office
Beale AFB, CA

ACC Wing Chief of Safety of the Year Award

Lt Col Richard J. Couture
432nd Wing Safety Office
Creech AFB, NV

ACC Crew Chief Safety Outstanding Achievement Award

SSgt Hunter L. Hale
432nd Aircraft Maintenance Squadron
Creech AFB, NV

ACC Safety Officer of the Year Award*

Capt Hunter Hayes
75th Fighter Squadron Safety office
Moody AFB, GA

ACC Flight Safety Officer of the Year Award

Capt Brandon S. Holloway
461st Air Control Wing Safety Office
Robins AFB, GA

ACC Flight Safety Noncommissioned Officer of the Year Award

MSgt John L. Poe
16th Air Force Safety Office
JB San Antonio-Lackland, TX

ACC Safety Noncommissioned Officer of the year Award*

SSgt Dominic Recella
20th Fighter Wing Safety Office
Shaw AFB, SC

ACC Flight Line Safety Outstanding Achievement Award

TSgt James M. Buko
367th Fighter Squadron
Homestead AFB, FL

ACC Occupational Safety Special Achievement Award

SSgt Zhaviyon M. Jester
355th Wing Safety Office
Davis-Monthan AFB, AZ

ACC Occupational Unit Safety Representative of the Year Award

SSgt Devin A. Murray
691st Cyberspace Operations Squadron
Ramstein AB, Germany

ACC Safety Civilian Professional of the Year Award*

Mr. Peter H. Falkenhausen
23rd Wing Safety Office
Moody AFB, GA

* These winners also represented ACC at the Air Force-level safety awards competition.

Mishap Statistics Scoreboard

FY21 Flight

Thru 31 Dec 2021

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

FY21 Occupational

Thru 31 Dec 2021

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

FY21 Weapons

Thru 31 Dec 2021

	Class A	Class B
ACC	0	0

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)

* Fatality ** Non-rate producing *** Performing SOUTHCOM mission

Symbols for Mishap Aircraft



Flight Notes

ACC Flight Safety investigated 3 aviation Class A mishaps this quarter. Unfortunately, one accident resulted in the death of an Airman. These mishaps occurred both during flight and on the ground, with little similarity. Still, let this serve as a constant reminder that attention to detail and ensuring we follow Technical Orders (T.O.s) are solid platforms from where to start. The ACC family needs each mission to end with its members safely returning to their families.

Occupational Notes

The first quarter of Fiscal Year 2021 yielded three fatal mishaps involving Air Combat Command Airmen. Two fatal mishaps involved motorcycles, while the third was a four-wheeled vehicle mishap in which two Airmen were killed. All three mishaps are still under investigation.

As we approach spring, we must continue to utilize sound risk-management while operating motor vehicles.

Motorcycle riders: Is your training up-to-date? If you are a new rider, have you completed all of the prerequisite training and briefings prior to riding? For both new and experienced riders, has your information been correctly updated in the Motorcycle Unit Safety Tracking Tool (MUSTT)? If you are unsure, please contact your unit's Motorcycle Safety Representative!

Four-wheeled vehicle operators: Is your vehicle prepared for the journey? Are your windshield wipers adequate for the rainy spring season? Are your tires serviceable? Don't set yourself up for failure by neglecting routine maintenance on your vehicle!

Weapons Notes

During the first quarter of FY21, ACC experienced one Class D and seven Class E mishaps. Five of the eight mishaps, including the Class D, involved damaged munitions, either discovered during inspection or caused by mishandling. One mishap involved expending aircraft impulse cartridges due to not following technical data during a functional check. The last two mishaps were negligent small-arms discharges. One was a discharge into a clearing barrel, and the other was fired inside the Airman's deployed sleeping quarters while cleaning the weapon. Luckily, no injuries resulted from these incidents. ACC has seen an uptick in small-arms related mishaps. In order to decrease this pattern, we must not become complacent when handling firearms, but instead think about basic safety practices. Complacency when handling small-arms is a recipe for disaster.



Ho'olu'olu
(Complacency)

Almost Killed Me

HOW MUCH ARE YOU DRINKING?

WHAT'S IN A STANDARD DRINK?



Each of the drinks above is a "standard drink."
Because beer, wine and liquor all have different amounts of
alcohol in them, standard drinks come in various sizes.

**OWN YOUR
LIMITS**

SERVE HONORABLY. DRINK RESPONSIBLY.
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**OVER the
Edge**
MAGAZINE

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**SHARE
YOUR
STORY**

Everyone has a safety story to tell – including **YOU!** Share your tale in The Combat Edge. Who knows? – The lesson you learned may save someone's life. No matter how long ago it took place, no matter what happened, no matter how small you think it was, we want to hear about it. We're interested in non-military matters, too: safety around the house or on the highway, something that happened while on vacation – every story contains a valuable lesson.

Send your story to: thecombatedge@us.af.mil, and be sure to include your name, rank, unit, base, phone number, and email address. For more information, please contact Richard Cook, editor (richard.cook.38@us.af.mil). Now ... start writing!



LIFE CAN CHANGE IN A FLASH

BY TSGT JACK TUCKER

When I was growing up, I really never understood how valuable life was until the summer of 1987. It was then that I had my first brush with death, a terrifying experience I pray I never again have to endure.

As a 14 year-old fueled by adrenaline, I was venturing out on my own more often than when I was younger. I had become an adolescent thrill-junkie. I enjoyed the rush I got from activities like exploring caves, horseback-riding, dirt-biking, cliff-diving and skateboarding. I often carried a small

AM/FM radio with me, and, if I tuned it just right, I could pick up stations on the other side of the Cahaba River, one of the biggest rivers in Alabama.

The river was showing the impact of a drought that had lasted for weeks. The forecast had predicted a scorching summer in Alabama, and by June the temperature was unbearable. The radio announcer complained about the lack of rain. The drought was so severe that the city had imposed restrictions on water usage.

During the summers in Alabama, I always managed to stay busy. Next to the thrill of high-risk activities and ultimate sports, one of my favorite

pastimes was fishing off the banks of Bishop Creek, which was created by the Cahaba River. Rumors had surfaced of alligators farther down the creek, but, being the fearless optimist that I was, I dismissed those stories as hearsay. Besides, nothing was going to stop me from riding my dirt bike down the best compacted red dirt road in the county to my favorite fishing spot. Bishop Creek was my place of solitude, my oasis. I couldn't imagine staying away just because there was talk about a few small alligators. I was determined to enjoy my afternoon of swimming and fishing - no matter what.



For the most part, my friend Toby and I always fished in the same spot. Located on top of enormous rocks about 12 feet from the water, it was the perfect location to climb, fish and swing from a rope that would take us half way across the creek. Each rock was the size of a Volkswagen, and very slick after rain. We spent a good portion of our summer afternoons on those rocks. The trees grew over them, providing a natural ceiling that shielded us from the sun. The canopy was so thick that we often couldn't tell if it was raining or not.

One afternoon, Toby and I grabbed our fishing poles, and headed down the hillside to the creek. When we reached the rocks, we noticed the water level was very low. This was unusual, especially since it finally had rained a couple of days earlier. There was not enough water for swimming or swinging from the rope, and the fish were all gone. Then, I remembered a soda commercial in which people slid down wet rocks into a river bed. The

low water-level revealed several rocks covered with wet moss. We decided to go farther downstream and explore the creek bed. After about ten minutes of sliding down the rocks as we went, the creek seemed to be getting deeper. After several attempts, I had learned to gain speed on bigger rocks, and was heading into deeper water that seemed to have appeared out of nowhere. We had found the perfect spot for a new activity that would get us through the rest of the day.

Climbing back to the top for a second turn down the rockslide, I took two quick steps, and off I went. No sooner had I hit the rocks than a gushing wave of cold, muddy water covered me completely. At first, I thought this was going to be the best part of the day, but then I heard the loud crashing of waves and lightning. I realized that this was not a safe situation. I had been swept away. After traveling downstream about 100 yards, I knew I had no control over the current. I could not slow down, no matter what I tried. The water-level had become frighteningly high. The creek had risen from about three feet to nearly ten feet. I was cut and bruised

as I was swept farther downstream. I grabbed the top of a rock that was protruding out of the water, and held on for dear life. Suddenly, a surge of water rushed over me, bringing with it uprooted trees and other debris. The water tasted muddy, and I was struck in the head by glass bottles carried by the rapids. I couldn't hold on any longer and unwillingly let go of the rock that was keeping me above water.

The current had me in its clutches, and I could feel Mother Nature's wrath, as her awesome power swept me away like a twig in an angry torrent of chaos and fear. While fighting the current and trying to keep my airway above water, I could just see my friend Toby. He seemed to be a mile away. I sped down the creek, which had now become a violent river. I was in a flash flood and wasn't sure if I'd make it out. How did all this happen in just 10 minutes?

I remember thinking that I needed not to panic. My survival depended on my quick thinking. As I navigated through the flood, I tried not to fight the current, so as not to tire myself. My main concern was to stay on my back in order to keep my head above water. Toby had finally caught up to me, and was trying to reach for me with a tree limb, but I was too far from shore. I remember seeing the helpless look on his face as I went under the water again. As I surfaced, I felt lightheaded and thought perhaps I had sustained a concussion from the bottle that had struck me in the head.

Continuing to twist like a corkscrew, I grabbed onto another large rock. This time, I saw that I was much closer to the shore. As soon as I realized where I was and where I needed to be, I made a break for it. Somehow the current forced me ashore, and I quickly continued to roll to the side of the riverbank. I got up, ran a few more steps up the rocks, and collapsed. I had just cheated death and was thankful to be alive.

I knew at that moment that the Cahaba River Dam had overflowed, and what I had just experienced could have been prevented if I had remembered that the river fed the creek. I should have headed home when the storms moved in. It later was reported that the river had caused major flooding in several locations of the county.

Since that near-fatal day during the summer of '87, I've always been extremely cautious of flashfloods. It was amazing to witness firsthand how surprisingly fast they can develop. Looking back, I realize that all the clues to preventing myself from becoming a victim that day had been present, but I had chosen to ignore them. The shrubbery had prevented me from being able to see the clouds rolling in overhead. The river had claimed several lives in the past, but I did not consider the deadliness of the risk. I had chosen to ignore the weather alerts that were broadcast on the radio. Since that day, I have learned always to be aware of my surroundings and to anticipate potential risks in all that I do. I hope never again to experience an event like I did that Saturday afternoon during the summer of '87. 🌩️

Ho'olu'olu

(Complacency)

Almost Killed Me

BY LYNN MADISON

When most people think of Hawaii, they may think of *luaus*, fun in the sun, *hula* dancers and swimming in calm, blue oceans near beautiful beaches. When I think of Hawaii, I remember the time I almost didn't make it home after a day of swimming at one of those beautiful beaches. I certainly learned valuable lessons that day.

Having lived on Oahu for more than twenty-five years, I was accustomed to a world of island beauty. My weekend days were characteristic of island life, usually involving beach activities like swimming, body surfing, or outrigger-canoeing. One day, a friend and I decided to spend the morning swimming at a beach on the north side of the island. This beach was known for dangerous undertows, but I had swum at this beach many times before without any problems, and wasn't concerned. We arrived early that morning and, luckily for us, we were the only ones there! No tourists! Best day ever! Signs were posted along the beach that warned of possible changing conditions such as choppy seas, strong currents, and fast-breaking waves, but we paid no attention to them.

With the beach all to ourselves, we waded into the water, and waited for the right wave to start body surfing. The currents were strong, and I remember

thinking at the time that I shouldn't venture out too far, because the swim back to shore could be challenging. We swam for about an hour or so, took a break on shore and then I decided to go back in for a quick swim. I remember the waves were choppy than before, and the current had grown stronger. I had been a lifeguard for several years, and had swum competitively in high school and college. I believed myself to be a strong swimmer. I ignored the little voice screaming in my head, warning me to go back to shore.

As I swam parallel to the beach, I could feel myself being pulled away from the shore. Nevertheless, I continued to swim. After about ten minutes, I started to make my way back to shore, when a large wave suddenly crashed into me, pushing me under. I could feel the undertow pulling me farther below the water's surface, and I was spinning in all directions. I remembered my training. To escape an undertow, it's important to remain calm, and never swim straight towards the shore or backward towards the open ocean. Instead, swim parallel to the shore in order to escape the current. Stop going in the direction that the current is pulling you. That was a problem for me, as I was being tossed around so much while under water that I couldn't tell which way was up. I remember thinking: "This might be it - my big exit."

I wondered if my friend had seen what was going on, and if she had gone for help. We were the only people on the beach that morning.

As I tried to figure out how to escape the undertow, I was hit by a large object. I was knocked to the surface, and out of the undertow. Whatever had hit me was big and powerful. It really hurt, and I thought my ribs were broken. I looked around to see what hit me. Honestly, I was looking for fins. I had been swept far from shore. I had some serious pain on the side where I had been hit. Many thoughts rushed through my mind. Was I hit by a shark? Will it come back? Am I bleeding? I started to panic.

At that moment, I heard my friend calling me from the beach. I focused on my friend's voice, and started to make my way back toward the beach. I was scared and exhausted, and I had a hard time swimming back to shore. Pain and fear had sapped my mental and physical strength. My friend swam out to help me. As I got back onto the beach, I turned around and looked out at the ocean in time to see a large *honu* (Hawaiian green sea turtle) pop out of a large wave. It looked around as if startled for a minute, and then went back under and swam away. I had never seen anything so beautiful, and had never been so thankful.

Looking back on that day, so many years ago, I see that I failed to assess the risks. There were many lessons to be learned from that terrifying, near-death experience. First, my friend and I had been the only people on the beach that morning, with no one to help when things went wrong. (The cell-phone signal was weak and intermittent at our location.) Second, complacency had caused me to overlook the dangers of swimming at a beach that was known for having dangerous undertows. Third, I had ignored posted signs warning of changing ocean currents, choppy seas, and strong breaking waves. I had done what many young people do: I had ignored the warnings. I had thought: "I got away with it before, why shouldn't I again?" And what about that internal alarm that I completely disregarded? I had dismissed that nagging voice that was screaming at me, warning me that it wasn't a good idea to go swimming in rough ocean conditions. I had known better, but I had ignored the warnings and took the risks anyway. It almost cost me my life. If it hadn't been for the *honu* (sea turtle), *ho'olu'olu* (complacency) surely would have killed me. 🐢



THE DINNER That Changed My Life

BY TSGT MICHAEL MACLEOD

My PT test was over. I had been training for it (and stressing about it) for some time, and I had just completed it. As I lay there, looking up at the Hawaiian sky and enjoying a moment of combined pride and relief, I thought to myself: “what I am going to do for food tonight?” I had been celebrating the completion of my PT test by having great meals and snacks all day. I was putting the finishing touch on the day by deciding what to have for dinner. Just before quitting time, a friend invited me to a new burger place. That evening, I got on my motorcycle and headed over to his house. We rode together to dinner in downtown Honolulu, enjoying the sites and the beautiful weather. We arrived at the restaurant, where I was treated to the best burger I had ever had. It was the perfect ending to an excellent day.

After some great conversation and food, we headed back out. We got to our motorcycles, put on all of our personal protective equipment (PPE) and started home. Instead of taking the highway, we decided to take the scenic route through downtown. On an eight-lane stretch of road, we came around a long, blind curve. As we rounded a corner, a car pulled out of a driveway into my lane. There was a Chevy Suburban on my right, and a curb with a fire hydrant on my left. I had no way out. I braced myself, and struck the front fender of the car on the passenger side. I was thrown from my motorcycle, and went over the hood of the car. I landed on the pavement and rolled a few times.

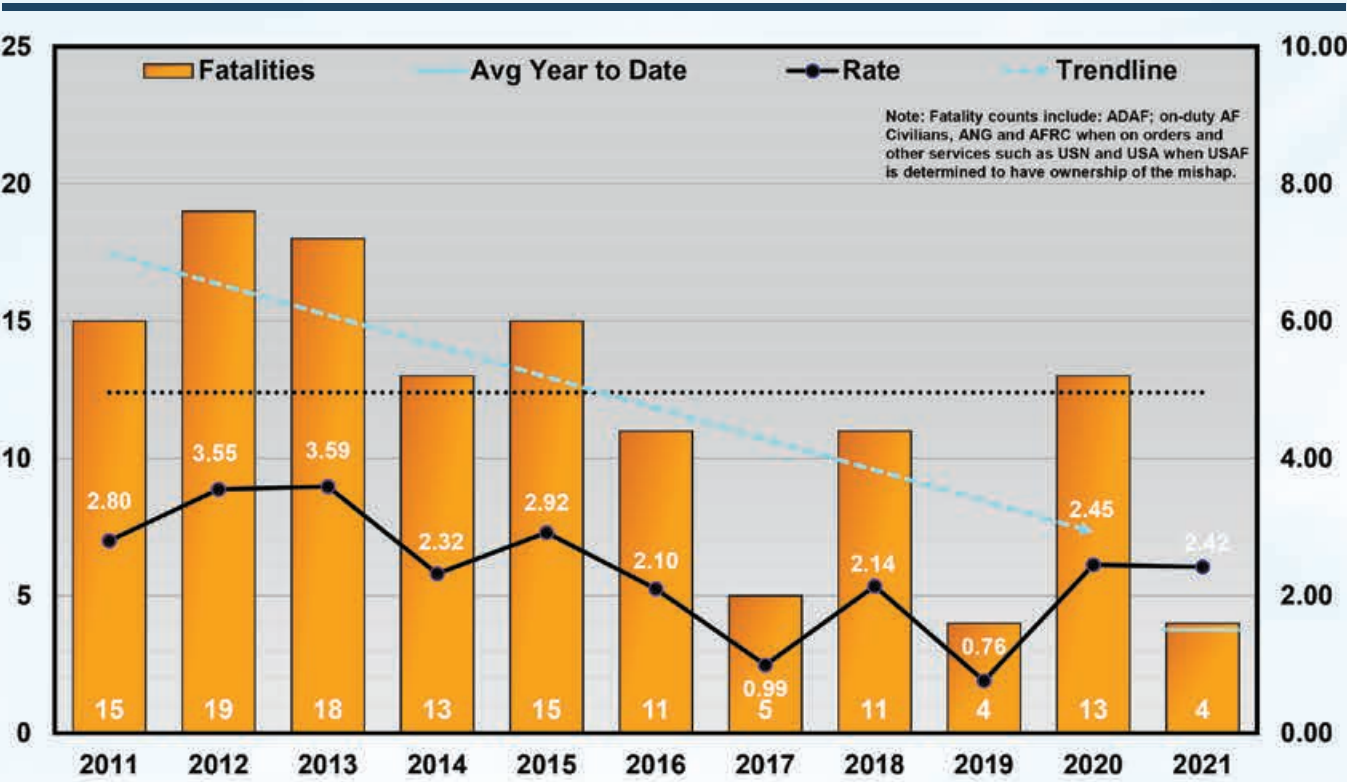
Once I stopped, I looked up to see my motorcycle sliding across four lanes. It bounced off the curb on the other side, and slid back to the center of the road. As I lay there, it occurred to me that I should get out of the road, so I got up and ran to the sidewalk. Once I got to the sidewalk, everyone stopped and came over to make sure I was all right. Four people helped me get my bike out of the road and up onto the sidewalk. The police came, as well as the ambulance. I refused medical care from the ambulance. My wife and my brother came to collect me and my motorcycle.

As the adrenaline from the accident wore off, my body became very sore. My knee began to swell so badly that I could not bend it, and my shoulder hurt so much that I couldn't move it. I told my wife what was going on, and she insisted on taking me to the ER. After four hours of sitting in the waiting room in excruciating pain, I finally received treatment. The day had begun with stress followed by celebration; it ended with injuries and a damaged motorcycle.

Looking back on the whole event, I realize that I learned some things the hard way. First, and most importantly, *never* deny medical care. You may not know the full extent of the damage that has been done to your body. Second, always assume others can't see you. No matter what gear you're wearing, how bright your lights are, or even the size of your motorcycle, you still present a small profile. Most drivers are not trained to see you.

Years later, the lessons are still with me. Every time I get on my motorcycle, I think about the accident. What if I hadn't worn my PPE? What if I had been in a different lane? What if I had left myself a way out? What if I had been easier to see? These are things we as motorcycle enthusiasts need to remember at all times. Doing so could mean a relaxing ride home instead of a painful trip to the hospital. 🍀

USAF Mishap Fatalities: PMV-2



CAO: 19 January 2021

There's a life riding on it.



LOOK TWICE FOR MOTORCYCLES

Share the Road.



Gun-safety

BY BRADLEY “SLIM” PICKENS

These days, a quick walk-through of any sporting-goods store will show guns and ammo flying off the shelves in record numbers. Unfortunately, gun-safety training classes are not filling up at a similar rate, and many new firearms-owners are lacking basic safety and mindset training. Although not intended as a substitute for qualified training, here are four safety rules to get you started.

GUNSITE Safety Rules

1. Assume all guns are always loaded.
2. Never let the muzzle cover anything you are not willing to destroy.
3. Keep your finger off the trigger until your sights are on the target.
4. Always be sure of your target (and what's beyond it).

Rule No. 1 is all about mindset. *All guns are always loaded.* As a gunsmith, I always ask the customer: “Is your gun loaded?” Nearly all reply: “No,” without even checking the magazine or chamber. I’m amused (almost) at the number of customers who surprise themselves when I ask them to clear the firearm, and out pops a round! These “unloaded” guns cause many unintentional discharges, and even injuries and death. Instructors used to say: “Treat each gun as if it were loaded,” but the words *as if* imply that some firearms might

be safe without your checking. Instead, if you believe that *all* guns are *always* loaded, you’re forced to check, by both sight and touch. Also, once you let a gun out of your sight or custody, it is considered to be loaded until you CHECK IT AGAIN!

Rule No. 2 is about gun handling. *Never let the muzzle cover anything you aren’t willing to destroy.* This means not pointing your firearm at people, pets, TV’s, cars, or ANYTHING you aren’t willing to destroy. It goes without saying that this includes your own face and body. Watch a seasoned shooter. They are so muzzle-conscious that they almost do gymnastics in order to avoid pointing their guns at other people or things of value. Also, when choosing holsters, think about the fact that an appendix holster points directly at your femoral artery; that a bra-mount holster points directly at your chin; that, loose in a purse, your muzzle could point anywhere; and that a firearm-mounted light forces you to sweep the muzzle to scan with the light. The list goes on and on.

Rule No. 3 is about committing to shoot. *Keep your finger off the trigger until your sights are on the target.* This is a two-part rule: 1) finger off the trigger; and 2) sights on the target. Keeping your finger off the trigger should be obvious. Startle-response, sympathetic response, simple loss of awareness - all can all cause you to press the trigger unintentionally. This rule also covers anything that can make its way inside the trigger-guard – things like keys, lipstick, and even a chewing-gum pack – all of which have caused negligent discharges. In

addition, some holsters require the user to depress an external button to unlock the firearm. Dragging the same finger into the trigger-guard during the draw stroke has caused negligent discharges.

... *Until the Sights are on the Target* means the firearm is pointed downrange, aligned for the shot. Ideally, this means a good sight-picture, but it also works if the muzzle is downrange, pointed at a safe backstop. Now, about that target ...

Rule No. 4 is about situational awareness. *Always be sure of your target.* Again, this is self-explanatory. Don’t point - or shoot - at shadows, movement, or things that merely startle you. I add *and what’s beyond*, because even small-caliber rounds can penetrate the target. Where does the bullet go after it penetrates? What if you miss? Even if you have a solid backstop, what’s in *it*? Hard surfaces, tires, and scrap steel can cause a bullet to ricochet in an unintended direction – even directly back to you!

Gun-ownership comes with responsibility. To become a responsible gun-owner, find a reputable trainer, learn safe gun-handling, and start building your safety mindset with the four rules above. Safe Shooting! 🦋

~ “Slim”

(NOT PICTURED) Bradley “Slim” Pickens is the 12AF/AFSOUTH Director of Safety. He is an IDPA and USPSA Competitive Shooter, NRA Pistol, and Shotgun Instructor, Olympic Shooting Coach, Personal Defense Trainer, and Master Gunsmith.