

March / April 2008

# Combat Edge

*Air Combat Command's Safety Magazine*

how BAD can be good



what is a  
*Range Hero?*

Avoiding  
Compacency





# Combat Edge

Volume 16 Issue 6, ACC SP 91-1

GENERAL JOHN D.W. CORLEY, COMMANDER  
COLONEL BILLY J. GILSTRAP, DIRECTOR OF SAFETY

courtesy photo

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# ACCent

## ON SAFETY

### THERE ARE NO SURPRISES

Two young Airmen spend the evening installing a high performance package on one of their cars. It's late when they complete the modifications, and they decide to test out the evening's efforts on a dark unfamiliar rural road. The car departs the road at a high rate of speed — one Airman dead. Was this an accident or had you already predicted the outcome? When you follow the chain of events that led to this mishap, the final outcome was really no surprise and was exactly as expected.

A young Airman is stopped by the highway patrol for driving over 130 mph on his sports bike. A couple of weeks later he decides he doesn't have to wait in traffic. He picks up speed as he drives between the two lanes of stopped traffic; as he crests a hill, he's unable to stop before hitting a truck in the road. Another lost Airman. Once again the outcome was exactly as expected and no surprise. In this case the young man had a history of reckless driving unknown by his supervisors. However, his peers were well aware of his behavior. Could they have predicted this outcome? Were they surprised?

An experienced technician decides he doesn't need a checklist because he has done the same task a number of times before. After omitting a couple of tasks, the explosive cartridge he's working with discharges. Notice I didn't say "accidentally discharges." That is because the outcome was predictable, exactly as expected, no surprise. The only surprise is that it hadn't happened before.

Human factors account for the majority of our mishaps: poor decision making, at risk behavior, mis-prioritization. A lot of our mishaps are predictable; we just don't know when they are going to happen. Are you predictable? Is your Wingman predictable? Given the chain of events, are you really surprised by the outcome? Incorporate these thoughts into your personal risk management. Take a look around at your Wingman and your work environment. Look for predictable risk areas/behaviors and correct them. You can identify and prevent the next mishap ... there are no *real* surprises.



COL BILLY J. GILSTRAP,  
Director of Safety



**H**

ave you ever sucked up a seat cushion due to a low fuel state? If not, then perhaps you should continue reading because you might be one sortie away from running out of fuel ... It only takes one seat cushion to permanently teach you to “never press the fuel.”

**Human Factors account for approximately 80% of all aircraft mishaps.**

That means the pilot/crew screwed up and the mishap could have been prevented. Sometimes your career is dangling by a thin piece of string and you get lucky and

survive. The story below is about my lucky day which occurred in 1995.

The recipe for disaster began with a 4-ship of experienced Viper drivers deployed to an exercise in Thailand at Korat AB. We were at the end of the deployment, and our mission was to burn up three bags of gas on a high speed low level over the lush jungles of Thailand as part of a “confidence flight” required to ensure the tanks would feed before deploying back to the US. What could possibly go wrong with that much gas and experience?

Shortly after takeoff, we were low-level in the weeds with our hair on fire “pushing it up.” I was number 4 and all I had to do was maintain position and enjoy the view. The scenery was outstanding and it was fun to cruise at high speed over the thick jungle canopy. I thought to myself that this must be what it was like to fly in Vietnam and Laos during the war. The last thing on my mind was fuel

# Fuel



by Lt Col Edward H. Linch III, Davis-Monthan AFB, Ariz.

## Waking up the Seat Cushion!

management. We had too much gas and we needed to burn it up!

Everything seemed to be going fine and we were all comfortable in the weeds.

**As I think back, this should be the time to "wake up" and check 6 . . .**

... because history shows that this is the perfect set-up for a possible mishap. Little did I know that my Inertial Navigation System (INS) had dumped at the beginning of the sortie. Attempting to be the best "smart Wingman"

I could be, I misjudged one of our turns due to the INS failure and ended up in trail. No problem, I have lots of gas and I soon corrected the situation with the use of afterburner and speed. I was "hauling the mail" across the jungles and ended up 1,000 pounds less than everyone else in the flight — no problem. As I caught up with the flight, I finally realized that my INS had dumped and I had no idea where we were over the jungle. As you know, this is not a comfortable position, but hey, I'm #4 and all I have to do is follow and trust my lead. He's the squadron commander and surely all will be OK.

Our low-level route ended with an Initial Point (IP) to target run with a pop attack. As we approached the target area, I was Joker. Joker was set at 2,500 pounds of fuel. The flight lead was surprised that I was Joker and decided to lower the Joker/Bingo to 2,000/1,500 pounds in order to complete the attack and egress. This "bingo" seemed



low since we had extra drag with three bags, but the flight lead was the squadron commander and no one challenged him. Thinking back, someone should have called Knock-it-off (KIO) but that wouldn't have been cool politically so we pressed ... bad move!

We flew across the target and proceeded south on the egress. Korat was west. I was thinking to myself, I should just KIO and go home alone, but I continued since my INS was inaccurate and navigating would be impossible with the TACAN out and communicating with the foreign air traffic controllers was challenging.

I'd sworn many times to never let a flight lead run me out of gas, **but here I was lost over the jungles with my squadron commander and I was low on gas in a situation I swore would never happen.** I called "Joker" (new Joker) on the egress, but due to the intense communication with the egress flow, lead didn't hear me. Soon, we "terminated" the low level and started our flight back to Korat ... just not at a fuel conserving maximum range airspeed. Thinking back, I should have called Bingo at this point.

Instead, I called Bingo at 1,500 pounds about 40 miles from Korat. This was not the best fuel state, but if we were flying direct to the field at the proper airspeed, I'd have it made in the shade. But, just as with every aircraft incident, the dominoes continued to fall. Besides not being at a fuel conserving altitude and airspeed, we had to deviate around an unforecasted thunderstorm. This deviation burned additional fuel and put me in an emergency state. I should've made a call on the radio, but hey, I'm #4 and I'm with two flight commanders and the squadron commander. Would I be challenging their credibility if I made a call? They know my fuel state. I should've made the call but I pressed with my flight and continued sucking on the seat cushion.

About 25 miles from the base, I got the "Home" mode fuel warning which in the F-16 indicates I'd arrive over the base with 800 pounds at 5,000 feet if I flew the computerized profile which we were definitely not flying. I called "Home mode Bingo" — a non-standard term since this is an uncommon fuel state. The flight lead acknowledged my call but continued to fly at 350 knots ... well above the max range airspeed. It seemed to me that no one in the flight was worried about my fuel, but in my cockpit the pressure of the seat cushion was on the rise — I was emergency fuel and I should have declared it but I didn't.

I was thinking "should I climb and go to high key or just press with the rest of the flight to initial?" I elected to stay with the flight. I look back at this sortie and kick myself every time. If you feel the need to go to high key for a fuel problem or the need to break out of the flight for any safety reason, then you have every right to do so. You're the aircraft commander and responsible for your jet. It doesn't matter who is leading the flight, you're the lead of your own jet and you're the one the mishap board will hang.

Due to the winds, in order to fly up initial, we had to pass the airfield on downwind. Approaching mid-field on a downwind for initial, the fuel totalizer was fluctuating back and forth and for a second I saw 300 pounds. In a three-bag F-16 this is an extremely bad situation. With external tanks, the tolerance on the fuel gauge can be up to 400 pounds. With the seat cushion firmly pressing against me, I finally couldn't take it any longer because if I followed my lead, I'd run out of gas.

I finally broke out of the flight (as I should have done earlier) and told the tower I was proceeding to a base leg to land — note, I didn't ask tower, I told them. As I rolled out on final I saw 500 pounds on the fuel totalizer, and as I landed the gauge went to 400 pounds. I shut down immediately in the dearm area after signaling the crew chief with the fuel gauge reading 300 pounds which is basically empty. The jet never flamed out due to the grace of God.

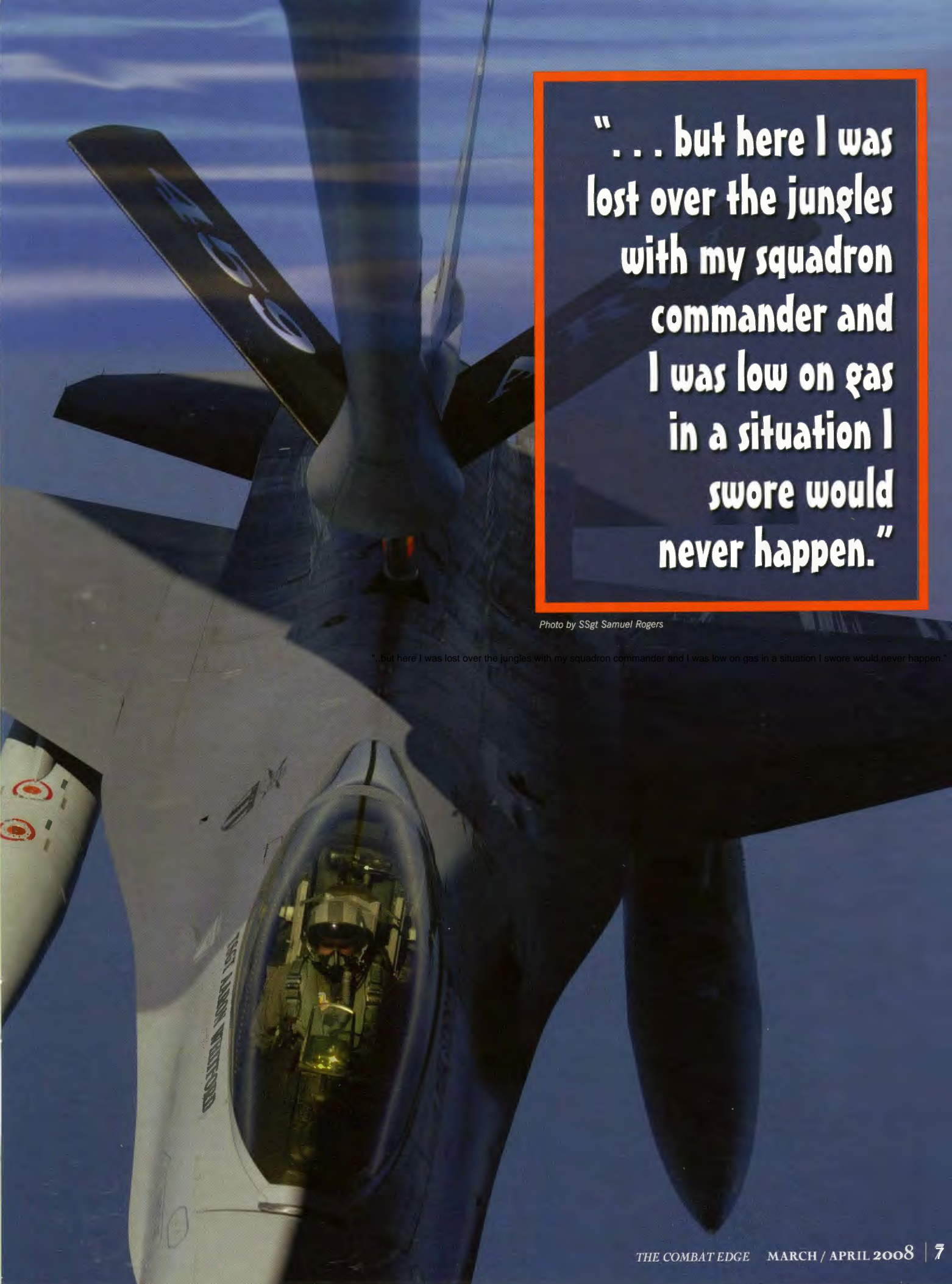
F-16s have flamed out with as much as 600 pounds showing on the gauge. God had decided to declare it a lucky day for me!

A few weeks after we returned from our deployment, a pilot flamed out his F-16 in the flare due to poor fuel management. That easily could have been me if I'd stayed with my flight.

There are many lessons I learned from this sortie that continue to shape my outlook toward fuel issues today from Joker/Bingo settings to extra divert fuel. The bottom line is you're responsible for your own jet and fuel management — don't press the limit with fuel. If you need to break out of the flight for any safety reason or need to KIO, then do so. You might have to do some talking in the debrief, but in the end game, your chances of surviving and having a mishap-free career are higher.

So, the next time you set a lower Joker/Bingo for your flight in order to get one more Basic Fighter Maneuver set or one more pass at the range, ask yourself how much seat cushion you'd like to suck up today and that should be enough to change your mind. If not, you'll learn the hard way and just remember that sortie could be today. How lucky do you feel? Check 6! 🗨





**"... but here I was  
lost over the jungles  
with my squadron  
commander and  
I was low on gas  
in a situation I  
swore would  
never happen."**

*Photo by SSgt Samuel Rogers*

*"... but here I was lost over the jungles with my squadron commander and I was low on gas in a situation I swore would never happen."*

# COMPLACENCY

## is a Dangerous Thing

**C**omplacency describes the state of mind many people have with regard to safety. Unfortunately, we go about our lives giving little thought to our personal safety, or for that matter, the safety of others. Our superiors keep telling us that safety is important, but for many, it is discounted because of being overconfident or simply maintaining an attitude of "It isn't going to happen to me."

Too often, our Airmen become complacent with regards to drivers' safety. Statistics show that the majority of traffic accidents occur within 10 miles of the driver's home. Just when we feel the most comfortable in a routine or familiar situation — we let our guard down: that's when it happens.

We all have a tendency toward taking the easiest route. It is just human nature to want to take the path of least resistance, the shortest or quickest route, one we know of or think we can create. When we are in a hurry and come up to an intersection and the light has been yellow, our instincts are to "punch that gas pedal" ... it is a matter of impatience and not having to wait. We're also in a hurry to get something done that we take safety shortcuts without thinking about the consequences. Another instance is taking short cuts by not wearing safety glasses when using the weed eater in edging the grass around sidewalks and trees. Every time a safety shortcut is taken and no one gets hurt, it reinforces the unsafe behavior, which encourages us to continue using that shortcut and to create even others.

Most injuries and fatalities, well over 90 percent by statistics, are not caused by unsafe conditions, but by unsafe acts. But, for whatever reason, we fail to eliminate unsafe behaviors until we get hurt ... or someone else we know gets injured. The more unsafe behaviors we use without injuries, the more complacent we become.

- **Leaders — Please Get Committed!**

It takes more than just saying you are committed to safety — you have to put actions behind your words. Leaders can demonstrate their commitment to safety in a variety of ways. First and foremost, leaders must always lead by example and look to weed out complacency.

- **Take time to walk around and talk to our Airmen and their families.**

Visit Airmen in their workplaces whether on the flight line, shop floor, at the work site or in their offices. Talk about your personal concern for safety and listen to their concerns. Take personal action to correct unsafe situations.



# — it's a Killer!

by Col John Stocker, Peterson AFB, Colo.

- **Integrate safety into all aspects of planning.**

During crew changeover, maintenance dispatches, and security force guard mounts review reports and discuss potential safety hazards that might occur. Take care to ensure that your focus is a positive action rather than a punitive one.

- **Enable and encourage Airmen to get involved in the safety process.**

Identify areas where Airmen can become actively involved in the safety process and encourage their participation by allowing them to share their own activities and near mishaps. Then recognize their involvement and efforts with positive reinforcement. Airmen whose ideas and involvement are valued will increase safety performance faster than our Airmen who simply follow the rules. Encourage creative ideas from our Airmen — we must create a culture in the Air Force where injuries are a thing of the past. We cannot let our guard down — our people and our mission are too important to the nation! Yes, complacency is a dangerous thing — it can indeed be a killer! ✈







could

**“Between 1 October 2001 and 21 September 2007, 79 percent of USAF fatalities were related to motor vehicles.”**



# BAD be good?

by Col John P. Good, Shaw AFB, S.C.

**T**here I was ... it was a bright and sunny afternoon, when ACC Safety asks for input in the development of a risk mitigating construct. What a privilege! It didn't take long to come up with something relevant, easy to remember, and, unfortunately, timeless. Oh, sure. I racked my brain for a moment, and then it came to me!

Take a look at the Class A, B, and C mishap reports in Blue Four News, for instance. Does a common theme stand out; how about deviations from the basics? "What kind of basics," you ask? How about "aviate," then "navigate," then "communicate" or "maintain aircraft control, analyze the situation and take proper action, and land as soon as conditions permit?" How about adherence to published guidance, like checklists or referencing job guides? How about leader Wingman responsibilities or air-to-air or air-to-ground training rules? How about wearing seat belts, don't drink and drive, and drive at a speed appropriate for the conditions? Yep; basics, like those.

So, "what do 'basics' have to do with your safety construct, colonel," you ask? Well the safety construct is a three-letter acronym. **The first letter is "B" for basics.** Commanders need to focus their personnel's attention on the basics.

Let's look more closely at some of those basics, again. Did you know that?

- Between 1 October 2001 and 21 September 2007, 79 percent of USAF fatalities were related to motor vehicles (351 out of 444 fatalities, whether that is related to two-wheel or four wheel vehicles).
- Between 1 October 2001 and 21 September 2007, 12 percent of USAF fatalities were sports and recreation-related mishaps (55 out of 444 fatalities, 28 of these 55 as a result of drowning).
- Wingman-related failure, as a cause in fatal mishaps, is not a statistic currently tracked within safety channels.
- The National Highway Traffic Safety Administration indicates, for military personnel, that the three primary causes for traffic fatalities are a lack of seat belt wear, impaired driving (specifically fatigue), and operating a vehicle in a manner inappropriate for the conditions (specifically in relation to speed).
- Data from the U.S. Department of Transportation website demonstrates that personnel who ride a motorcycle have a 32-times greater chance of being fatally injured riding a motorcycle than riding in a car.
- Data from the National Highway Traffic Safety Administration indicates that a person, if not wearing their seat belt and involved in an accident, has a 1-in-3 chance of being thrown from their vehicle. Moreover, if they are thrown from a vehicle, they have a 3 out of 4 chance of being fatally injured.



# **"Safety professionals need to encourage commanders to hold their personnel accountable for their actions."**

Now, perhaps, you can see why there is so much emphasis from our commanders on the operation of motor vehicles, seat belt wear, speeding, impaired driving (whether that be from alcohol use or fatigue), and sports and recreational activities. Oh! Did I mention where the U.S. Department of Transportation and National Highway Safety Administration get their data? Yep! You guessed it! The data comes from dead people. For now, that's enough on basics.

Let's move on to the second letter in this safety construct. **The letter is "A" for accountable.** Safety professionals need to encourage commanders to hold their personnel accountable for their actions. "Where does accountability play a role in safety," you ask? When the commander learns their personnel are deviating from the basics, the commander should hold their personnel accountable for these deviations. The manner by which the commander holds their personnel accountable certainly varies by the deviation, the degree of deviation, and the circumstances surrounding the deviation. Of course, it is always the commander's choice on what action to take in an effort to shape such behavior. However, personnel who deviate from basics, like those characterized above, and are not held accountable may unwittingly lead some of our younger Airmen to believe they can be selective about adhering to these basics.

So, for all of you Wheel of Fortune fanatics reading this article, what's the last letter in the safety construct? That's right! **The last letter is "D" for the four Ds (not the three Ds - "dumb, dangerous, or different"), but the four Ds, which stand for diligence, discipline, dedication, and attention to detail.** Commanders need to train personnel on the four Ds.

Frequently, mishap sequences begin (or are not stopped) by a lapse in diligence or personal or professional discipline on the part of an individual(s). Perhaps the degree of dedication to the task plays a role in such lapses, as well. A review of Blue Four News or the current fiscal year's ground mishaps will convince you that such lapses are integrally related to mishap causes. In terms of the last "D," detail is not always readily identifiable, so we need to look for it. What's the best way to train for personal attention on diligence, discipline, dedication, and detail? Teach it and, model it to our Airmen, which require time and energy. Be that as it may, the sacrifice is worth the effort.

So what's that simple, relevant, easy to remember, and, unfortunately, timeless safety construct? It's BAD. That's right. Focus on the B – A – D and good will result (honestly, the acronym just jumped out at me as I reviewed mishap report summaries). Not that things are bad, just that by focusing on the contents of an acronym called B – A – D good will result. Most USAF accidents, whether they are in the air or on the ground, could have been prevented if the mishap individual(s) focused on the basics, a culture of accountability existed within the unit when deviations from basics were identified, and the concepts of diligence, discipline, dedication, and attention to detail were routinely taught and modeled.

The construct is simple, because it is easy to remember and applicable to risk management. Frankly, the word BAD is a result we want to avoid. However, the construct is relevant, because the majority of USAF mishaps could have been affected by focus on the B – A – D. In my view, the best thing about this acronym is that it is not only easy to remember, but is a simple reminder of a general set of timeless truths.

Interestingly, the construct has an internal pattern that is relational. The pattern is an iterative relation-





# **NO** **GOOFY \$#!**

ship among the three points of the B – A – D, where a failure to adhere to the basics in the conduct of a task frequently is hand-and-glove with a lapse in diligence, discipline, dedication, and/or attention to detail. An active unit culture of accountability has the capacity to disrupt this relationship and break the safety chain, which could prevent a mishap.

But is that it? Are there any other active tools we can provide our Airmen to affect the B – A – D? Yes there are! We must teach our personnel to apply the term A – C – T, much like daily vitamins. It is nothing more than the practical side of the risk management construct but in bite size form. So, how does ACT work?

**The first thing** we should do after receiving our tasking for the day is Assess what might hinder us from accomplishing our assigned tasking, whether that be the influence of the weather, the health and numbers of personnel available to accomplish the task, or the influence of other forces. **The second thing** we should do is Consider the possible options to reduce the affect of those influences. **The third thing** we should do, after assessing and considering, is Take action on those options over which an individual has control to

reduce the risks we just identified through this process. Unfortunately, while an excellent memory jogger that is simple to employ, the use of the ACT construct is not routinely exploited by all Airmen.

The other risk mitigating construct I'll offer is the concept of "slow is smooth, and smooth is fast." I'm reminded of the days back in training and new at applying my trade. We wanted to impress the "old heads" by how quickly and aggressively we could perform a task. Our intensity and aggressiveness frequently led to mistakes, resulting in taking longer to complete a task well than if we just took a little edge off our speed, instead. We soon learned when we controlled that intensity and aggressiveness we were smoother overall in the performance of that task, and, ultimately, faster.

So why is a fighter pilot talking to you about safety without his hands, any way? Because I realize the adage "be safe" really boils down to some very simple actions. It also requires teamwork; because I have also learned I cannot succeed alone (can anyone say "Wingman?"). I also realize I, like so many of us, need help to take what some consider "simple" (but not natural, yet) and internalize it; for me, acronyms serve this purpose. Perhaps now you understand how "BAD could be good." ✦

It's just another day on the flight line. Due to the surge, crews are out turning jets as fast as they can. All of a sudden you hear on the radio that a cordon has been established around one of the jets in the other squadron. You hear a lot of radio chatter but don't really know what's going on. The next day you are briefed at role call about the incident. You learn that a crew chief was attempting to safe an AIM-7 missile on station three of an F-15C and some how had pulled the MAU-12 safeing pin from the LAU-106 launcher. The crew chief proceeded to insert the speed handle into the launchers' hook mechanism (instead of the umbilical assembly) and opened the hooks. Of course, the missile fell to the ground. Two fins on the missile were damaged and the radome was shattered.

The whole point of this is to reiterate the importance of following technical data and staying current on your training. If you are unsure about something ask. One of your fellow loaders is not at work today. You get the briefing as to what happened to him. He was at the End of the Runway (EOR) yesterday and in the process of launching jets, an incident happened. He was in charge of pulling the safeing pin from the inboard pylon on station two of an F-15E. Due to the height of the aircraft he was using a ladder. As he went to pull the safeing pin, there was a sound like a shotgun going off. That was the sound of the pylon carts firing. Because the safeing pin was removed, firing voltage was sent to the station and the pylon jet-tisoned from the aircraft. As the pylon fell to the ground the AIM-9 missile on station 2A scraped him on the chest. The pylon also had an external fuel tank on it. When the tank hit the ground, it burst open and 600 gallons of JP-8 fuel spilled onto the EOR pad. After the brief, a few key

**"The whole point of this is to reiterate the importance of following technical data and staying current on your training."**

# Another day on the flight



points were mentioned. The reason the pylon jettisoned from the aircraft was because the Emergency Jettison (EJ) switch was partially depressed sending voltage to the pylons. The only reason station 8 did not fire also was because the safeing pin was still in. Proper pylon arming procedures were not followed. When arming the pylon, you are supposed to pull the pin from the second detent, electrical safe the pylon, then wait a second. That way if the carts do fire, the mechanical safety, first detent, will prevent the pylon from jettisoning. Again, remember what you've been trained to do, then do it. You're on your way to the emergency room with one of your coworkers. He has one eye covered. He is admitted into the hospital. After an hour or so he walks into the waiting room. He has been released, you ask him what happened. He says he

was working on a LAU-128 missile launcher doing an 18- month inspection. The attach bolts had failed their mechanical check and he was in the process of removing and replacing the inserts on the bolts. He had already cut the plastic inserts and was in the process of attaching them to the attach bolts. He put super glue under the plastic inserts and was using a hammer to seat them. As he was hammering, some of the super glue shot out and went straight into his eye. He blinked and, of course, his eye lids stuck shut. He ran to the emergency eyewash station, but the water did not help. So another valuable lesson was learned and a common safety routine validated. Wear safety glasses when using a hammer. ✈

**“Wear safety glasses when using a hammer.”**

**“Proper pylon arming procedures were not followed.”**

**“As he went to pull the safeing pin, there was a sound like a shotgun going off.”**

line

by SSgt Theodore D. Fout, Eglin AFB, Fla.



*Getting*

**Ready  
for  
Riding  
Season**



*photos by Stacy Keiser.*



*Remember*



**T-CLOCS**



# **T – TIRES AND WHEELS**

- Check the air pressure of tires and wheels.
- Check for roundness, cracks and dents, and bent, broken or missing spokes.

# **C – CONTROLS**

- Review the levers and pedals to make sure they're still lubricated, adjusted, and fitted properly.
- Inspect cables to make sure they are not frayed, kinked, or folded into sharp angles.
- Test that the throttle moves freely, does not stick, and snaps closed when released.

# **L – LIGHTS**

- If you removed your battery over the winter, install it — re-check the battery to make sure the terminals are clean and tight, it's properly charged and secured.
- Look over the lenses on the bike to make sure they are not cracked or broken, are securely mounted, and do not have excessive condensation trapped within.
- Make sure the reflectors are not cracked broken and are securely mounted.
- Test all lights.

# **O – OIL AND OTHER FLUIDS**

- Check the levels and quality of the engine oil, hypoid gear oil, shaft drive, hydraulic fluid, coolant, and fuel.
- Check for leaks of these same fluids.

# **C – CHASSIS**

- Review the condition of the frame, looking for lifting paint, cracks, or dents.
- Make sure the front forks and rear shocks are properly adjusted.
- Check the tension of the belt or chain. Lubricate the chain if needed, and inspect the teeth of the sprockets confirming they are not hooked and are properly mounted.
- Replace broken or missing fasteners and tighten if loosened.

# **S – STANDS**

- For both center stands and side stands, make sure they are not cracked or bent and that it springs into place and has the required tension to hold the bike in position.

You may also download this checklist direct from the Motorcycle Safety Foundation at the site below to print out and save. You will need Adobe Acrobat to view it.

<http://www.msf-usa.org/downloads/T-CLOCSInspectionChecklist.pdf>



by Lt Col Doug Slocum, Tuscon, Ariz.  
with Lt Col Ed Vaughan, Andrews AFB, MD

# USAF MAINTENANCE R

USAF Maintenance Resource Management (or MRM) by Lt Col Doug Slocum, Tuscon, Ariz. with Lt Col Ed Vaughan, Andrews AFB, MD

If you were the CEO of a company that wasted over \$80 million a year, injured numerous workers, and lost untold efficiency – and it was all preventable – wouldn't you be just a little concerned? The company I'm describing isn't fictitious – it's the U.S. Air Force — **specifically USAF maintenance**. It's the dilemma posed by the problem of living with preventable human error. Looking at USAF maintenance performance statistics over the last 10 years, 18 to 20 percent of all USAF aviation mishaps are attributed to preventable human error in aircraft maintenance — over \$350 million in direct costs. In addition to the mishap statistics, there have been numerous fatalities, lost workday injuries, and lost efficiency — all of which are much harder to quantify but that are substantially higher than the direct costs.

**“It's the  
dilemma  
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human error.”**

Since World War II, accident and mishap rates have improved dramatically. Equipment is much more reliable (and expensive), and the root-cause analysis safety investigation process has done an admirable job of identifying procedural and organizational issues. The performance and fallibility of the average worker has not kept pace with these improvements. As a result, human factors issues continue to take an increasingly larger toll as an overall percentage of causal factors in mishaps. Over the last 15 years, the mishap and fatality rate in the military has leveled-off to a comparatively low, but consistent, rate. However, no preventable accident or fatality is acceptable. So the question becomes how do we reconcile the status quo with an effective initiative to target preventable human error? Phrased another way, from the safety perspective, how do we touch zero? The answer lies in taking a fundamental look at how we approach accomplishing our day-to-day jobs and how to insulate our workers from ever being put in a position where one mistake leads to an immediate and unrecoverable consequence. The answer to preventable human error is an initiative indistinctly titled “Maintenance Resource Management” or “MRM.”



# RESOURCE MANAGEMENT [MRM]

The goal of MRM is to balance the science of why people perform the way they do with a “how can I do my job differently tomorrow than I did today?” rule-of-thumb approach. The outcome is an immediate and lasting change in attitudes and behaviors. Since there is no one leak-proof defense against human error, the MRM implementation strategy employs a layered, redundant “defense in depth” by:

## **A.** Focusing on the **individual**:

Providing tools and principles to make each individual more reliable, as well as improving individual performance. People will never be perfect and error-free, so the goal is to take individual performance from good to excellent — without an unrealistic goal of perfection.

## **B.** Focusing on **teamwork**:

Using synergy/Wingman concepts to set-up a redundant series of checks and balances to identify and “catch” individual errors. Workers should never be put in a position where one mistake results in an immediate and unrecoverable consequence.

## **C.** Focusing on **safety nets**:

Employing protective equipment and “air bag”-type safety systems and processes to mitigate the consequences of any uncontained errors.

**“People will never be perfect and error-free, so the goal is to take individual performance from good to excellent . . .”**



There seems to be an attitude prevalent in our maintenance community that training and rules are fine for peacetime; but when it comes to contingency and wartime ops in the AOR, we will do whatever is necessary to get the job done. The reality is that nothing could be further from the truth! To find out why, all we have to do is look at the past, present and future.

## Past

Beginning in 1943, General Claire Chennault's Flying Tigers' operation in China had to be supplied exclusively by an air transport bridge over the rugged Himalayas from India that was dubbed "The Hump."

The route and operation was so dangerous that losses in men, planes, and equipment flying transport missions over "The Hump" between two friendly nations was higher than bomber losses to enemy action flying combat missions into the heart of Germany. In a 6-month period, 155 transports were written-off and almost 200 US Airmen were killed in the operation. One of the innovations used to reverse the tragic trend was the brainchild of Lt Col Bruce White, called "production line maintenance." It not only streamlined and consolidated preventive and periodic maintenance, but it also stressed discipline, standardized procedures (T.O.s), work schedule rules, and supervisory checks of all maintenance actions. Lt Col White essentially started the military's first MRM program. The result was phenomenal. Accident rates and fatalities dropped and MC rates increased. The result was a doubling of the materials being delivered to the customer. Lt Col White's initiative was adopted by all of the combat forces for the remainder of the war. MRM concepts delivered war-winning combat capability.

## Present

The biggest threat to our deployed combat troops is the enemy — right? Wrong! Mishaps continually account for more than 50 percent of all losses to troops in a combat theater of operations. In Operation DESERT SHIELD/STORM and IRAQI FREEDOM, that number rose to 75 percent. That means three out of every four injuries or fatalities was the result of preventable human error — not the enemy. It would appear that we are our own worst enemy. MRM directly targets preventable human errors. Therefore, MRM principles are even more applicable in the combat environment — not less.

## Future

The future of the USAF presents many challenges. They include manpower cuts, average airframe ages, ops tempos, experience levels, consolidation efforts, and BRAC just to name a few. Using MRM principles to improve our maintenance culture in the future will preserve our planes and our people — the very resources the taxpayer entrusts to us to "get 'er done" on a day-to-day basis. MRM is not another three-letter, unfunded, mandated, fad-of-the-day program. It is a way of doing our jobs that increases efficiency, saves time, planes, and lives.







The Chief of Flight Safety from the Air National Guard, Lt Col Ed “Hertz” Vaughan, sponsored MRM as an initiative to the Defense Safety Oversight Council (DSOC). The result has been DOD endorsement of MRM, and the USAF is universally adopting MRM throughout the maintenance community. Initial results are encouraging. MRM training has been directly credited with saving combat assets.

As the MAJCOMs wrestle with how best to implement this tool and get the most mishap prevention out of it, it remains incumbent upon each Airman to use sound risk management in daily ops. As we learned in a discussion following one of our many seminars, nothing better captures the spirit of MRM than the Air Force’s long held Wingman concept. General Moseley said it best in his June 2007 “CSAF Vector” ... “One of my top three priorities is developing our Airmen and taking care of them and their families. It’s a notion that’s deeply rooted in our Air Force culture and heritage. “Taking care of Airmen” means more than just providing them with the training, equipment and quality of life they deserve. It also calls for providing leadership they can trust unconditionally. The Wingman concept — the bond we all share as Airmen — is at the core of this conviction. It reflects the ultimate confidence in our fellow Airmen: we trust each other, quite literally, with our lives.

Effective implementation of MRM is best approached as evolution not revolution. MRM is not a program or a “thing to do” — it is a fundamental approach to improving individual performance and procedurally insulating organizations from the consequences of unchecked, preventable, human error. Continental Airlines realized a 66 percent reduction in lost workday injuries and mishaps 1 year after training two-thirds of its maintenance personnel in MRM. Initial work and studies with MRM in USAF F-15s in the 1980s yielded similar results. We have an opportunity and the tools to make a difference — it’s **Maintenance Resource Management**. It’s proven and it works! ✈

**“ . . . it remains incumbent upon each Airman to use sound risk management in daily ops.”**



# WINGMAN SPOTLIGHT

What is a range hero?

## Range Hero?

by A1C Ryan Whitney, Nellis AFB, Nev.

**M**any people wonder if they would have the mental and moral courage to react in a brave manner if ever faced with a dangerous or hostile situation. One 98th Range Wing truck driver doesn't have to wonder anymore.

On the morning of May 4th, Juan Trillo, a contractor with the 98th Range Wing Support Services Group, demonstrated the true definition of the word courage when he saved the life of another.

In Mr. Trillo's career driving as a heavy truck driver for the 98th Range Wing, he has safely driven more than 200,000 miles across Nevada and transported over 2.5 million pounds of cargo, a feat that few can claim.

One of the more serious challenges driving in Nevada is the roadway itself; predominately two-lane highways with posted speed limits of 70 mph.

Many drivers often exceed this speed, causing dangerous situations when passing and one of the most deadly vehicle mishaps: a head-on collision. These facts provide the background on Mr. Trillo's courageous act.

The day started out like many other days for Mr. Trillo. He traveled from Creech Air Force Base to Tonopah, a 440-mile round-trip excursion and full day's work, delivering construction equipment.

On his return trip home, he was approximately 90 miles from his final destination when he came upon three vehicles that had collided in the lane ahead of him.

He safely slowed his truck, and as he approached the vehicles, he saw that one of the vehicles, a pickup truck, had caught fire in the engine compartment.

"I arrived to the scene just after the accident happened, and I was thinking 'this looks pretty bad, I hope everyone is ok' " Mr. Trillo recalled. "It was then that I noticed the driver of the truck was still in his vehicle, and I didn't think anymore, I just jumped out of my semi and ran to help out the injured driver."

Upon seeing his actions and the inherent danger that the vehicle posed to its passenger, two other men assisted Mr. Trillo in the lifesaving effort.

They found the truck's doors were crushed by the impact and were wedged shut.

The three men worked to pull the injured person through the window of the wrecked vehicle, no easy task considering the injured driver weighed more than 250 pounds and was disoriented and upset.

After dislodging the driver, the rescue party carried the wounded individual another 50 feet to where a trained medical technician was waiting to treat the injured man.

## Wingmanships



The man who Mr. Trillo pulled out of the vehicle had sustained serious head injuries and was later airlifted to the University Medical Center by Mercy Air, according to the Nevada Highway Patrol accident summary.

"As soon as I saw that everyone was safe and the emergency personnel were there, I went back to my truck and left for my next stop," Mr. Trillo said.

But his actions didn't go unnoticed. "It took great courage for these men to take the steps they did," said Lieutenant Frank Jarvis of Nye County Sheriff's Office, who arrived on the scene as the events were unfolding.

Mr. Trillo later received the Lightning Bolt Award, which was presented in recognition for his actions in saving the life of another in the face of grave personal danger, as well as receiving the 98th Range Wing coin from Col Christopher Haave, who at the time was the commander of the 98th Range Wing, which oversees the Nellis Test and Training Range.

"Mr. Trillo's actions certainly spared the victim from more serious injuries and probably even saved his life," said Lori Finch, Administrative Assistant with the 98th Range Support Services Group.

But, don't bother asking Mr. Trillo about his encounter. He modestly said, "I only did what any one else would do." Contrary to what Mr. Trillo says, there were many bystanders at the scene who watched, but did not assist.

"My coworkers, of course, say that I was a hero, but really I was just there at the right time to help someone who needed it," Mr. Trillo said. 🦋

Not to say that we expect all personnel to immediately jump into action at every mishap they see, but we do ask that we all use sound ORM practices when encountering this type of situation.

**1. FIRST WE MUST IDENTIFY THE HAZARD:** In this case it's a vehicle accident with a person who is trapped in a burning vehicle that could explode.

**2. WE NEXT ASSESS THE RISK:** In a burning vehicle, the probability of the person surviving is not good if immediate action is not taken to remove them.

**3. ANALYZE RISK CONTROL MEASURES:** Risk control measures include attempting to put out the fire or extracting the person from the burning vehicle.

**4. MAKE CONTROL DECISIONS:** Control decisions in this case are to either wait for help and hope that emergency services arrive in time or take immediate action to try and save this person from the burning vehicle.

**5. IMPLEMENT RISK CONTROLS:** Mr. Trillo's risk control measure was to extract the person and move him to a safe location away from the burning vehicle.

**6. SUPERVISE AND REVIEW:** Injured person was airlifted to a medical center for treatment.

*Further guidance on ORM can be found in AFPAM 90-902, Operational Risk Management (ORM) Guidelines and Tools.*



courtesy photo

**"I just jumped out of my semi and ran to help out the injured driver"**



# MONTHLY AWARD WINNERS

## Flight Line Safety



AWARD OF DISTINCTION

**M**Sgt Farmer led a 19-member aerial port team and nurtured a safety-first culture with zero mishaps this period winning his squadron's Team of the month. He ensured safe flight line ops by identifying MHE hydraulic problems overcoming a 35 percent equipment deficit with zero delays. He extinguished a passenger terminal electrical fire potentially saving the 5K sq ft, \$65K facility and preventing injuries to 40+ AF and Army personnel. MSgt Farmer mentored 18 Airmen on flight line driving safety. He co-developed a brief to 506 AEG leaders resulting in 60 accident-free days. He tackled the squadron's most hazardous job with ease; he up/downloaded 3K+ pax with zero mishaps/delays during 250+ EROs. He enhanced flight line force protection with tightened pallet yard access ensuring the safe handling of 545 pallets/1K tons. He expedited USMC special ops by overseeing a short-notice 8-ton upload. He overcame a 50 percent loss of MHE/cargo staging area by changing vehicle parking resulting in no delays during AMC ramp

repair. He collected 100+ lbs trash/FOD from cargo yard/parking ramp and installed new FOD signs. Directed safe DV ops; General Officers, DOS, DOD, and Congress visitors — safe movement for 30 high-vis pax. He expedited support for three ramp ceremonies by clearing a 32K sq ft troop formation area — safety ensured for 1.2K. He removed a hazardous flight line "blind spot" by arranging barriers in the congested area thus eliminating potential mishaps. He inspected and corrected 500+ Army cargo/bag pallets ensuring their airworthiness. MSgt Farmer maintained a spotless safety program and policed the base's busiest area resulting in zero findings during 332 AEW Safety visit.



**MSgt William T. Farmer**  
506th Expeditionary Logistics Readiness Squadron  
Kirkuk AB, Iraq

## Aircrew Safety



AWARD OF DISTINCTION

**S**ENTRY 62, an E-3 AWACS crew, were conducting a FTU night pilot proficiency sortie. While in the Tinker AFB traffic pattern, the AC noticed an inboard flap asymmetry. The crew had previously accomplished two simulated instrument approaches without incident. The flight crew took immediate action to reduce flap settings in order to maintain a stable flight configuration. The crew coordinated with Tinker tower, SOF, and ATC to set up holding in the standard fuel dump area. Once established in the fuel dump area and clear of traffic, the AC called for the flap asymmetry checklist IAW 1E-3A-1. The IP, AC, NAV, and FE accomplished five different compound checklists with flawless crew coordination. The NAV monitored altitudes, headings, holding pattern, and air traffic using flight instruments, and weather radar. The IP, AC, and FE also determined the safest landing configuration combining the asymmetrical and split flap checklists. The crew recomputed their takeoff and landing data for the configuration and accomplished a split flap approach and landing. They landed at 240,000 pounds with inboard flaps locked at 40

degrees and outboard flaps at 50 degrees. Teamwork, professionalism, and ingenuity led to the safe recovery of a \$335M AF asset and 11 E-3 crew members.



**Maj William Hart, Maj Dave Evans**  
1Lt Aaron Calhoun, TSgt Jesus Rivera  
966th Airborne Air Control Squadron  
552nd Air Control Wing  
Tinker AFB, Okla.



## Ground Safety



## AWARD OF DISTINCTION

**T**Sgt Kluttz was the primary USR for the 332 EMDG, the sole level three trauma facility in the Iraqi theater. He safeguarded 354 staff across eight buildings. He executed responsibilities on a part-time basis that normally warrant a full-time position. He developed and implemented a safety program for a new 110K sq ft medical compound. He supervised 18 flight safety monitors covering 16 sections; two of which were recognized by 332 AEW/SE for their exceptional efforts. He created a new process to transmit AEW personnel mishap info from ED to SE exceeding AFI 91-204 standards! He vigilantly ensured patient and staff safety by recognizing and correcting oxygen bottle hazards in ED, ICU, and OR. He reacted to a tripping mishap by installing a protective barrier which averted further injuries while verifying a member was okay. He aggressively tracked and resolved 18 Fire Prevention Inspection findings garnering praise by the Chief of Fire Prevention. He spearheaded site clean-up by leading a 50-man team to remove 12K cu ft of debris. He built and illuminated an alternate walkway

around a construction zone ensuring the safety of all visitors and staff. He was a valuable member of the BASH team performing avian eradication which protected aircraft operating in the busiest airspace in the AOR. His safety program thrived under his keen oversight. He routinely disseminated safety info helping Group mishaps to decline by 20 percent! He led the safety charge in a complex health environment — 2K surgical operations, 800 patients a month, with a 98 percent survival rate!



**TSgt Jason L. Kluttz**  
332nd Expeditionary Medical Group  
332nd Air Expeditionary Wing  
Balad AB, Iraq

## Pilot Safety



## AWARD OF DISTINCTION

**I**mmediately following an F-117A flight demonstration at the 2007 MCAS Miramar air show, Lt Col Flesch experienced a loud bang and an uncommanded abrupt left yaw with rapid pitch up while maneuvering to land. Lt Col Flesch immediately eased off the pull, moved both throttles to mid-range and leveled the aircraft at the pattern altitude of 1,500' AGL. Except for an "anti-ice" light on the warning light annunciator panel, there were no indications in the cockpit of impending engine failure. Now nearing mid-field, Lt Col Flesch decided to lower the landing gear and execute a full stop from a wide-base position. Upon lowering the gear, the aircraft began to rapidly lose altitude and airspeed. Without abnormal engine operation indications, Lt Col Flesch advanced both throttles to military power in an attempt to salvage both airspeed and altitude. Lt Col Flesch heard a loud noise in the cockpit, and the aircraft exhibited a noticeable yaw in the direction of the left engine while the jet continued to descend and lose airspeed. Confirming a left engine failure on his

instruments, Lt Col Flesch immediately raised the gear and lowered the nose to gain safe single-engine flying airspeed. He climbed to pattern altitude and executed a flawless single-engine approach to a full-stop landing. Under-powered and slow to accelerate from low speeds, the F-117A is challenging to fly in this known flight regime. Compounded by the earlier loss of altitude, there was no room for error in overcoming this major emergency. Lt Col Flesch's reactions saved countless lives of those in surrounding areas and of those gathered for the air show.



**Lt Col Todd Flesch**  
8th Fighter Squadron  
49th Fighter Wing  
Holloman AFB, N.M.



# MONTHLY AWARD WINNERS

## Unit Safety



## AWARD OF DISTINCTION

The 447th Expeditionary Operations Support Squadron standardized parking and services for CV-22 testing ensuring emergency responders were familiar with the newest aircraft in the theater. They identified 14 hazardous airfield obstructions. Their eradication ensured a safer BIAP flying environment. When an Iraqi Airlines jet departed surface with a blown-tire, they cleared debris and re-opened the runway in 30 minute. They reconfigured the aircraft taxi route during critical airfield repairs ensuring work site safety, integrity, and reducing FOD potential. They revamped a failing flight line driving program by strict oversight which eliminated CMA violations — a 100 percent reduction! They inspected 14 unit flight line driving programs for 100 percent compliance. They invigorated the BASH program which reduced wildlife strikes by 50 percent during the bird migratory season resulting in zero aircraft damage. Expert oversight with BIAP NOTAM program identified 19 flight safety hazards. Time-critical info was pushed to aircrew. Focal point for ATC and ACC revisions to an outdated instrument procedure — authored critical civilian flight safety information. Their vigilance ensured deteriorating runways and taxiways were usable

for GWOT; over \$12K in weekly repairs! They supported 4K+ aircraft operations; mitigated countless convoys traveling dangerous Iraqi roads — ensured DoD assets' safety. First on-scene during C-130 IFE; directed egress route/transport of 30 passengers — 100 percent pax safety guaranteed. They identified critical lighting outage on BIAP civil runway; minimal time repairs prevented complete ops suspension. Expertly recovered 1K+ lbs FOD during daily inspections — prevented millions of dollars in aircraft damage costs.



**447th Expeditionary  
Operations Support Squadron  
447th Air Expeditionary Group  
Sather AB, Iraq**

## Weapons Safety



## AWARD OF DISTINCTION

MSgt Charleston greatly contributed to sustained combat operations of multiple CJSOAC AC-130U gunship, MC-130P Combat Shadow, and MH-53 Pave Low aircraft in direct support of Operation IRAQI FREEDOM. He revamped the Squadron Additional Duty Weapons Safety program which ensured all safety regulations were adhered to. He recommended eight approved changes to increase safety and security. He worked closely with 332 AEW Munitions Flight to prepare, inspect, and load nine crates of 105mm high explosive airborne ammunition. He supported Navy CSAR with base movement of munitions ensuring the safe movement of 4,320 countermeasures. His superior SNCO guidance played a pivotal role in the safe inspection, assembly, and loading of over 70K rounds of munitions assets, valued at eight million dollars for on-going combat operations. He diverted and notified munitions operations of 7.62 suspension and coordinated download of 60K rounds of suspended aircraft ammunition eliminating a pos-

sible life-threatening mishap for combat aircrew members. He re-warehoused 220 munitions/30K pounds of explosives line items to facilitate a new Munitions Storage Area. He designed and built a Munitions Operations site and licensed the facility to combine CSAR, Navy, Army, and CJSOAC assets. MSgt Charleston developed new munitions residue recycling turn-in procedures which reduced/eased document processing by 65 percent. He directed the delivery of munitions 200 miles without mishaps. He organized a Tiger Team which joined personnel from sister services to build an approved explosive operation site.



**MSgt John E. Charleston  
1st Expeditionary Special Ops  
Maintenance Squadron  
332nd Air Expeditionary Wing  
Balad AB, Iraq**



# DECEMBER

## ACC SAFETY SALUTES SUPERIOR PERFORMANCE

### EIGHTH AIR FORCE

**Maj Juan C. Gallego**  
960th Airborne Air Control  
Squadron  
552nd Air Control Wing  
Tinker AFB, Okla.

**Maj Larry Miller**  
966th Airborne Air Control  
Squadron  
552nd Air Control Wing  
Tinker AFB, Okla.

**SrA Christopher Harlan**  
965th Airborne Air Control  
Squadron  
552nd Air Control Wing  
Tinker AFB, Okla.

**SrA John M. Roberts**  
509th Operations Support  
Squadron  
509th Bomb Wing  
Whiteman AFB, Mo.

### NINTH AIR FORCE

**1Lt Jonathan E. Sprague**  
4th Expeditionary Fighter  
Squadron  
332nd Air Expeditionary Wing  
Balad AB, Iraq

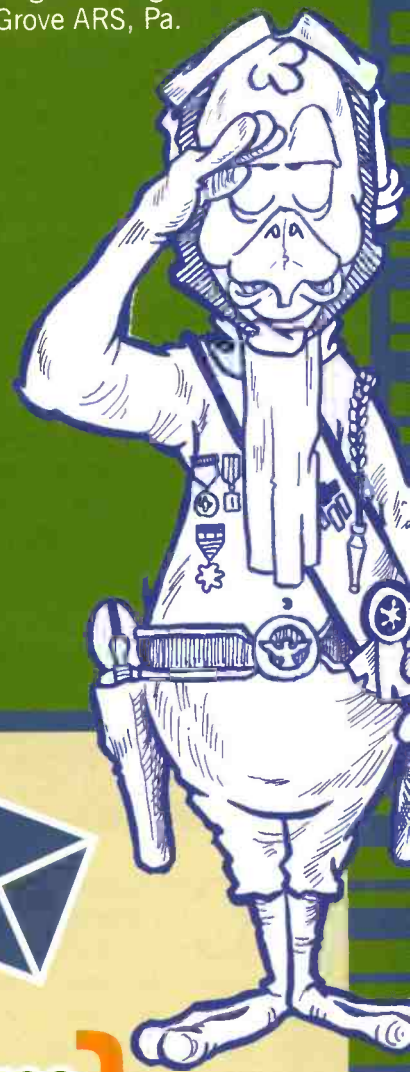
**WHISTLER 87 Crew**  
908th Expeditionary  
Air Refueling Squadron  
380th Air Expeditionary Wing  
Dhafra AB, Iraq

**Maj Eric M. Yape**  
4th Expeditionary  
Fighter Squadron  
332nd Air Expeditionary Wing  
Balad AB, Iraq

**TSgt John P. Cillo**  
455th Expeditionary  
Maintenance Squadron  
455th Air Expeditionary Wing  
Bagram Air Field, Afghanistan

### USAF WARFARE CENTER

**Capt John Howley**  
111th Fighter Wing  
Willow Grove ARS, Pa.



# SEND US YOUR STORIES ABOUT . . .



## { BARBEQUES, OUTDOOR SAFETY, HEAT STRESS, HEAT STROKE PREVENTION, SEAT BELTS, ETC. }

**VISIT US ON THE WEB**



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E-mail: [acc.sem@langley.af.mil](mailto:acc.sem@langley.af.mil)  
or Fax: DSN 574-8975  
Comm (757) 764-8975  
Attn: Maj Brad Robinson

Or send a letter to:  
THE COMBAT EDGE  
HQ ACC/SEM, Attn: Maj Brad Robinson  
175 Sweeney Blvd  
Langley AFB VA 23665-2700  
Telephone: DSN 574-8868, Comm (757) 764-8868



# MONTHLY AWARD WINNERS

## Unit Safety



## AWARD OF DISTINCTION

The 332nd Fire and Emergency Services Flight provided crash/fire/rescue/emergency medical and fire prevention services, painstakingly ensuring the safety for 30K+ military, DoD civilian and contract personnel occupying Balad Air Base. They are the only joint-service fire department in the Iraqi theater of operations integrating 51 Air Force and 8 Army personnel. They responded to 100+ structural fire incidents resulting in no losses to mission essential structures and facilities. They utilized the new Army Tactical Firefighting Truck in the "first ever" real-world response; extinguished burn-pit fire. They eliminated smoke obstruction for 200+ aircraft flying combat missions which enabled continued safe take-offs and landings. They validated new tactical firefighting system under actual combat conditions; increased fire suppression capacity. They were critical to life preservation/safety during 105 emergencies; saved combat coalition forces and Iraqi citizens. They provided immediate life support/sustainment; established patient stabilization and allowed transport to AFTH. They completed 300+ facility inspections ensuring structures were within all applicable fire safety guidelines. They trained 30+ Army Fire Marshals on fire prevention techniques resulting in a 30 percent reduction in mishaps. They volunteered 100+

off-duty man-hours directly supporting five USO shows to ensure compliance with safety codes. They spent 300+ hours working at the AFTH providing casualty triage. This significantly increased "patient-to-provider" ratio. They garnered 10+ advanced firefighting and multiple vehicle operation certifications. They responded to 75+ in-flight emergencies; all incidents were mitigated with no loss of aircraft or personnel!



**332nd Fire and Emergency Services Flight  
332nd Expeditionary Civil Engineer Squadron  
332nd Air Expeditionary Wing  
Balad AB, Iraq**

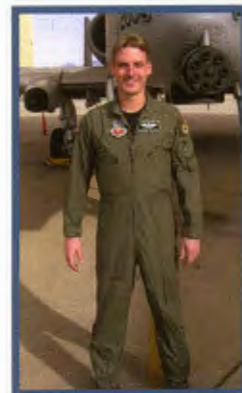
## Flight Line Safety



## AWARD OF DISTINCTION

Capt Nelson, the 358 FS Flight Safety Officer, personifies commitment to a proactive safety culture within the A-10A FTU. While taxiing for a local training sortie, Capt Nelson noticed a potentially hazardous situation in the making. Weapons carts/maintenance equipment, though parked in designated areas, appeared within the required 10-foot wingtip clearance. Coming to a stop, Capt Nelson ensured the equipment was moved prior to any further movement of his aircraft. After the flight, he took the initiative and went to the flight line to measure and ensure wingtip clearance compliance. The measurements strikingly revealed the required wingtip clearance could not be maintained while the A-10 turned from the parallel taxiway in the parking area to the taxiways which lead to or from the main taxiway. Realizing dire consequences of mispainted lines, he instantly brought the issue to the attention of 355 FW/SEF. As a direct result of Capt

Nelson's astute observations and initiative, a message was rapidly disseminated to all maintenance and flying units to make certain equipment is not parked in the mismarked areas. In addition, the situation was brought to the immediate attention of appropriate Operations and Maintenance leadership, and the lines were remarked and repainted within 8 days of Capt Nelson's initial observation. No small task as over 40 corners around the A-10 sunshades and parking ramp needed immediate attention.



**Capt Rodger M. Nelson  
358th Fighter Squadron  
355th Fighter Wing  
Davis-Monthan AFB, Ariz.**



## Pilot Safety



## AWARD OF DISTINCTION

**C**apt Adam Fisher, flying his first A-10 sortie, recovered his \$12 million aircraft on only a single-engine.

While practicing turning rejoins in the Tombstone Military Operating Area, Capt Fisher pushed his throttles from idle to max and immediately felt the aircraft shudder and heard a gunshot-like "bang" from the left side. He quickly pulled the throttles back, noticed left engine gauges fluctuating out of limits, and called "Knock-It-Off." Capt Chris Rust, the IP, acknowledged the KIO and established a chase position on the stricken aircraft. Demonstrating outstanding FRM, Capt Rust assisted Capt Fisher in troubleshooting the malfunction while continuing to keep control of his own aircraft and maintaining situational awareness and control of the flight. After noting the abnormal engine indications, including ITT above maximum allowable and engine core RPM stagnated below limits, Capt Fisher correctly diagnosed the problem as an unrecoverable compressor stall. He methodically ran all the appropriate checklists, successfully shutting down the malfunctioning engine. Capt Fisher focused his attention to his

next daunting task — landing an aircraft he had never flown before, at an airfield he had never seen before, and do it all with only one engine inoperative. Capt Rust's expert instruction helped set his student up on a 15 nautical mile final, perform an alternate gear extension (due to loss of left-side hydraulics), and fly a textbook single-engine approach to a full-stop landing. Capt Fisher brought his aircraft to a stop on the centerline of the runway using the emergency braking system. Capt Fisher's outstanding academic study and airmanship allowed him to handle one of the most difficult A-10 emergency procedures on his very first sortie in the aircraft.



**Capt Adam C. Fisher**  
358th Fighter Squadron  
355th Fighter Wing  
Davis-Monthan AFB, Ariz.

## Aircrew Safety



## AWARD OF DISTINCTION

**W**hile returning to Whiteman for pattern work, Maj Calhoun lowered the landing gear of his B-2 at an 8 mile final. Upon lowering the gear he received near simultaneous hydraulic cautions for both number one and four hydraulic systems. Due to a hydraulic fitting failure, both reservoirs had depleted. Hydraulic systems one and four are the primary systems for landing gear operations and braking capability. Without them, the B-2 uses accumulator pressure which may deplete in as little as 15 minutes once the landing gear is lowered. On final they were left with a right main unsafe gear indication with the left main and nose wheel down and locked. Instinctively, Maj Calhoun referenced and executed the emergency gear extension checklist to obtain a three down and locked gear configuration. Cognizant of their time limit on the accumulator pressure and still in a safe position to land, the aircrew elected to continue the approach to a full stop. Upon landing they were able to use the accumulator pressure to apply brakes, stop the aircraft with about 1,000 ft remaining and safely emergency egress the aircraft. Capt Rezac and Maj Calhoun performed flawlessly despite losing 44

gallons of hydraulic fluid and the use of two 4,000 psi systems. Capt Rezac displayed superior composure while piloting the \$2.2 billion B-2 safely back into maintenance's hands. Maj Calhoun displayed excellent airmanship and use of CRM while accomplishing the necessary checklist procedures to safely recover the aircraft in a time-critical situation.








**Maj Matt D. Calhoun, Capt Tim B. Rezac**  
13th Bomb Squadron  
509th Bomb Wing  
Whiteman AFB, Mo.





## FY08 Aircraft

As of February 1, 2008

	Fatal	Aircraft Destroyed	Aircraft Damaged
8 AF			
9 AF			
12 AF			
AWFC			
ANG (ACC-gained)			
AFRC (ACC-gained)			

## FY08 Ground

As of February 1, 2008

	Fatal	Class A	Class B
8 AF		1	4
9 AF		2	0
12 AF	0	0	0
DRU's	0	0	0



= Fatal



= Fatal due to misconduct

## FY08 Weapons

As of February 1, 2008

	Class A	Class B
8 AF	0	0
9 AF	0	0
12 AF	0	0
AWFC	0	0

## Aircraft Notes

One of our ACC-gained units lost an F-16C during training in January. Fortunately, the pilot ejected safely. When flying hours or airframes are not available, it is even more important to get the most out of simulator training. Make the effort to match simulator scenarios to the actual situations that may arise. Ask the following questions: Are the emergency and training scenarios realistic? Is your training going to a logical conclusion? Are you taking shortcuts or developing bad habits because of the way the simulator operates? If so, how can it be fixed? Can you recognize the effects of fatigue or poor CRM in the simulator? The sim is a big part of training like we fight. When the hazards of fatigue, poor weather, communications, or mission complexity add up, the difference between success and failure may depend on what you saw in the sim.

## Ground Notes

ACC sustained two losses in January. One was needless because good PRM and Wingman practices were not utilized. The other loss was sustained when an Airman's heart gave out during his annual PT test. The command is sustaining a 40 percent reduction of Class A mishaps over the same period from FY07.

## Weapons Notes

Moving into the second quarter, ACC is still maintaining its good start into FY08. However, we have recently had two munitions activations. These are caused by technicians not following their tech data. If we continue ignoring our tech data we will have a major incident. If tech data doesn't cover the operation you are performing or you feel the tech data needs improvement, take the time to process the AFTO Form 22. "It's always been done this way and our tech data just hasn't caught up yet" isn't an excuse. Take the time now to make the change. Thanks for the emphasis you put towards weapons safety every day.

## Legend

Class A - Permanent Total Disability; Property Damage \$1,000,000 or more  
 Class B - Permanent Partial Disability; Property Damage between \$200,000 and \$1,000,000  
 Class C - Lost Workday; Property Damage between \$20,000 and \$200,000  
 \*\* Non-rate Producing  
 \* Fatality

## Symbols for Mishap Aircraft





# ACC ANNUAL AWARD WINNERS

**Congratulations to the following  
FY 07 ACC Annual winners:**

## COMMANDER'S AWARD FOR SAFETY

Ninth Air Force  
Shaw AFB, S.C.



## WING SAFETY PROGRAM OF THE YEAR

509th Bomb Wing  
Whiteman AFB, Mo.



## WING CHIEF OF SAFETY OF THE YEAR

Lt Col Sanders E. Prescott  
33rd Fighter Wing  
Eglin AFB, Fla.



## FLIGHT SAFETY OFFICER OF THE YEAR

Capt Julius C. Romasanta  
366th Fighter Wing  
Mt. Home AFB, Idaho



## FLIGHT SAFETY NCO OF THE YEAR

MSgt Roy H. Ollie  
509th Bomb Wing  
Whiteman AFB, Mo.



## CREW CHIEF SAFETY OUTSTANDING ACHIEVEMENT

SSgt Anthony J. Medaris  
1st Fighter Wing  
Langley AFB, Va.



## FLIGHT LINE SAFETY OUTSTANDING ACHIEVEMENT

TSgt Tony F. Hyatt  
33rd Fighter Wing  
Eglin AFB, Fla.



## WEAPONS SAFETY OUTSTANDING ACHIEVEMENT

Mr. Brian A. Tripp  
509th Bomb Wing  
Whiteman AFB, Mo.



## LOGISTICS SAFETY OUTSTANDING ACHIEVEMENT

Capt Jeffrey M. Godzik  
509th Bomb Wing  
Whiteman AFB, Mo.



## GROUND SAFETY OUTSTANDING ACHIEVEMENT

Mr. Timothy M. Edwards  
4th Fighter Wing  
Seymour Johnson AFB, N.C.



## GROUND SAFETY SPECIAL ACHIEVEMENT

SSgt Matthew H. Perraut  
366th Fighter Wing  
Mt. Home AFB, Idaho



## TRAFFIC SAFETY SPECIAL ACHIEVEMENT

33rd Fighter Wing  
Eglin AFB, Fla.





