

# *TAC ATTACK*

OCTOBER 1989





# ANGLE OF ATTACK



**E**veryone wants to fly like we are going to fight. But we need to ask ourselves, "Who are we going to fight at 600 kts and at 100 ft?" We don't have any potential adversaries that are 12 feet tall. We don't even have any which train to 6 feet tall. If we are honest with ourselves, we have to say the only people we fly against at 100 feet and the "speed of heat" are ourselves and our allies — nobody else trains down there. Before we jump right back into our training with the beginning of the new fiscal year (FY), let's ask ourselves a few pertinent questions. Such as, how many of our folks have just returned from one or more weeks of "use or lose" leave? Have I made any effort to remind the schedulers of the wisdom of starting off the new FY with a walk- then- run plan? Do I want the Lt who has just returned from two weeks of leave to be scheduled for the most demanding ACM ride he will ever have? Or should I consider having the squadron schedule some BFM flights (or for us air- to- mud types, some controlled range flights) to get the mind and muscles fine tuned again? Or if you are the guy who just returned, is your first week back the time to try out all those "new" techniques you thought of, while you were on leave? A famous musician once said, "If I don't practice one day, I can notice the difference. If I don't practice for three days, my critics can notice the difference. "

What about your flying skills — when do you begin to notice a difference?

Can your flying techniques increase your chances of taking a hit from lightning? Is there a difference between static discharge and lightning? Can you get zapped 20 miles from a thunderstorm? Can you do anything to reduce the probability of your jet being struck by a bolt from the blue? The answer to all those questions is — **yes!** To find out the logic behind those answers and to gain some new techniques to add to your tactical bag of tricks, turn to page 4 and read Murphy's Law — Lightning Strikes Two Ways.

I want to say farewell to two Lt Cols who are departing the HQ TAC Safety shop to go share their leadership and flying skills with TAC. Lt Col Vandy Vandenberg will soon be flying the AT-38B at Holloman AFB and Lt Col Mo Sonner "gig'em Aggie" will return to flying the E-3 AWACS at Tinker AFB. Best wishes for continued success to both of you.

Happy Halloween, pardner.

*Jack Gawelko*  
**JACK GAWELKO, Colonel, USAF**  
**Chief of Safety**

# TAC ATTACK

DEPARTMENT OF THE AIR FORCE



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### TAC SP 127-1

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## TAC ATTACK

OCTOBER 1989



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# MASS AT



**Maj Hap Tucker**  
Editor, *TAC Attack*

## OPSEC

(Operations Security) was just about nonexistent. Everyone had heard something about the upcoming mass gaggle launch — if you need any details, just

go over to the barber shop. It would be an-all out effort with continuous target coverage for up to two hours. Yeah, the Recce sorties would be before and after the main attack. Those who hadn't heard about

October 1989



# LAUNCH SUNDOWN

it could easily see the supply buildup. That buildup combined with a couple of stories in the base paper were more than enough clues for even a novice spy to deduce the scheduled date and proposed target area.

On top of that, we are always so predictable! You know, stand down to get everything ready. Large purchases of specialized clothing — the type normally used for this mission. Flying the same attack with the same tactics — sure they worked before, but every time we've done this mission, it's almost a carbon copy of the last one. You could probably just change the date on the after-action report and nobody would notice the difference!

A "C-day" (the day on which movement for a deployment operation begins) wasn't declared, because the needed forces were already in place and available. Contingency plans were available to deploy additional forces, but the probability that they would be needed was considered minimal.

"D-day" (the day on which a particular operation commences) arrives and the element of surprise has surely been diminished and most likely lost. Briefing — na. Most of the crews just suit up and strike out in flights of two or more. Some of the crews are wearing special masks, which really degrade their peripheral vision

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**Most of the crews just suit up and strike out in flights of two or more.**

**Some of the crews are wearing special masks, which really degrade their peripheral vision and may even cost them their lives.**

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and may even cost them their lives. There are some old pros, but there are a lot of rookies also. You never really know how they will do under the pressure of such a large mission. Will they hack it, or will something unexpected happen and cause them to cut and run — right into the jaws of death? Intel reports that the ground threats will be high, with lots of fast moving traffic. I guess this could be called a real life final exam, to determine if the training was thorough enough or not.

Call signs range from Angels to Zebras with the bulk of the







# MASS LAUNCH AT SUNDOWN

players using Ghost or Goblin. No old crews here, average age is nine, with the youngest about two years old and just able to walk. Each is driven with a wild desire to get the most candy he or she can. Armed with a bag to collect the loot, some head out without even being given the boundaries of where they can or cannot "trick-or-treat."

If you are going to be pulling SOF (Supervisor of Family) duties, you may want to review the following checklist:

1. Have a plan and get involved.
2. The time to tell the kids you will be painting their faces with clown makeup is the week before Halloween (remember to buy some makeup before Halloween night). Don't expect to get nominated for "Father of the Year" if you tell your kid at the last minute, "Hey, take off that mask — you can't see anything!"
3. Wearing bright clothing (you know white angel or ghost), some reflective tape, or carrying a flashlight will help make the little people more visible to drivers.
4. Team up with some other adults to help escort the kids around the neighborhood. It's a lot easier for two or three adults to watch the kids than for just one adult.
5. Let the kids know what the



plan for the candy is:

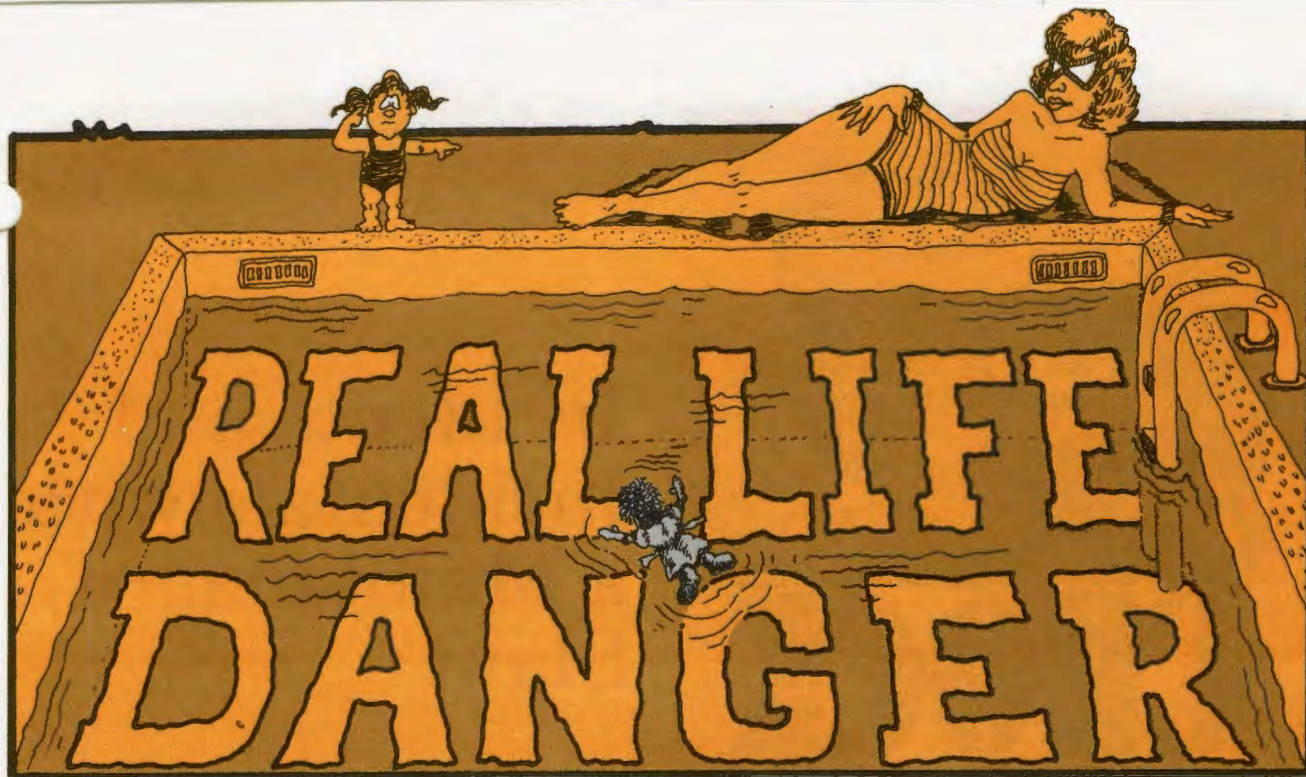
- a. They can eat anything, and we will use our kids to find out if there are any lunatic poisoners in the area.
- b. They can only eat the candy after we get back home and sort thru it to remove any unsealed or suspicious looking candies.
- c. They can only collect the candy, but when they get home it will be exchanged for an equal amount of goodies which we have bought or made.
6. Give the kids the boundaries you want them to have (did they really ring the doorbell at 2330?) — either this neighborhood and/or this time, the mission is over.
7. If you are giving out the candy at home, be sure to have the sidewalk well lit, and free from any roller skates, etc.
8. Candles in pumpkins look neat, especially to the little

people who would love to play with it! Be sure it is out of their reach and under constant adult surveillance.

9. Depending on the neighborhoods, you may want to consider getting together with some other parents and having your own party for the kids. You can have games and treasure hunts where the kids still get candy (and that's what it's all about to them), but you don't have to worry about whether the candy has been tampered with, or will the kid bolt out in front of traffic.

If you are not directly involved with launching, supervising, or supplying this mass gaggle, then use extra caution if you go out while the mission is in progress. If you are off to your own party, have fun! But, be sure there is a designated driver along, just in case you need to dodge a low-flying ghost! ➤





**Major Dale Botsford**  
**602 TAIRCW**  
**Davis-Monthan AFB AZ**

I was at the office, getting ready to visit my boss to obtain a decision on an exercise I had been planning for him, when I got a call from our neighbor. She told me something had happened at our house, that an ambulance had come and taken my wife and a child, assumed to be our two-year-old daughter away.

I rushed to St. Joseph's hospital to find my wife in tears. She told me what happened: She had left the two toddlers just outside the pool gate in our backyard while she came in to answer the phone; she spent about one-to-two minutes on the phone, then came back outside to discover Katrina had fallen in the pool and was floating face down. She scooped the little girl out of the water and ran out through the house into the street screaming

for help. At least three neighbors responded immediately and one, who had taken a CPR course previously, used rescue breathing to try and revive the child. Katrina responded to this by gasping and coughing out material and then beginning to breath. 911 was called and an ambulance was dispatched and on the scene in about five minutes. They just happened to have a doctor riding with them, so Katrina got the best of care as quickly as possible. She was taken to a local hospital, stabilized, then placed in intensive care one night. Since her release, she has shown no signs of permanent impairment, mental or physical.

Everyone was fortunate here; the neighbors knew first aid, and the ambulance was close by and had a doctor on board.

Lessons learned here were cheap. Here are some actions we have taken to prevent this from happening again:

1. We bought a cordless phone; you can carry it out to the pool

with you, so you aren't tempted to leave the children unwatched to answer it.

2. We bought a combination lock for the pool gate— even three-year-olds can unlatch a gate—so it must be locked.

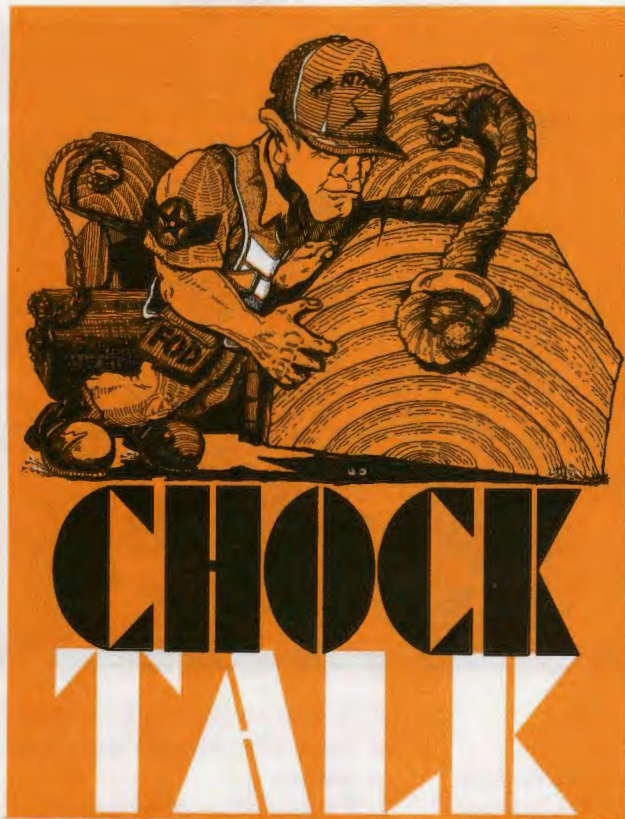
3. We posted pool rules and instructions for rescue breathing and CPR.

4. We enrolled my wife and daughter in a CPR course given by the Red Cross; it's so important to restore breathing prior to the 4-6 minutes of unconsciousness after which brain damage will occur.

5. We bought a life ring and rope to complement the rescue equipment already on hand. We feel that having this on hand keeps your mind on safety and provides the tools to "reach, throw or go."

6. The most important thing we did was decide that an adult will always be out at the pool when kids are swimming; it only takes seconds for a child to fall in and drown if no one is there to rescue them immediately. ➔





chock talk

## OOOPS! There it goes

**T**he crew had finished its BFM sortie and taxied to the end-of-runway (EOR) area for post flight checks. The EOR crew was checking the aircraft pylon sway braces for security when the instructor pilot noticed an engine rumble



## Incidents and Incidentals with a Maintenance Slant

and immediately initiated engine shutdown procedures.

The EOR crew member had exposed his headset to suction from the left engine, and it was sucked into the engine intake as a result. Fortunately, the entire headset was prevented from going into the engine by the restraining cord, but the ear muff did go in, causing damage from the IGVs through the eighth stage of the compressor.

A jet engine's suction is insidious. Don't allow something being sucked into the intake to be the first indication that you've wandered "into harm's way. Give the intake of a running engine as wide a berth as possible.

## I should have known

**A**n F-16 was sitting in the parking spot with the engine running when it suddenly sucked up an exhaust cover containing two AOA probe covers. As a result of the incident, the F-16 ingested one of the probe covers.

This incident happened when the loose exhaust cover was blown in front of the mishap aircraft by another F-16 taxiing out of an adjacent parking



space. There were several people who could have kept this from happening. The crew chief launching the taxiing F-16 was probably the person responsible for laying the intake cover and probe covers on the ground. He should have ensured they were secured from jet exhaust blast, gusting winds, etc., before the chocks were pulled and the jet was allowed to move. What about the folks working around the mishap jet? Could they have noticed the objects lying loose on the ramp and potentially causing FOD in their airplane?

## Foreign Object Damage

**FOD** may only be a three-letter word (instead of the infamous four-letter variety), but it should be just as distasteful to us. I'm sure you can easily think of several losses which we suffer each time foreign object damage occurs:

- damaged resources (engines, etc.)
- valuable dollars lost to repair expenses
- lost training/operational sorties
- lost man-hours from work done to repair damage

All of these reasons are enough to fight FOD, but there are even more disastrous results that could occur. For example, an F-4 crew was climbing out after takeoff and had just pulled the throttles out of afterburner when they heard a very loud compressor stall. The pilot retarded the throttle to idle and the stall cleared. Two minutes later when the pilot tried to advance the left throttle, the engine stalled again at 85 percent. The pilot left the throttle in idle, dumped fuel and performed a heavyweight single-engine landing.

The cause of the engine problem was a 10/32 bolt that made its way into the engine from an unknown source. Result: a damaged engine and a noneffective mission. Obviously, it could have been much worse. Let's all do our best to fight FOD!



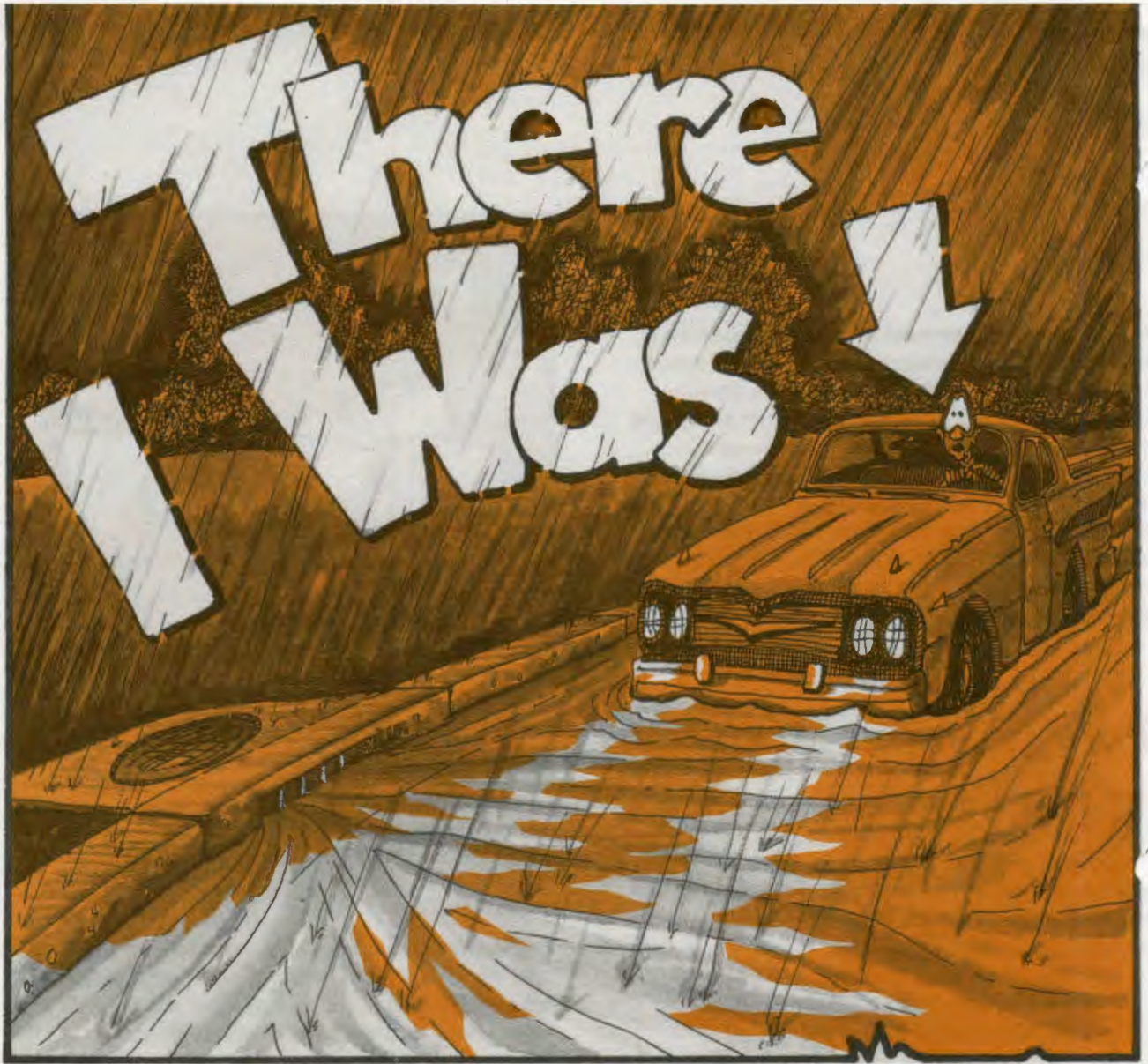
## Give it a wide berth

**T**wo F-4 crew chiefs had assisted in launching an aircraft and, when it was ready to taxi for takeoff, the crew chief marshalled the aircraft forward about thirty feet to accomplish an end of runway (EOR) inspection.

The assistant crew chief positioned himself to the left rear of the aircraft while the crew chief was located to the right and in front of the jet. After completing the EOR inspection, the crew chief gave the pilot the signal to taxi. Both crewmembers visually checked for personnel and equipment prior to adding power, then started to taxi by advancing power to approximately eighty percent. At this time, the assistant crew chief crossed about 20-30 feet behind the taxiing airplane, intending to help recover another aircraft. He was blown over by the jet's exhaust and came to rest about 75 feet behind the aircraft, suffering several bruises and losing six workdays.

Working around any running aircraft has potential hazards involved. Don't put yourself into a corner by losing sight of all that's going on around you. If you decide to challenge a jet's exhaust, you'll always come out on the losing end.





there I was

**Bob Balsie**  
Endicott, NY

**I**t was March of 1966 and I had stayed past quitting time at the gas station where I was working in order to install a new muffler on my 1961 Chevy Bel Air. Cars didn't come standard with seat belts in '61; but because I was a fan of auto racing, and race drivers always wore seat belts, I had purchased and installed a pair of seat belts myself. When I left work that night in March, it was pouring down rain, so I knew that I

would have to drive slowly. The gas station was only about two miles from my house, but I'd made the trip a hundred times and felt that I could almost do it in my sleep. I was driving about thirty miles per hour and was only about two blocks from home when I came to a small hill. At the bottom of the hill was a shallow dip in the road. On both sides of the road were ditches to carry off rain water, and a small culvert ran beneath this dip connecting the two ditches. It was raining so hard that a large quantity of water had backed up in the ditches,

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**It was raining so hard that a large quantity of water had backed up in the ditches, and the culvert couldn't take the water fast enough; so it was flowing across the road.**

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and the culvert couldn't take the water fast enough; so it was flowing across the road. As I started down the hill, I saw a car coming the other way. The car turned out to be a very large 1959 auto (you know, 4000 lbs, 130 inch wheel base, i.e., Sherman Tank). The other driver didn't see the stream of water on the road; and when he hit it, he lost control of his car and came into my lane.

The whole event probably took less than two seconds to occur, but time seemed to stretch out considerably. First, there was denial on my part (No, he can't be coming over into my lane), then disbelief (this can't be happening!) and finally, reality hit (**THIS IS HAPPENING!**). At the last second, before impact, I spun the wheel to the right and, thereby, avoided a head-on collision, but his car sideswiped mine. The impact caused my upper body to swing forward, and I hit my face on the steering wheel with quite a bit of force. My right hand also hit the windshield and was cut on the shattered glass. The impact caused my car to spin sideways off the road and into the drainage ditch.

The car stopped abruptly, suspended over the water by the front and rear bumpers. My body was thrown toward the right side of the car—or at least it would have been if I hadn't been wearing the seat belt. Instead of being thrown violently against the passenger's door and possibly out into the water-filled ditch, I was held firmly in place by my

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**The other driver didn't see the stream of water on the road; and when he hit it, he lost control of his car and came into my lane.**

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belt. It took a couple of seconds to sort out what had happened before I exited the car through the driver's door which had sprung open on impact. The other driver's car was badly

damaged, but my trusty C was totaled. However, because the seat belt, my only injuries were a cut on my thumb and a bad cut under my nose where my face had hit the steering wheel.

What can we learn from this experience? First, this accident occurred only two blocks from my home, not on a long trip; **MOST ACCIDENTS OCCUR WITHIN 25 MILES OF HOME.** Second, the speed involved was relatively low—only thirty miles per hour; **YOU DON'T NEED HIGH SPEEDS TO PRODUCE A SERIOUS ACCIDENT.** Third, accidents can happen any time—even on a trip that you've safely made many times in the past. Fourth, wear your seat belt **AND** shoulder harness. My injuries were relatively minor, but I might have escaped injury altogether had I had shoulder harness to restrain my upper body.

Perhaps the most interesting thing about this whole episode is that a couple of weeks before I had my accident, I noticed that I was becoming sloppy about seat belt usage. So one night as I was leaving work at the gas station, I got in the car and said to myself, "I know I'm never going to need this thing, but I probably should wear it all the time anyway," so I made it a habit to buckle up from then on. Two weeks later—**BANG!**

I know that the seat belts in some cars are difficult or uncomfortable to wear, and that you "know" that you'll never need them, but make it a habit to buckle up anyway. With all of the nostalgia concerning older cars from the fifties and sixties, you never know when you might meet up with a "Sherman Tank."







## TAC AIRCREW OF DISTINCTION

**C**aptain Thomas G. Wilson, on 3 May 1989, was flying an F-16 on a Maverick sortie in an operational readiness exercise when he detected abnormal engine nozzle response. He elected to return to Shaw AFB, where he burned down fuel to reduce the aircraft's gross weight. When Capt Wilson reduced power to prepare for landing, his engine experienced a catastrophic failure. With severe structural vibrations and an engine fire, Capt Wilson calmly and precisely maneuvered his aircraft to a base key position in preparation for a

stop his aircraft prior to the arresting cable.

Capt Wilson's superior demonstration of airmanship averted possible loss of a valuable combat aircraft. His judgment in a stressful time-critical environment and outstanding performance have earned him the TAC Aircrew of Distinction.



**Captain Thomas G. Wilson**  
17 TFS, 363 TFW  
Shaw AFB, SC

flameout landing, and then shut down his engine. After confirming his EPU was running and the hydraulic system pressure was low, Capt Wilson performed an alternate gear extension. He executed a flawless flameout landing and used accumulator braking to





# Fleagle





# OUT OF THE ENVELOPE

**CMSgt Billie Hester**  
Chief, Ground Safety

**E**xperience can be a costly teacher—especially if you don't survive the lesson being taught. A flight instructor once remarked, "My job is to keep the student pilots within an area or 'learning envelope' where they can learn from their mistakes, but not get killed by them." As supervisors and coworkers, we need to help each other keep down the tuition payments of "the school of hard knocks."

For example, on the first ride of a just purchased used motorcycle, the proud owner collided head-on with a gravel truck and was instantly killed. The mishap report was straightforward and conclusive—until the background was determined. The previous owner, a friend of the deceased, knew the new owner had never ridden a motorcycle, had never been trained, and probably wouldn't consider taking a motorcycle riding course. The previous owner also knew his friend was leaving immediately after the transfer of title on a cross-country outing. The purchaser had even talked with his fellow workers and supervisor about his plans for the trip and his lack of knowledge in operating a motorcycle.

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**The mishap report was straightforward and conclusive - until the background was determined.**

**The previous owner, a friend of the deceased, knew the new owner had never ridden a motorcycle, had never been trained, and probably wouldn't consider taking a motorcycle riding course.**

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But what about the fellow workers, the seller, and the supervisor? Should they have taken the time to help the prospective rider better grasp the situation? Should they have shared that most motorcycle fatalities involve nonuse of helmets, alcohol, and/or **lack of hands on training**? Or that the best place to get training is not on a new bike on your "first ever" motorcycle cross-country trip.

Consider this recreational example: Several members of a unit had been planning a mountain-climbing expedition in a

local mountain range, although none of them had any real experience. The outing had been discussed over a period of time and the climbers had "promised" their supervisor they would be careful. Everybody in the shop knew of their inexperience, but nobody offered advice or attempted to discourage the pending climb. "We've been readin' about climbin' . . . and have spent a lot of time studying the climb sequence in that movie. . . Eiger Sanction," they told their listeners.

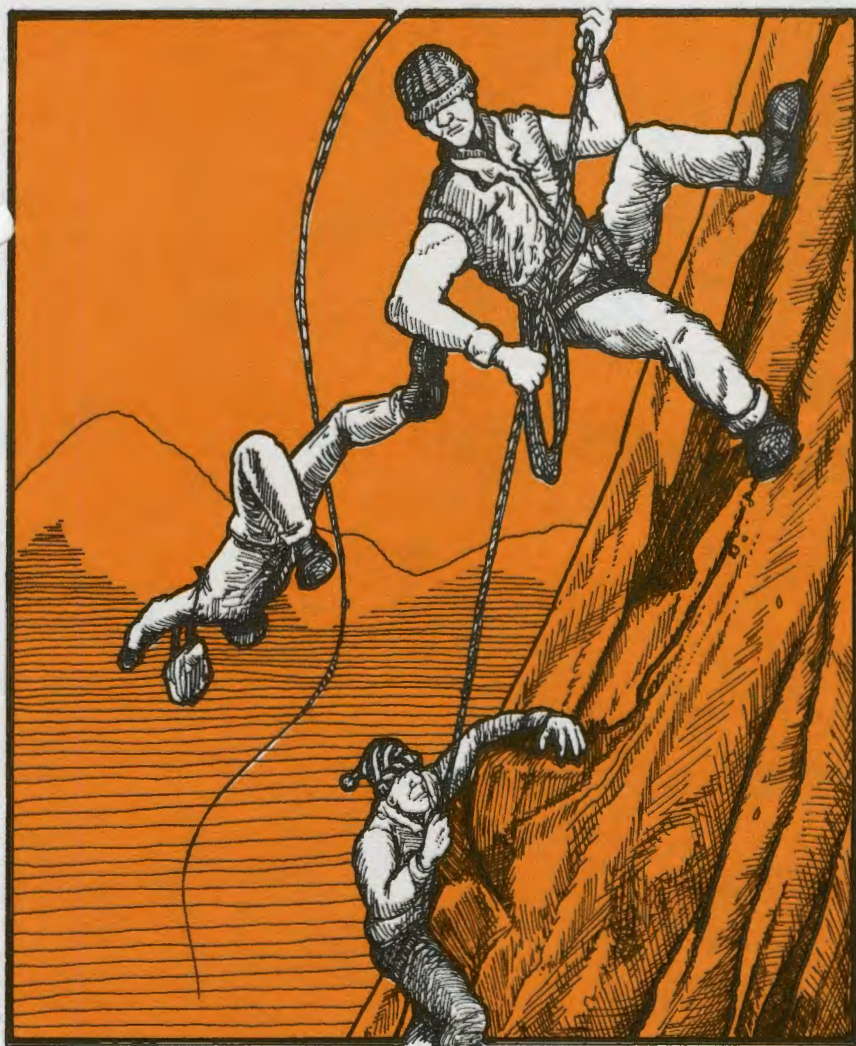
The "climbers" never made it past the first vertical wall. The

leader slipped and pulled the others down—there were no survivors. Yes, they should have known better, but someone in their shop should have cared

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**Several members of a unit had been planning a mountain-climbing expedition in a local mountain range, although none of them had any real experience.**

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enough to try and reason with them, to try and keep them **WITHIN** a safe learning envelope. Even in the flat lands of Florida, universities offer courses in mountain climbing, where the students can discuss their falls and get another chance to do it right.

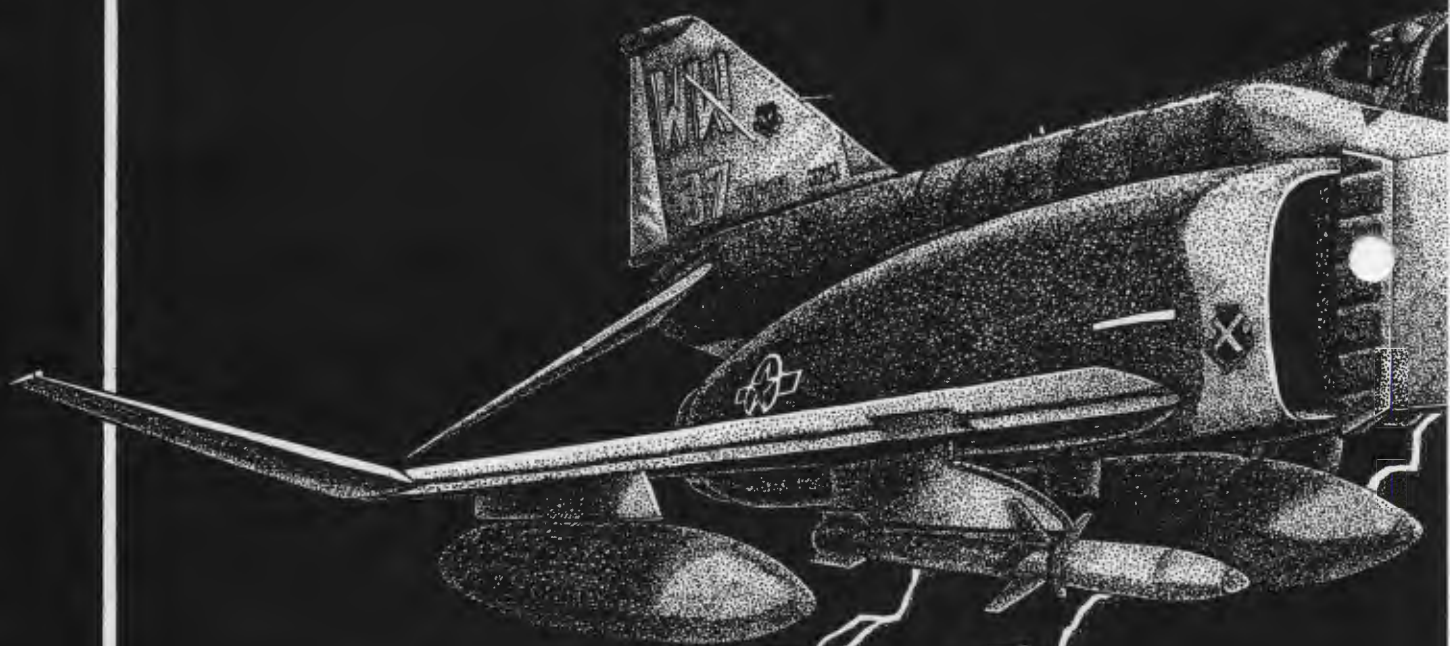
In the above situations, what should they have done? Do you know of similar situations in your own unit; and if so, what should you do now? If your answer is "nothing," then I suggest you ask yourself the following question. Do I just not really care about my coworkers, am I complacent, or is it something else? Based on your answer, you'll be better prepared to work at getting more "constructively" involved. No, you don't want to try to run other peoples lives, but you must care enough about your coworkers to help them to stay within a safe "learning envelope."



# F-4G WILD WEASEL

37 TACTICAL FIGHTER WING

30 MAR 1981 - 5 OCT 1989









# MURPHY'S LAW -





# lightning strikes two ways

**Capt John D. Murphy**  
**(No Relation!)**  
**5 WW/DNS**  
**Langley AFB, VA**

**H**ow likely is your aircraft to be damaged by lightning? Considering that only 22 lightning strikes damaged TAC aircraft during the last 23 months, the odds are certainly on your side. However, are there any precautions or techniques we can use to increase the miss distance? The answer is yes... and no.

"A bright flash of light and a loud 'boom' similar to a cannon going off" is how a crew described a discharge they encountered while descending to land. Flying at 10,000 ft, the airplane entered instrument meteorological conditions (IMC) and encountered very light, steady turbulence seconds before the strike. Immediately after the discharge, the crew noted light rain and St. Elmo's fire (luminous, low intensity electrical discharge). The crew

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**The crew described the St. Elmo's fire as "green waves dancing on the windscreen," which continued for two to three minutes.**

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described the St. Elmo's fire as "green waves dancing on the windscreen," which continued for two to three minutes. After landing, maintenance discovered over \$50,000 damage including a small hole in the radome, aircraft skin delamination, and over 100 "spot welds" along the underside of the fuselage. Weather analysis revealed the OAT (outside air temperature) at 10,000 ft was about 1°C.

Did this crew do something wrong? The answer is no, since the crew was well over 20 miles from thunderstorms as confirmed by airborne and ground-based radar. Radar showed only light precipitation in the area where they encountered the strike; not the type of weather normally requiring avoidance.

This example is typical of USAF mishaps reported as lightning strikes. Most don't occur while flying near a thunderstorm, **but are associated with flight in precipitation near the freezing level.** An article by D.W. Clifford of McDonnell Aircraft Company, entitled "Another Look at Aircraft-Triggered Lightning," describes the experiences of many military and commercial pilots. Clifford states the strikes usually fit into one of two types. The most common occurs near the freezing level in precipitation not associated with thunderstorms, and may be preceded by static noise on aircraft radios and St. Elmo's fire around the aircraft

extremities. When the discharge occurs, it's accompanied by a loud bang and usually does little or no apparent damage. Typically, a small \$5,000 hole is burned through the radome and minor delamination occurs.

The other type of discharge occurs abruptly in or near a thunderstorm and usually causes more severe damage. This type is what most of us picture as a true lightning strike, where the aircraft was simply in the way of a bolt of lightning. Fortunately, we experience very few of these in TAC—because we routinely give thunderstorms a wide berth.

But what about the more common type of electrical discharge, often referred to as "static discharge" (triboelectric charging for you electrical engineers). It is the one which occurs in areas we normally think of as safe. Clifford explains that aircraft static charge accumulates through a process which is similar to the static electricity build-up when you scuff your feet on a carpet. For aircraft, the amount of charge transferred is related to the type and amount of water particles, aircraft frontal area, and aircraft speed. A C-5 flying at cruise speed through heavy precipitation will usually build-up a charge quicker than an F-16 slowed to approach speed flying through light rain. **Flying near the freezing level adds to the static charge build-up.** The most intense electrical charging





# MURPHY'S LAW- lightning strikes two ways

Murphy's Law: lightning strikes two ways

mechanisms exist in this region due to its mixture of ice crystals and supercooled water droplets. Furthermore, as supercooled droplets become more highly charged at the freezing level, they may break into even more

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**If all this electrical potential is at the freezing level in innocent looking rain clouds, why is there no natural lightning ?**

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numerous smaller droplets, thus increasing the electric charge build-up.

If all this electrical potential is at the freezing level in innocent looking rain clouds, why is there no natural lightning? Good question! Here they deal with theory. First, for lightning to occur, charged areas need to separate. In rain showers, large charged regions don't form until aircraft come flying through. Not only is your aircraft accumulating a large negative charge from impacting cloud droplets and precipitation, the turbulence created in its wake may intensify the charge exchange process. Although Clifford's explanation is complex, it essentially says the aircraft triggers the discharge. Whether you want to call this a lightning strike or static discharge, it really doesn't

matter—the results are often the same.

So where does St. Elmo's fire fit into the process? St. Elmo's fire is also called corona and occurs when charge sufficient to exceed the breakdown strength of the air builds on the sharpest points of the aircraft. Air breakdown strength is its resistance to electrical arcing and decreases with altitude. The corona will typically form around the aircraft nose and besides being visible to the crew, may cause radio static.

Does the presence of St. Elmo's fire mean you'd better get ready for a strike? Well, not necessarily. Although you may be on the verge of a rapid discharge, electrical exchange to the air by corona reduces the charge on the aircraft. As long as the corona releases charge from the aircraft at least as fast as it builds up, you're okay. However, static charge build-up can exceed the corona's ability to "vent" the charge. The aircraft then becomes a region of charge build-up and a discharge similar to lightning occurs.

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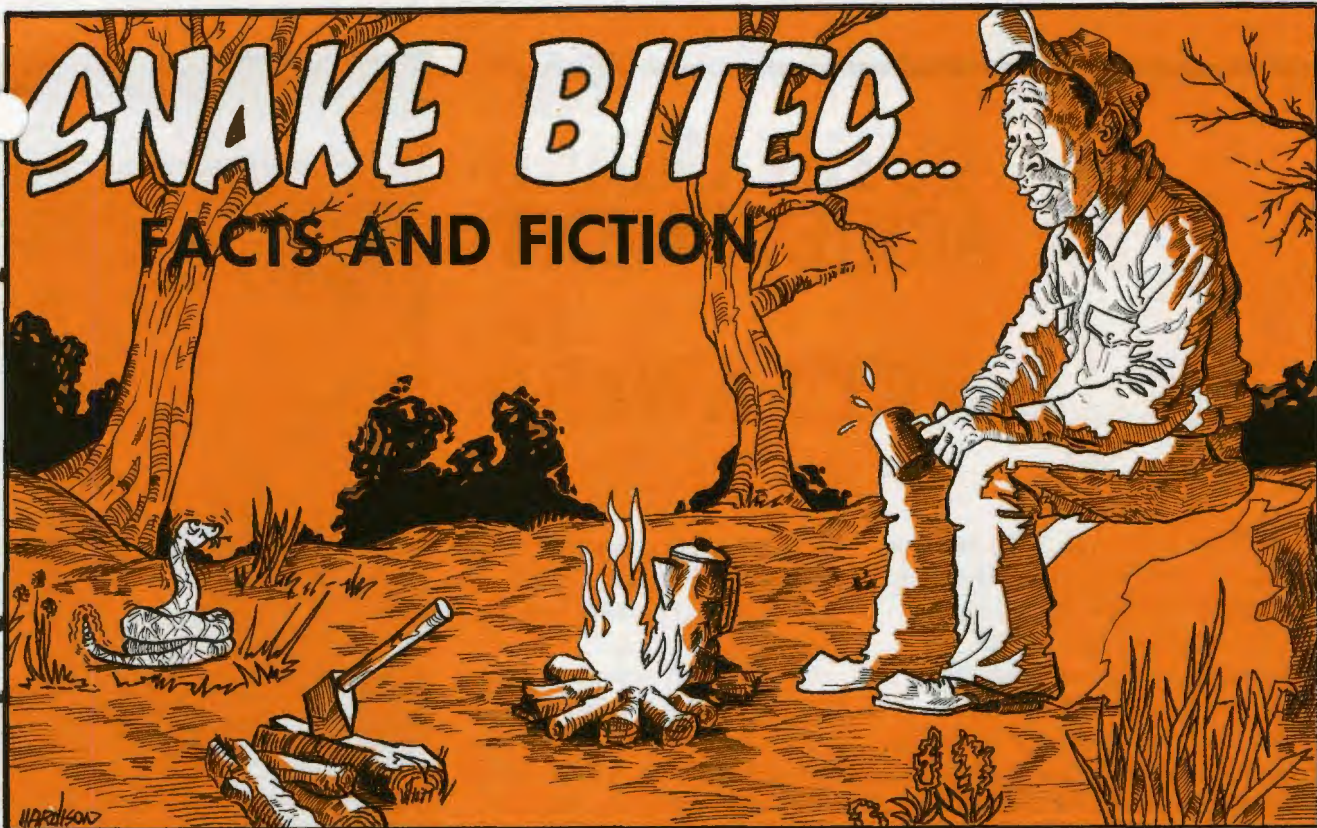
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This discussion isn't meant to imply we're only susceptible to aircraft-triggered static discharges. Natural lightning strikes can and do occur. The USAF, NASA, and FAA have conducted considerable aircraft lightning strike research by intentionally flying highly instrumented CV-580 and F-106B aircraft in the vicinity of thunderstorms. Their results show conditions likely to cause lightning strikes differ from those we generally encounter during a static discharge. These tests demonstrated the probability of lightning strikes in thunderstorms increased with altitude. At 36,000 to 40,000 ft and at temperatures below  $-40^{\circ}\text{C}$ , they averaged two strikes per minute inside thunderstorms. At 18,000 ft, the frequency was one strike every 20 minutes. Most of the strikes were actually triggered by the aircraft itself. Test results, though, were probably influenced by how the data was collected. NASA obtained data by intentionally penetrating thunderstorms—a maneuver most pilots shy away from. Lightning strikes in the vicinity of thunderstorms don't pose as great a hazard to TAC aircraft. This isn't because they're not potentially dangerous, but because they're usually easy to avoid by giving thunderstorms a wide berth using flight planning, radar, and good old common sense.





**SSgt John M. Murphy**  
**2020 CS/PAR**  
**Shaw AFB, SC**

**R**ecently, a Senior NCO from the 2020th Communications Squadron, Shaw AFB, SC, had an unfortunate meeting with a venomous snake. The end result of this meeting was a lot of pain and suffering, one week of hospitalization, and two weeks of convalescent leave.

Yes, this was an unfortunate occurrence, but not an uncommon one. According to a study by the University of Missouri School of Medicine, over 6,000 snake bites are reported annually. So, maybe, we all should review the following facts and fiction of snake bites.

First the good news, there are only four types of poisonous snakes indigenous to the United States. They are the cottonmouth or water moccasin, as it's sometimes known, the coral

snake, the copperhead, and several varieties of rattlesnakes.

Second, most snake bites are not fatal, according to Major Kenneth Costa, Chief of Environmental Health at Shaw AFB. The biggest reason for this, he says, is that most people can receive medical attention very shortly after being bitten. Most snake bite victims will suffer pain, swelling and nausea. It will definitely make you feel bad, but normally will not be fatal. And while there are anti-venoms available, usually treatment is limited to relieving the symptoms of the snake bite.

To prevent snake bites, avoid wet swampy areas and areas that have a lot of tall grass; or if you are out west, avoid the brush and rocky areas. If you must be in these areas, then wear high top shoes or boots and thick pants. Avoid putting your hands where you cannot see them.

If you do encounter a snake, stay still, or back off slowly to allow the snake to escape. Remember, snakes will usually only bite humans when the snake is surprised or feels threatened.

But what should you do if it's just not your day and you are still bitten by a snake? First, **STAY CALM!** The more excited you get, the more your heart will beat and the faster the venom will travel through your body. Also try to limit your physical activity for the same reason. If available, cleanse the wound with soap and water. The most important thing though is to seek medical help as soon as possible.

One thing you should not do is imitate old western movies by cutting the wounded area and sucking out the venom. You'll only do more damage to the wound and possibly cause an infection.





# TAC OUTSTANDING ACHIEVEMENT IN SAFETY AWARD

**C**apt Tofani, an RF-4 Instructor WSO, serves as the 16th Tactical Reconnaissance Squadron's Flight Safety Officer. His noteworthy achievements have earned the accolades of Wing Safety Division as well as the only "Outstanding" issued to a squadron safety program in the last two years. He created an aircrew safety note system where aircrews are able to alert the safety office to possible hazards at anytime. Maintenance interface and trend analysis were noted as "best in the wing" and are currently being adopted by all squadrons.

Capt Tofani's safety "AT-TABOY" program brings atten-

tion to aircrew accomplishments in flying safety and tops off the safety program which serves as a "model of the wing."

Capt Tofani's sustained top-notch performance has not only markedly increased the combat capability of the 16 TRS, but is also instrumental in the increased safety awareness of the 363 TFW. His briefings at wing quarterly safety meetings are an integral part of this increased awareness.

Capt Tofani's outstanding achievements and dedication to safe mission accomplishment have earned him the TAC Outstanding Achievement in Safety Award.

TAC Outstanding Achievement in Safety Award



**Captain Thomas Tofani**  
**16 TRS, 363 TFW**  
**Shaw AFB, SC**







# WEAPONS WORDS

## When in doubt, submit

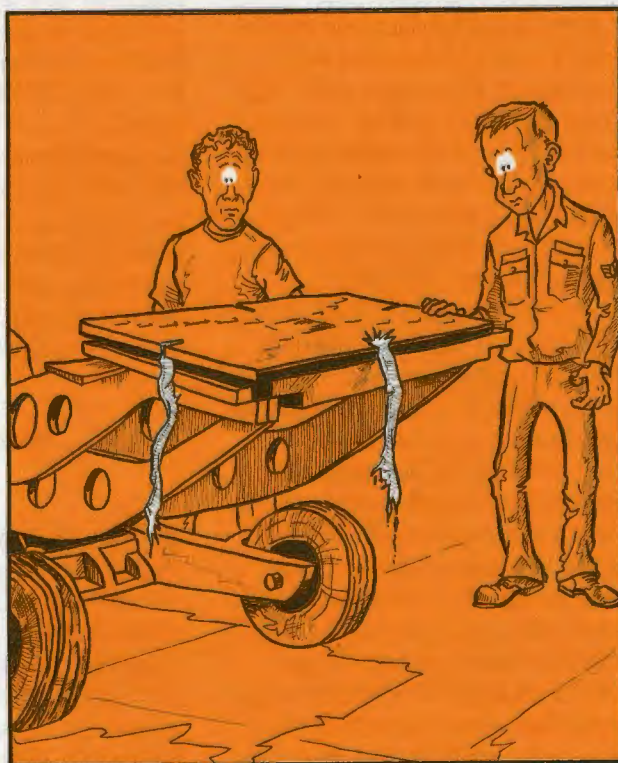
Maj Martha Kelley  
HQ TAC/SEW

**W**hen do you submit a Dull Sword (Nuclear Deficiency Report) on nuclear certified equipment? Do you have a choice? If you think that the problem or deficiency is caused by normal wear and tear (broken water pump, worn tires), can you opt not to submit? During the recent TAC Nuclear Surety Program Review, these questions were asked by units visited and TAC staff. To clarify the issue, let me quote the report submitted by AFISC, Det 1, Directorate of Nuclear Surety, to TAC/SE as a result of their visit:

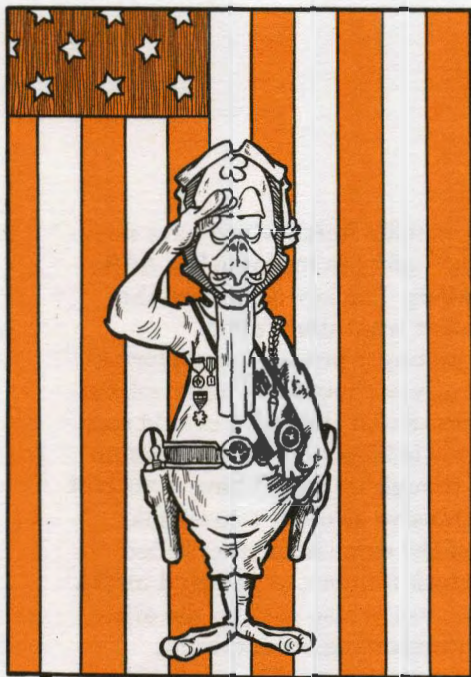
"...whether or not an item fails from 'normal wear and tear,' 'operator error' or 'design deficiency' has no impact; Dull Swords must be submitted. The only exceptions are failed items which have no impact on nuclear safety. Guidance useful in

determining those specific items which have no impact upon nuclear safety is contained in AFR 127-4, paragraph 10-2g. The key is not how the item failed, but rather what item failed."

Unless the item manager provides you a formal reply indicating that you should no longer submit Dull Swords on a particular item, you should continue to submit. This is important in a command such as TAC, even though we do not have a nuclear commitment as extensive as other commands. Remember, much of the same nuclear certified equipment (same stock number, or as listed in T.O. 00-110N-16) that we use is also used by the other commands when transporting, maintaining, and/or loading nuclear weapons. The same MJ1A bomb lift that you use to load an inert MK-82 bomb or BDU-50, can also be used to load a B-61 nuclear weapon. Identifying these deficiencies so that they can be corrected before a mishap occurs is the key to preserving our resources. Next month, look for a follow-on article on aircraft Dull Sword report submissions.







# FLEAGLE SALUTES

**Lt Col Charles E. Hicks**, 354 TFTS, 355 TTW, Davis-Monthan AFB, AZ, was on his fifth A-10 recurrency sortie when the aircraft's ailerons froze. The upgrading pilot was on a conversion sortie which called for disconnecting the powered flight controls and flying the aircraft on the emergency cable back-up system known as manual reversion. When Col Hicks attempted to return to normal flight control operation, the aircraft's hydraulic pressure stayed at zero and the only operable controls were the cable powered elevator and rudder. Using rudder to control bank angle, Col Hicks returned to Davis-Monthan escorted by his instructor pilot, flying in a chase aircraft. They notified the supervisor of flying who initiated a telephone conference with depot personnel. While attempting to control the aircraft and apply procedures suggested by depot experts to free the flight controls, Col Hicks ob-

tained a partial hydraulic system recovery. Col Hicks continued working the problem, and after flying the aircraft for over one hour in the physically exhausting back-up mode, the flight controls suddenly returned to normal. With the problem solved, Lt Col Hicks executed a flawless straight-in approach and landing. Col Hicks' skill as an aviator and his knowledge of aircraft systems resulted in the successful recovery of a valuable combat aircraft and have earned him a Fleagle Salute.

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**C**an one person really make a difference? The new additional duty safety NCO in the 355th Aircraft Generation Squadron must have thought—yes! Instead of doing just the minimum required, **Technical Sergeant Jeffery D. Harder**

took the bull by the horns and got actively involved with the ground, weapons, and flight safety programs at both his unit and base level. He didn't wait for a mishap to point out which areas needed changes. Instead, while he was performing his primary duties, he kept a watchful eye for things which could be done smarter. He personally identified and brought about the correction of many deficiencies that others failed to notice. He developed a work center safety briefing book which made it easier for the supervisors of 27 different work centers to do their job not only safer, but more effectively. He is currently establishing a cardiopulmonary resuscitation (CPR) program for all the personnel in the AGS.

Sergeant Harder's diligent efforts and many contributions earned his unit an "Outstanding" during the last annual safety inspection and a Fleagle Salute.



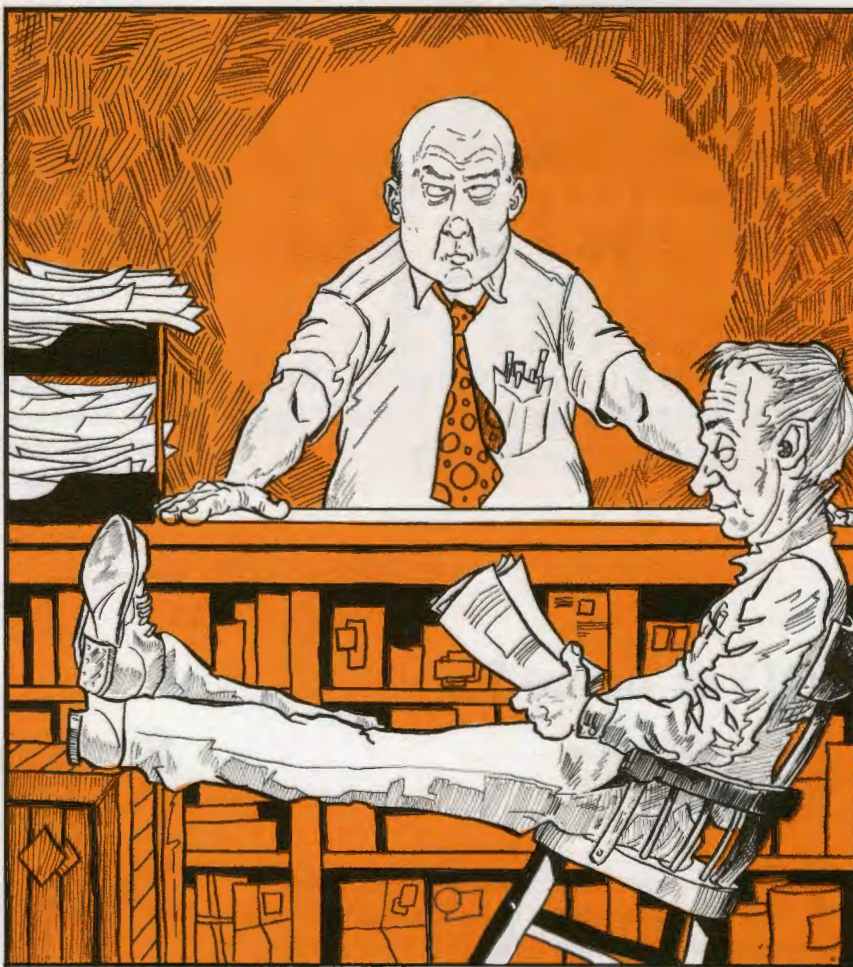
# IT'S NOT MY JOB

**Mr. Cal Faile**  
**HQ TAC/SEG**

**I**t is extremely frustrating at times to walk into a servicing agency seeking assistance and find out that you can't get service because Joe Know-it-all is on vacation. The situation sometimes gets tense, especially when the person says, "it's not my job—so I can't help you."

It's great to know that this scenario does not happen very often in the Tactical Air Command. But once is too often! During a recent staff assistance visit, I walked into a unit and asked a senior manager to see his unit safety program. He replied, "That's not my job, the base safety office is responsible for safety on this base." I further inquired as to what role he played in supporting the base safety program. He indicated that his primary responsibility was to supervise and get the work out.

Safety is an inherent responsibility of management and supervision. We need to get safety responsibilities in the right perspective. The base safety office manages the overall safety program for the senior commander who is also the senior safety officer. Each unit under his command should have their own safety program that complements and supports the base safety program, with the goal of better mission accomplishment.



As safety program managers, safety personnel monitor and are readily available to assist unit commanders in developing their programs.

Managers, supervisors and individual employees have safety related responsibilities. If you would like to know exactly what your specific responsibilities are, take a moment and review AFR 127-12, Air Force Occupational Safety Fire Prevention and

Health (AFOSH) program, or AFVA 127-5. You should also have a copy on file, or one readily available for your periodic review.

The bottom line—who is responsible for safely accomplishing the mission? We all are! It's a matter of preserving life and valuable resources while accomplishing the TAC mission—not only today, but also tomorrow. ➤





## DOWN TO EARTH

ITEMS THAT CAN AFFECT YOU  
AND YOUR FAMILY HERE ON  
THE GROUND

### FOD at home ?

MSgt Randall Treece  
184 CAMS (KSANG)  
McConnell AFB, KS

**T**hose of us who work around aircraft on a daily basis are aware of foreign objects—loose hardware, tools, coins, pencils and other objects which cause considerable damage to aircraft tires



and engines in both the military and civilian aviation communities.

But are we aware of the Foreign Object (F.O.) hazard at home? While gassing the lawn mower this week, I noticed a 3" piece of wire embedded in the left front wheel. All but about an inch of the wire had passed completely through the hard plastic wheel. It had obviously been thrown by the blade. Had the wire been thrown aft instead of forward, it could have easily passed through the thin plastic guard at the rear of the mower and been embedded in my foot or ankle. We've all heard horror stories about what rotary mowers can do when they encounter a rock or other small hard objects. I would encourage all of you to check your driveways and yards for possible F.O. before you mow. Have the children been building something and used nails? Are all the small metal hot wheels accounted for? Did dad leave any screws or washers on the car or boat? Hopefully, we'll all find our F.O. at home with our eyes and not with our mowers.

### Sunrise and sunset

MSgt Merlin R. Mickelson  
366 AGS  
Mt Home AFB, ID

**S**unrise and Sunset—both are beautiful times of day, but also very dangerous. The traffic load on our roads is significantly heavier and some people are not quite at their best.

In the morning, maybe they failed to get enough sleep, or, by nature, mornings are rough on them, and it takes longer to become fully alert. In the afternoon, people may be a little tired from a long and busy day. Maybe there is something they just cannot get off their minds which is bothering and worrying them, or perhaps distracting their attention. These things together are bad enough, but now let's throw in that blinding, piercing sun. The

October 1989

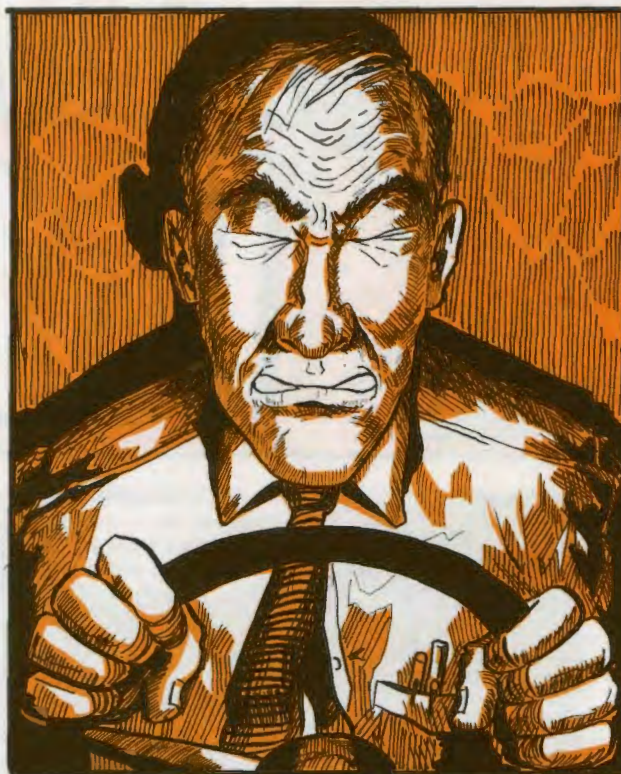


one that is low and is just coming over, or going behind, the horizon. That time of day it can give you a real skull-buster of a headache. This is the period when one's vision is severely affected, no matter the direction in which they are traveling.

Now, did you see that little car behind the pickup truck attempting to pass you? Or did you notice the motorcycle coming over the rise down the road traveling over the speed limit? Are those brake lights lit up on that mini-bus, or is it the sun playing tricks? Where did that bicyclist come from? These are only a few examples of what the sun can do to your vision.

To help reduce some of these problems, try wearing sunglasses and use the sun visor in your vehicle, or wear a hat with a bill. Keep the windshield and other windows clean; motorcyclists need to ensure their helmet visor is clean. Ensure your headlights are in proper working order and don't be afraid to use them; for even in daylight, they can readily be seen.

If you are tired in the morning, adjust your sleeping habits to get more rest; have another cup of coffee or glass of juice. Do something that works for you, so when you do go out on the road, you are awake, refreshed and alert. When leaving work at the end of your shift, don't be in such a big hurry. If you are tired, do something that will revive



you—like washing your face or drinking a cold soda pop.

When driving, adjust your speed and following distances accordingly, and **DRIVE DEFENSIVELY**. Do not become a statistic or cause one.

PASS IT ALONG...



nine people are waiting





# Funny Fotos







AHHH, nothing beats a good soak  
at the end of the day.



Please somebody, show me  
the men's room. I've been  
in this thing for 23 hours.



Are you sure this is the  
way to use eyeliner ?



And you call yourself  
a chef ?



# TAC OUTSTANDING ACHIEVEMENT IN SAFETY AWARD

**A**fter a routine mission, the pilot taxied his OA-10 back to the ramp and completed a normal engine shutdown. After egressing the aircraft, the pilot and crew chief, A1C Armando Alvarez, were completing a post flight walk around when they heard a loud pop and observed flames emanating from the left engine tail pipe. Both A1C Alvarez and a second nearby crew chief, Sgt Kerry Isner, immediately ran to man fire bottles while simultaneously calling to the expediter truck for help. Observing the situation, the expediter, SSgt Collis M. Philyaw, immediately recognized the problem as a post engine shutdown fire. Without hesitation, he jumped from the truck, quickly climbed into the OA-10's cockpit, and correctly performed post engine shutdown fire procedures. By the time the fire department arrived, SSgt Philyaw had motored the engine and successfully blown out the fire before it caused any engine/aircraft damage. By his alertness and quick timely reactions, SSgt Philyaw prevented the loss of an aircraft engine and possibly an entire aircraft.



**SSgt Collis M. Philyaw**  
**23 CAMS, 602 TAIRCW**  
**Davis-Monthan AFB, AZ**







# TAC TALLY

Total			TAC			ANG			AFR		
AUG	THRU	AUG	AUG	THRU	AUG	AUG	THRU	AUG	AUG	THRU	AUG
	FY 89	FY 88		FY 89	FY 88		FY 89	FY 88		FY 89	FY 88
2	24	31	2	16	19	0	8	9	0	0	3
0	6	16	0	4	11	0	2	4	0	0	1
2/0	20/4	21/0	2/0	10/2	14/0	0/0	10/2	6/0	0/0	0/0	1/0
0/0	1/1	0/5	0/0	1/1	0/4	0/0	0/0	0/1	0/0	0/0	0/0

CLASS A MISHAPS
AIRCREW FATALITIES
• IN THE ENVELOPE EJECTIONS
• OUT OF ENVELOPE EJECTIONS

\* (SUCCESSFUL/UNSUCCESSFUL)

## TAC'S TOP 5 thru AUG 1989

1st AF		9th AF		12th AF	
CLASS A MISHAP-FREE MONTHS		CLASS A MISHAP-FREE MONTHS		CLASS A MISHAP-FREE MONTHS	
108	318 FIS	51	507 TAIRCW	41	474 TFW
43	57 FIS	26	1 TFW	33	37 TFW
22	48 FIS	22	4 TFW	23	24 COMPW
3	325 TTW	18	347 TFW	20	355 TTW
		9	354 TFW	19	366 TFW

ANG		AFR		DRUs	
CLASS A MISHAP-FREE MONTHS		CLASS A MISHAP-FREE MONTHS		CLASS A MISHAP-FREE MONTHS	
225	110 TASG	108	482 TFW	155	552 AWACW
200	138 TFG	98	924 TFG	25	USAFTAWC
182	177 FIG	86	906 TFG	17	USAFTFWC
177	114 TFG	60	507 TFG	11	28 AD
141	155 TRG	47	917 TFW		

## CLASS A MISHAP COMPARISON RATE

CUMMULATIVE RATE BASED ON ACCIDENTS PER 100,000 HOURS FLYING TIME

TAC	FY 89	1.7	2.7	3.0	3.2	2.6	2.4	2.3	2.9	2.6	2.5	2.6	
	FY 88	6.4	3.4	3.0	2.7	2.6	3.3	3.0	3.1	3.3	3.2	3.0	3.4
ANG	FY 89	0.0	0.0	1.5	2.3	2.8	3.1	3.2	2.8	3.0	3.6	3.2	
	FY 88	0.0	0.0	0.0	0.0	0.9	2.2	2.5	2.7	2.9	3.0	3.5	3.2
AFR	FY 89	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	FY 88	0.0	10.6	7.7	5.9	9.5	7.9	6.7	5.8	7.5	6.8	6.0	5.5
Total	FY 89	1.2	1.8	2.5	2.8	2.5	2.5	2.4	2.7	2.5	2.6	2.6	
	FY 88	4.3	2.9	2.4	2.2	2.5	3.2	3.1	3.1	3.4	3.3	3.3	3.5
MONTH		OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP



