Combat Edge

August 2005

GENERAL RONALD E. KEYS, COMMANDER

COLONEL CREID K. JOHNSON, DIRECTOR OF SAFETY

Combat Edge

Volume 14 Issue 3,
ACC SP 91-1

Visit us on the web @ www2.acc.af.mil/combat-edge

Cover Photo by
TSgt Ben Bloker

Editor's Correction: **I would like to express my sincerest apologies to Dr. Daryl Hammond, P.E., who submitted "Lockout/Tagout & Electrical Safety" in July's edition. We incorrectly listed his title as "Mr." versus the title of "Dr." -- a regrettable mistake on my part, but in no means with malicious intent, as my staff and I take great pains to proof the magazine prior to publication.**

LT COL ANTON KOMATZ
EXECUTIVE EDITOR

MAJ DANIELLE COLEMAN
MAJ WENDY HAMILTON
EDITOR

MRS. BARBARA TAYLOR
ASSOCIATE EDITOR

SRA ALEXANDER SOTAK
PUBLICATIONS DESIGNER

TSGT BEN BLOKER
ASSOCIATE PHOTO EDITOR
1ST COMMUNICATIONS SQUADRON

THE COMBAT EDGE (USPS 0531-170) (ISSN 1063-8970) IS PUBLISHED MONTHLY BY AIR COMBAT COMMAND, HQ ACC/SEM, 175 SWEENEY BLVD, LANGLEY AFB VA 23665-2700. PERIODICAL POSTAGE PAID AT NIAGARA FALLS NY 14304, AND AT ADDITIONAL MAILING OFFICES. POSTMASTER: PLEASE SEND CHANGES OF ADDRESS TO HQ ACC/SEM, 175 SWEENY BLVD, LANGLEY AFB, VA 23665

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

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

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EXECUTIVE EDITOR, THE COMBAT EDGE
HQ ACC/SEM
175 SWEENEY BLVD
LANGLEY AFB VA 23665-2700

TELEPHONE: (757) 764-8868
DSN 574-8868
FAX: (757) 764-8975
E-MAIL: ACC.SEM@LANGLEY.AF.MIL

THE EDITORS RESERVE THE RIGHT TO EDIT ALL MANUSCRIPTS FOR READABILITY AND GOOD TASTE.

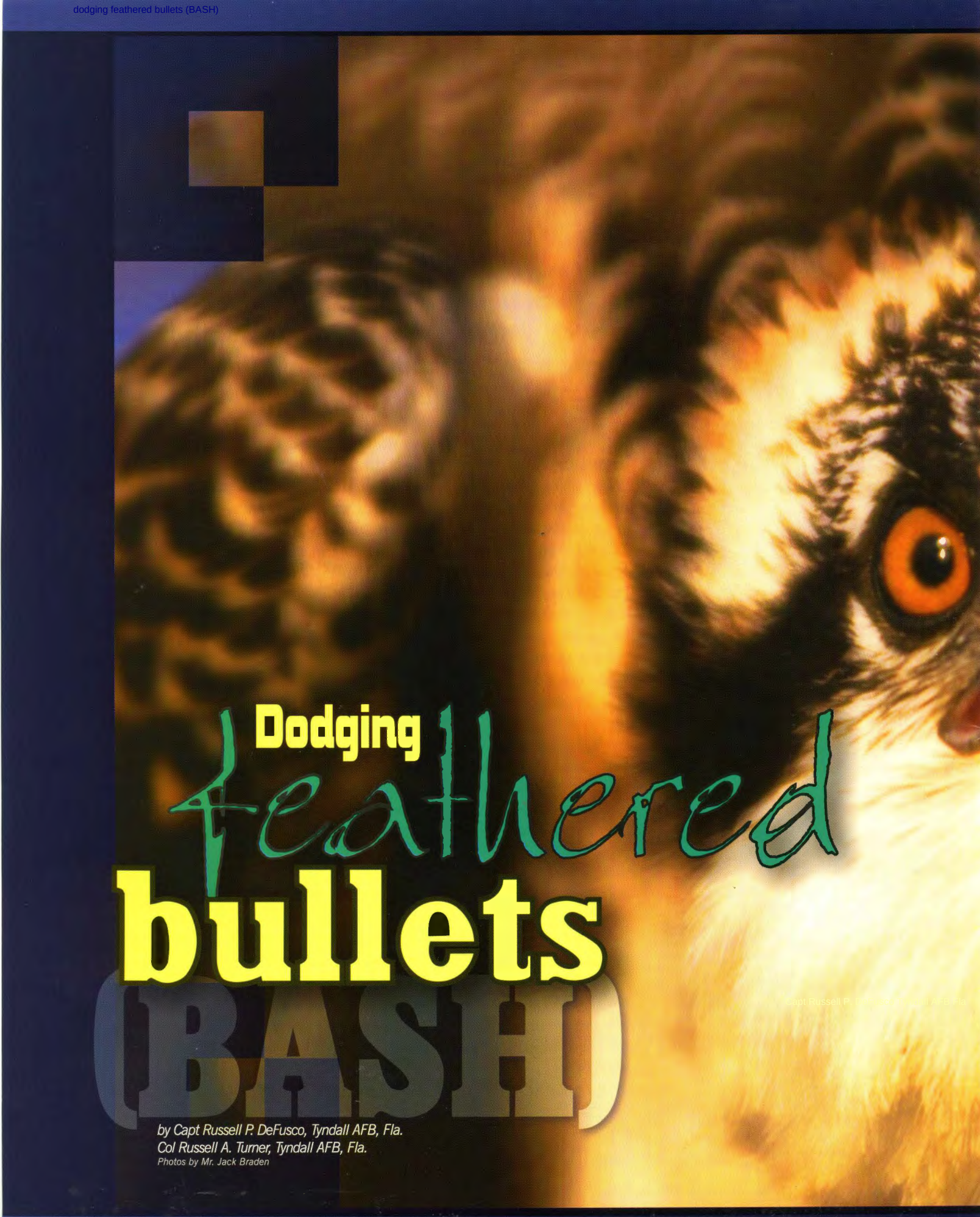
ACCent on Safety

"New technology now provides vehicle drivers and passengers with exact time, location, and severity of impending accidents, providing ample time for them to buckle their seat belts prior to impact..."

Unfortunately, mishaps don't occur on a strict time schedule; therefore, the only defense is to be prepared. Ask yourself: "Am I doing all I can to keep myself safe and those around me safe?" If you answer in the affirmative, continue on and encourage others to follow your example. If your answer is "usually" or "no," then changes need to be made, and one such change is in the area of seat belt usage. Prior to the July 4th weekend, COMACC directed every ACC unit to conduct random no-notice seat belt checks on their installations. The policy change came after several fatal mishaps in which drivers and or passengers failed to buckle-up or demand that others buckle-up before starting out; and in one case, the belted passengers survived, while the driver did not.

People can be asked, reminded, and even directed via Air Force Instruction (AFI 91-207, The USAF Traffic Safety Program) to wear available safety restraints on and off duty, but some still fail to comply. One way to get the message across and encourage compliance is to reiterate that driving is a privilege and not a right, point out that the difference between the two is that a privilege can be revoked for non-compliance, and then make good on that promise by suspending driving privileges for those that fail to comply. COMACC's policy letter encourages commanders to consider suspending on-base driving privileges for 30 days, but after a low-speed fatal accident where the driver was not restrained and ejected from the vehicle, Dyess AFB upped the suspension period to 1 year! Sound harsh? Not at all ... if the possibility of death or permanent disability isn't enough to change your habits, maybe walking for an extended period will. Use your seat belt and make safety your **Combat Edge!**

Colonel Creid K. Johnson,
ACC Director of Safety



Dodging feathered bullets (BASH)

by Capt Russell P. DeFusco, Tyndall AFB, Fla.
Col Russell A. Turner, Tyndall AFB, Fla.
Photos by Mr. Jack Braden

Reprinted from April 1986 Issue of TAC ATTACK

A recent accident investigation board determined that the loss of an A-10 was partially a result of improper pilot response in an attempt to avoid hitting a flock of birds. The pilot pulled his aircraft down and away from the birds, striking high tension lines and causing the loss of the aircraft. Fortunately, he escaped without injury. The question many of you may have is, "What is a proper pilot response for avoiding birds?" The question is more complicated than it may appear on the surface and specific guidance has not been available.

The bird strike problem is a serious one, costing the Air Force approximately $20 million each year. Nearly 2,300 bird strikes are reported to the Bird Aircraft Strike Hazard (BASH) Team annually. While many of these strikes are unavoidable, a reduction in the hazard is possible by a variety of means; not the least of which is pilot response to an imminent strike. The effectiveness of a maneuver to avoid birds is dependent on a number of factors including human physiology, the decision process, and aircraft response to pilot inputs.

Pilot reaction studies should be considered in determining proper pilot response. The average pilot requires 0.10 seconds for sensation of an image to travel from the eye to the brain. Focusing on the sensed object requires an additional 0.29 seconds. Perception, or recognition of the object, takes another 0.65 seconds for the average pilot. Each of the above factors will vary between individuals and in differing situations. Object size and color, relative motion, background color and composition, contrast, and light intensity level all greatly influence the amount of time required to perceive an object to be avoided. The problem doesn't end there though, as the average pilot requires 2.0 seconds to decide to act on the perceived situation. Decision time varies with experience, level of concentration, and situation awareness, but is significant in all cases. Once the decision to react is made, 0.4 seconds are required to operate the flight controls (i.e., pull back on the stick).

The response of the aircraft to control inputs varies among aircraft. Larger aircraft generally require significantly more time to react. The average USAF aircraft requires about 2.0 seconds to respond to flight control inputs. Within the fighter community, the F-15, for example, is capable of an instantaneous pitch rate of 22 degrees per second with maximum control deflection. With a 0.5 second aircraft response to control inputs and a 5,000 foot turning radius at 450 knots, 0.52 seconds are required to move the aircraft 20 feet to avoid a bird strike.

So, it requires approximately 4 seconds from the time of initial object sensation until the aircraft has moved sufficiently to avoid a bird strike. In other words, at 500 knots, a bird must be sensed from a distance of at least 3,342 feet, or 0.63 miles, to avoid colliding with it (see chart).

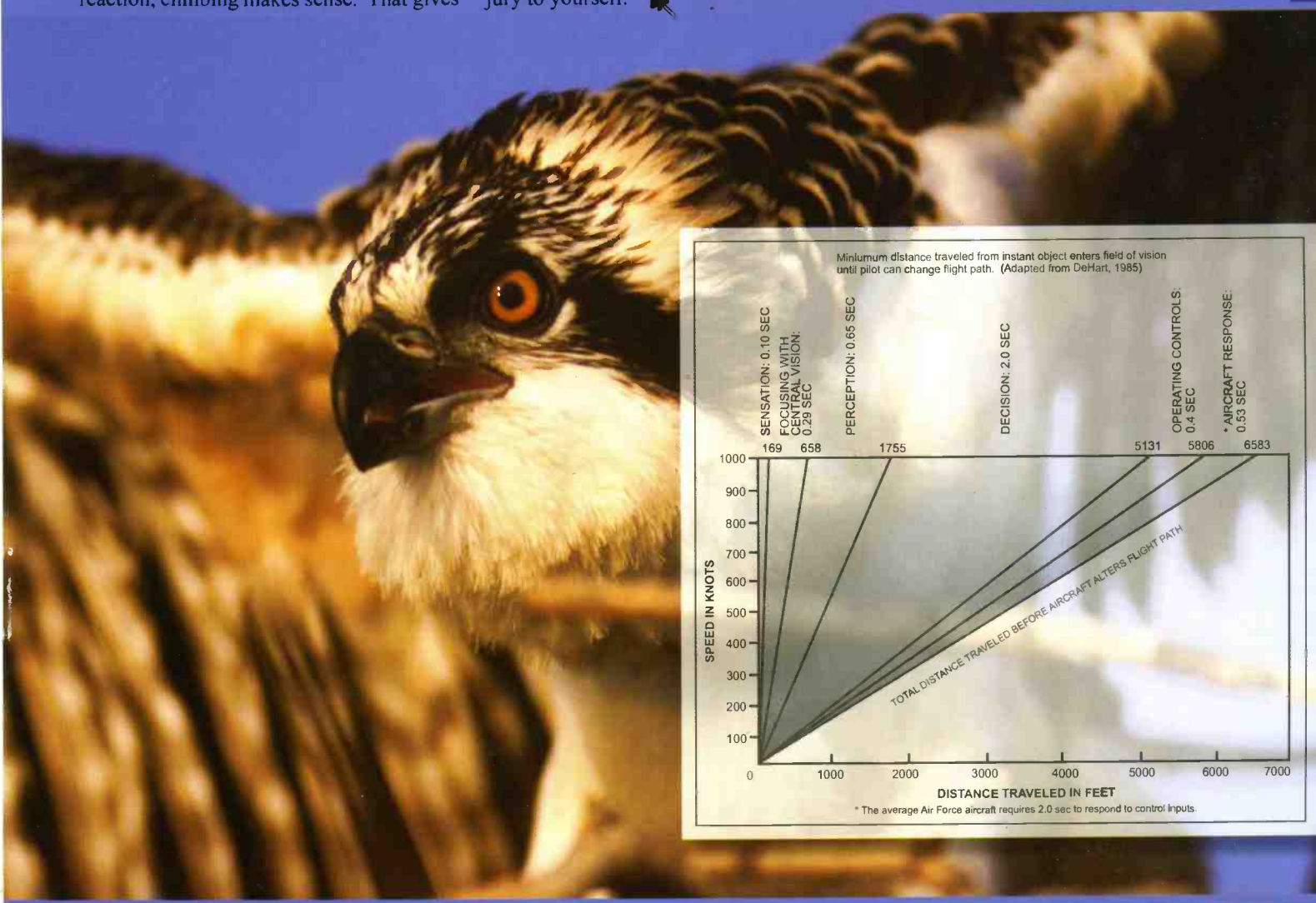
Frequently, it isn't possible to maneuver to avoid birds; and the strike is inevitable due to the birds' proximity. A recent F-111 Class B investigation board found that, "When one considers mental reaction time and the time that it takes for a control stick input to actually move the aircraft, it is unreasonable to

assume that the pilot could have avoided hitting the bird." In situations like this (i.e., when the bird is within the gray region of the chart below), it is best to remain level, possibly duck your head, and take the strike. Maneuvering within this region may only create additional problems such as pilot disorientation, loss of control, unusual aircraft attitude, or increased damages following the bird strike.

When birds are perceived outside the minimum distance required, maneuvering the aircraft to avoid the birds may prevent a strike. In most cases, birds will tuck their wings and dive if they perceive an oncoming aircraft as a threat. There are exceptions: Gulls, for instance, often turn and attempt to outrun the oncoming threat and are often struck from the rear as a result. Although a few birds maneuver laterally to avoid danger, it is very rare that a bird climbs. Since you don't have the time to categorize the bird and its possible reaction, climbing makes sense. That gives you the best chance of avoiding the bird. It also gives you altitude and time for coping if you do take a hit.

By pulling up, the pilot may be able to protect more vulnerable parts of the aircraft such as the canopy or engines by taking a strike on the undersurface of the aircraft. Most importantly, by pulling up, the possibility of collision with the ground or other structures is greatly reduced.

Since bird avoidance is rarely a practiced maneuver, you – as a pilot – should have an idea of what to do before you encounter a "feathered bullet" in your airspace. In a two-seat aircraft, crew actions in the event of a bird strike should be briefed or reviewed before every flight. Remember that there are times when a bird is too close to avoid. Remaining straight and level and protecting your face in this situation is best. When you can respond, pull up to avoid damage to your aircraft and possible injury to yourself.



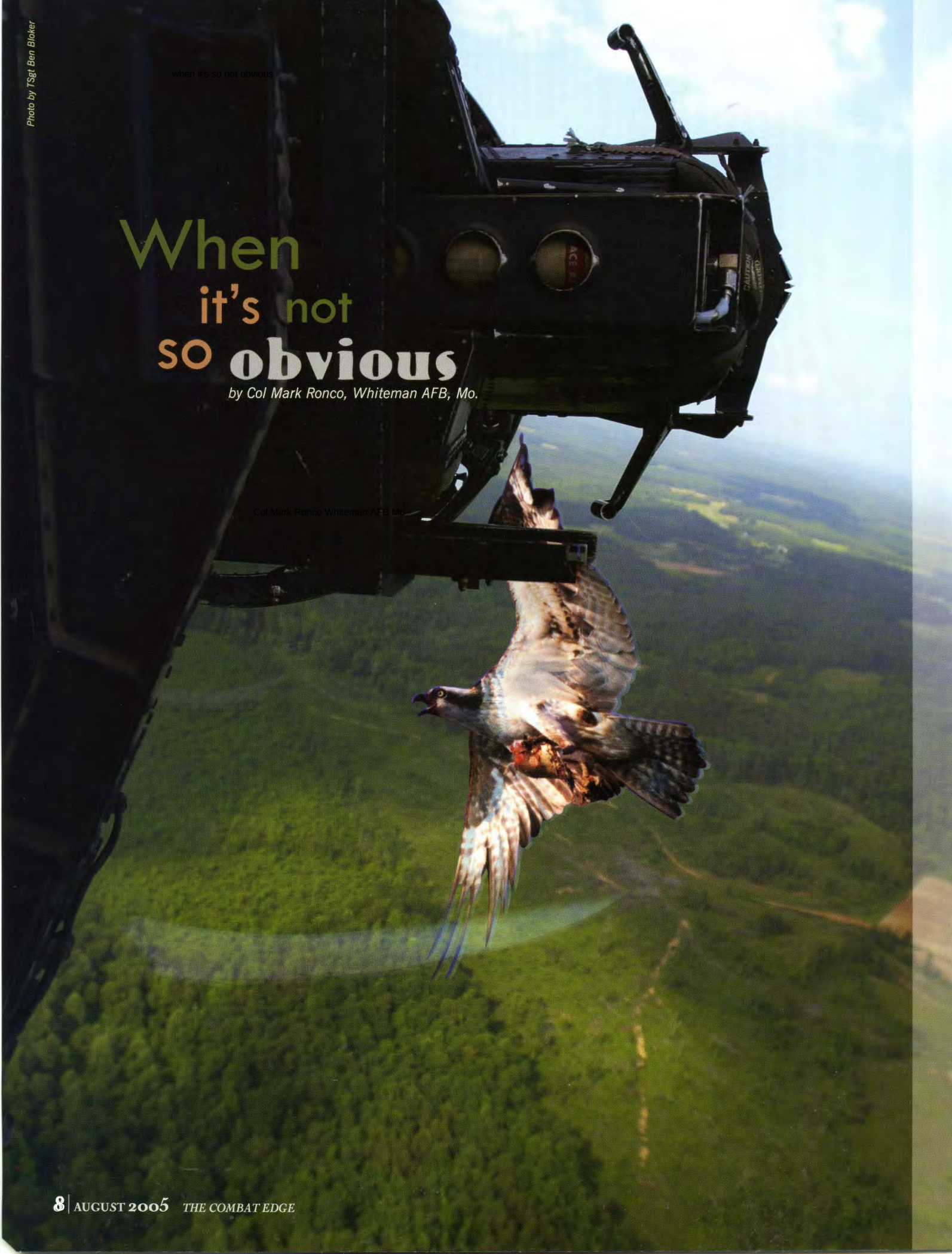


Photo by TSgt Ben Bloker

when it's so not obvious

When it's not so obvious

by Col Mark Ronco, Whiteman AFB, Mo.

Col Mark Ronco Whiteman AFB Mo

Photo by SrA Joshua Strang

Can you recall your days in initial training and the dreaded Emergency Procedure (EP) of the Day? Do you remember when the StanEval instructor pilot called your name and you knew it was your opportunity to excel in front of your classmates and instructors, impressing all with your emergency procedures knowledge? You probably began by reciting the three basic rules in every emergency situation: Maintain aircraft control ... Analyze the situation ... Take the proper action.

All the while, you were desperately trying to remember the boldface or memory item for that emergency. After regaining your composure and confidently stating the boldface, you gathered all the indications and cues given to you and dutifully went to the appropriate checklist. Having covered yourself in glory so far, you then expounded on all that the Dash One had to say about that emergency - repeating every note, warning, and caution ever written. By now you were sure you had aced the scenario and saved the jet, becoming legendary in your own mind. Do you remember how it turned out? More times than not, people got it wrong (or only partially correct) and sat down to a chorus of howls from their classmates. It's funny now ... but back then, it was a nightmare!

For many of us, the above daily ritual in pilot training was the beginning of how we learned to deal with emergencies in the air. Today, as a flight examiner, I administer emergency procedure evaluations based upon obvious indications and known failure modes in the A-10. I tend to spend most of my time thinking about the obvious and not the abstract when it comes to aircraft failures. In the story that follows, you will see that the obvious does not always exist. In order to maintain control of an aircraft, sometimes it can require all of your skill and experience. Nothing is obvious in the black of night; and just maybe, there may not be any published procedure for what is specifically wrong with your aircraft.

It was January 1997 ... I was the instructor and flight lead on a Night Vision Goggles (NVGs) upgrade sortie for a young wingman in my squadron. After a straightforward brief covering tactical execution using NVGs, we departed into the darkness to make our planned takeoff time approximately 1 hour after sunset. On

departure, I had just snapped my NVGs into my helmet and was answering departure control when all of a sudden ... my aircraft began to violently shake and make a loud, deafening noise. My first thoughts were that I had a compressor stall on one of the engines, but a quick look at the engine instruments showed normal operation and parameters. I continued to climb to about 4000' Mean Sea Level (MSL), called a "knock-it-off" to my wingman, and directed him to rejoin from his trail position. I began a turn to a downwind pattern to stay close to base and remain underneath the overcast. As I looked inside the cockpit at my instruments during the turn, I noticed that I had zero airspeed, my altimeter was indicating below field elevation, and the vertical velocity indicator was wildly fluctuating plus or minus 1,000 feet per minute (FPM). A quick check in the Head-Up-Display (HUD) confirmed that it was not a gauge problem. All I had was the attitude indicator, heading select indicator, velocity vector in my HUD, and an aircraft that felt like it wanted to come apart due to the excessive vibration. To say that the roots of confusion were taking hold is an understatement.

Courtesy Photo

Maintain Aircraft Control

The deafening noise and vibrations – along with the lack of normal flight instruments – were enough to bring me to the basics that I had learned so many years ago ... fly the jet first! I set a power setting that I knew would keep me flying considering the full fuel load and used the Angle of Attack (AOA) gauge to make sure I was in the ballpark for airspeed. The Attitude Direction Indicator (ADI) and HUD would suffice to maintain straight and level flight, but I had to reduce the vibration and noise. The instrument panel was shaking so violently I could barely read the instruments.

Analyze the Situation

As I leveled at 4,000', I pulled the throttles back slightly to maintain the AOA setting. I noticed a slight reduction in the vibration ... a clue ... I've got some kind of engine problem. Even though both engines were matched up and reading normal on the gauges, I decided to pull the right throttle back. As I did that, the vibrations and noise were significantly reduced. I tested the left throttle in the same manner with no change in vibration; so I retarded the right throttle to idle and the vibrations and noise subsided to a minimal level. Of course, it now required a moderate amount of rudder correction to maintain coordinated flight. As my wingman rejoined, I had him check my aircraft for damage using his NVGs, but he could detect nothing unusual. Now I felt more in control and finally had a moment to contact the Supervisor of Flying (SOF). After a short consultation with a Functional Check Flight (FCF) pilot, we decided this problem was outside the scope of any published Dash One procedure. No one could make a connection between the multiple problems I was experiencing ... least of all me. I still had no clue why any of this was happening.

Take Proper Action

The Dash One for the A-10 mentions using sound judgment and common sense in conjunction with a full understanding of all aircraft systems when dealing with emergency/abnormal situations. Since I had no clue why all this was happening I decided the time for analysis was over. I

Photo by Denise Gould

knew I had a sick jet, and it was time to put it back on the ground. I had my wingman read the only pertinent checklist – the engine failure procedure. It was now time to adapt, innovate, and overcome. The plan was to shoot a single engine Instrument Landing System (ILS) approach with my wingman acting as the talking airspeed indicator and altimeter. We accomplished a modified controllability check and got ready for the approach. The ILS worked fine, and the only surprise was how much rudder it required to maintain coordinated flight once it was configured. The landing was uneventful, and I rolled into the dearm and shutdown procedure.

I climbed down the ladder and noticed a few bird feathers on one of the pylons. Only after I walked to the right side of the aircraft did I realize the extent of the damage and what had happened. My Warthawg had sustained massive bird strikes from at least five Canada snow geese. Two geese went down the right engine destroying numerous fan blades in the fan section, continued on to tear out a 4-foot section of sheet metal next to the compressor section, and finished by destroying the engine tailcone. Two more geese met their fate on the right gear pod and leading edge of the right wing, severing both pitot-static lines exactly where they run through the leading edge of the wing. Another goose hit the left slat and terminated itself on the fuel drain underneath the left engine, barely 2 inches below the intake. All in all, it was not a good night for the geese ... or me.

Safety Lessons Learned

1. Migratory waterfowl fly at night and are in their highest concentrations 1 hour before and after sunset. I think about that now when I fly at night.

2. Air Traffic Control's radar can see large flocks of birds, but cannot report them unless visually confirmed by a pilot - which isn't gonna happen at night. So now I always ask them before I take off if they see anything unusual.

3. What is totally obvious in the daylight can be totally invisible in the dark. Most of the confusion and unknowns that exist at night would have been easily resolved by visual cues during the day. In fact, this incident would most likely have never happened in the daytime; I probably would have been able to see such a large flock of birds and avoid them.

4. Operational Risk Management (ORM) definitely plays an important part in night operations; the risks are not the same as for day operations and need to be assessed accordingly when planning your night missions.

5. The three basic rules of emergencies always work, don't forget them!

Finally, we all know of other aircraft in the inventory that have been brought down by bird strikes and other unusual problems. I was very fortunate that night. The threats are out there as we continue to increase our night operations. Think about it, plan and brief it, and be ready for the "not so obvious" to happen. Fly safe!

birds, DUCK!

Lt. JG Don Gaines

by Lt jg Don Gaines

Courtesy Photo

My instructor and I were on the final leg of a three-leg, round-robin flight around Texas, near the end of T-34C intermediates. The previous two flights were mostly in and out of clouds; however, climbing through 1,000 feet on the final leg, we were in the goo. As we continued our climb, we reached VFR-on-top by 3,000 feet. While my instructor listened to the Hazardous Inflight Weather Advisory Service (HIWAS) for weather updates, I was dodging thunder cells.

Once we were told to switch to Center for the Precision Approach Radar (PAR) into NAS Corpus Christi, we both breathed a sigh of relief. When I contacted Center, they told us there were lots of birds in the area. I looked up and noticed a flock off to our 3 o'clock low, but they were no factor. Calling them out, I went right back to the task at hand — flying the approach, as this was for a grade. I trimmed out the aircraft and was setting up my instruments for the TACAN approach when I looked up to see something very bad. A wall of birds was flying right at us. I had enough time to yell "Birds!" over the ICS, and then ducked behind the console. A second later, I could feel the rush of air in the cockpit and things flying around as we passed through the flock.

I sat there for a few seconds just watching everything move in slow motion when I heard my instructor yelling over the ICS, "Are you OK?" Looking up, I saw the windscreen had a large hole in it. One piece was still connected to the aircraft but flapping in the wind. The magnetic compass, which sat on the console, and one of the mirrors were now missing, and the other mirror was shattered. As I looked into the shattered mirror, I could see blood covering my face and helmet, and I noticed a cut on my lower lip. I raised my visor and noticed the distinct line of blood where the visor ended. Besides the cut lip, I was in good shape and finally called back that I was fine. Then, as any good student would, I told my instructor a bird had just hit us. Laughing, he called back, "No kidding, most of it is sitting in my lap."

He took the controls, and while I hit 7700 on the transponder, he declared an emergency over the radio. When another aircraft called up asking for our working area, Center gave us a discreet squawk. They thought we were simulating the bird strike emergency. Center immediately called over guard for all aircraft to maintain their positions, while they handled an actual emergency. As the radio calls continued, with aircraft offering their assistance, we now started working the task at hand — getting on the deck. Looking at my console, my instructor asked me to move the approach plates. We still had all the VFR and IFR charts and approach plates sitting on the console, so grabbing my flight bag, I quickly stuffed all of them into it. I then pulled out the pocket checklist for a bird strike, and my instructor called for a climb to 5,000 feet. He said we needed to check out the aircraft and see if we could land it and if the birds had damaged anything underneath. When he said to be prepared to ditch if the aircraft rolled, I kept thinking how I couldn't believe this was happening to me.

As we slowed to landing airspeed, I felt my heart beating. My instructor lowered the gear, and we both sighed in relief as we saw three-down-and-locked. He then set up for a straight-in, and as we crossed the threshold, I saw the fire trucks and ambulance, which followed us to a stop. We taxied off the runway and shut down on the taxiway, then hopped out and thanked each other for a job well done. Looking at the aircraft, it seemed that just one bird had caused the damage.

We talked about the things we could have done better. I was flying a simulated instrument approach and we were responsible for our own VFR clearances, but I should have kept scanning outside, grade or no grade. We initially wanted to just land the aircraft, only then realizing that we first needed to take care of the emergency, resulting in my instructor's call for a climb to altitude. On top of everything else going on, there was the distraction of multiple calls over the radio. Between the other aircraft asking for our working area, offering their assistance, and Center's responses, comms were extremely difficult.

We did do some things well. Neither one of us lost our heads, we calmly divided the emergency tasks, and once we realized we needed to do the checklist items, we went through them quickly and calmly. Although we were nearing the end of a long day of simulated and actual instrument work, I learned to always keep in mind the responsibility we all bear: to see and avoid.

Courtesy of Approach Navy Safety Magazine.

Photo by A1C Austin Knox

Courtesy Photo

Something to CROW about

Stephen A Calatrello
something to crow about

by Stephen A. Calatrello, Arnold Engineering Development Center, Public Affairs, Arnold AFB, Tn.

Although Arnold Engineering Development Center (AEDC) uses some of the most sophisticated technologies in the world to test aerospace systems before flight, it's been using one system for 24 years that's about as simple as instant mashed potatoes and Stovetop Stuffing.

"It's about as low-tech as you can get," said Randal Watt, a project manager at the Arnold Air Force Base, Tenn., test center's Bird Impact Test Facility. "Most people who tour AEDC are surprised we haven't developed a more sophisticated test technique. But it's really common sense, a very simple thing. If you are trying to simulate a bird hitting the windshield of an aircraft, the easiest and best way to do it is to catch a bird, accelerate it to the desired speed, and have an aircraft windshield in its path."

Bird strikes can cause extensive damage to aircraft and serious injuries to their crews. At worst, they can be deadly confrontations. The Air Force estimates that planes hit about 3,000 birds every year, causing damages of $50 million and sometimes loss of human life. In a bird-strike accident in September 1995, 24 AWACS crew members were killed after takeoff from Elmendorf Air Force Base, Alaska. So for more than 20 years, Watt and his colleagues at AEDC have been helping the Air Force upgrade and certify aircraft windshields and canopies for bird-strike resistance.

"Birds have been a hazard ever since there has been an airplane," Watt said. "But the situation didn't become really critical until planes starting flying very fast and close to the ground."

A serious problem in Vietnam

The critical period began during the height of the Vietnam War, Watt said. F-111 aircraft – equipped with terrain following radar that allowed them to zip along a few hundred feet off the ground – were hitting a lot of birds. So an office set up at Wright-Patterson Air Force Base, Ohio, received a tasking to do something about the bird-impact hazard.

People at Wright-Patt knew AEDC had gun range experience, so they asked what it would take to develop some sort of bird-strike test. With some scrap hardware, including an old 8-inch Naval gun, and a little design and fabrication, engineers at AEDC hatched a plan. They assembled a simple air gun, and gave the world what people at Arnold now commonly call the Rooster Booster, or the Chicken Gun.

"The gun has a 60-foot-long barrel and a 10-foot, 3-inch chamber that can be pressurized with air," Watt said. "to operate the system, the chicken carcass is placed into a balsa wood container called a sabot (French for "shoe") and loaded into the barrel. Between the barrel and the air chamber is a thin plastic diaphragm, which isolates the sabot from the high pressure air until shot time. "Firing" of the gun is accomplished by rupturing the diaphragm, permitting the air to push the sabot and bird down the launch tube toward the test article, which sits in an outdoor shed area."

As the sabot and chicken exit the launch tube, a tapered and threaded section strips the sabot away, permitting the bird to continue in flight to the target. The sabot stops before the end of the section.

Good for tests, or Sunday dinner

Watt said AEDC buys whole 4-pound chicken carcasses, feathers and all, from a local chicken farmer.

"These are the same chickens that would end up on your Sunday dinner table," Watt said. They're kept in a freezer until needed for testing, when they're thawed. Though the American Society for Testing and Materials Standard for bird-impact testing will permit using imitation birds, Watt said the Air Force typically requires a real bird carcass.

The preference of most of the System Program Offices (SPOs) is to simulate the event as close to reality as possible, Watt said. "The best thing to sue to simulate a bird strike is a bird. And chickens are the easiest to come by."

Aircraft and bird encounters occur thousands of times each year. The Air Force alone has approximately 3,000, according to the Windshield Systems office at Wright-Patterson Air Force Base, Ohio. Since 1972, when AEDC's Bird Impact Range began operating, a representative transparency from nearly every type of U.S. military aircraft has been bird-strike tested. This testing has helped save untold lives and millions of dollars.

In the 20 years Watt has been associated with the chicken gun, he's seen some real advancements in wind-

Rooster Booster

proves old-fashioned ingenuity needn't be high-tech

shield and canopy technology.

"Our first shot was in October 1972 on an F-111 escape module. Back then the windshields were basically glass," Watt said. "Because they were designed strictly for aerodynamic loads, with no consideration whatsoever to bird impacts, they failed at very low speeds, under 70 knots or so. They just punched right through, which would result in a fatality and the loss of an expensive aircraft."

The Air Force went to various windshield manufacturers and asked them to develop stronger windshields. Moving away from glass to more modern plastics such as acrylic or polycarbonate, a high-strength plastic, developers went to laminated designs, which are stronger and more flexible. Since its inception, AEDC's chicken gun has tested the windshields and canopies of the majority of aircraft flying in the Defense Department's inventory, including the A-7, A-10, F-15, F-1, F/A-18, F-111, T-37, B-1, and C-130.

Watt warns that not all windshields and canopies fail to qualify simply because they shatter. On an early F-16 test, Watt recalled, viewing the test with the naked eye showed the windshield withstood the impact just fine.

"We had our high-speed cameras running inside the cockpit photographing the bird coming in and the canopy deflecting into the cockpit area. It looked like the surf coming in – just a big wave running through it."

So in addition to integrity tests, Watt is also interested in how much deflection occurs. "Even if the windshield or canopy survives, if it hits the pilot in the head, he's dead. And sometimes the pilot's head is within an inch or two of that bubble canopy."

Still another consideration is temperature. Because a windshield's or canopy's properties will change according to the temperatures they are exposed to, developers must consider how windshields and canopies will respond to severe weather.

"One scenario is the plane sitting in the desert in the middle of the day that has to suddenly go into the air and hits a bird as it's taking off," Watt said. "That windshield is probably going to be very hot. So to simulate that condition, we heat the test area up to 200 degrees Fahrenheit.

"The other case is the aircraft sitting on the runway in Alaska in the middle of winter and it's 30 degrees below zero. Again, if that plane has to go airborne, its windshield will be very cold, so by putting a thermal enclosure around the test area and supplying cooled gaseous nitrogen, we can cool the area down to 30 or 40 degrees below zero."

Watt expects the chicken gun will be in use for years to come, including 40-plus firings a year.

Editor's Note: The Ballistic Impact Range A.K.A. "The Rooster Booster" was born out of necessity and has served the flying community well since then making aircraft components and canopies safer in the event of a bird strike. Although the need for impact testing has lessened over the past few years since this article was published, aircrews continue to reap the benefits of this unique testing program that's strictly for the birds.

Reprinted Courtesy of Leading Edge, AFMC Public Affairs

Taking it on home

by Maj Patrick J. Chaisson, Camp Dohu, Kuwait
Photos by Author

I received the February 2005 issue of your magazine via my brother, an Air Force officer stationed with the National Security Agency at Fort Meade, Maryland. The issue featured a story on old munitions, which inspired me to write a short story on the safety aspects of selecting "war trophies" in a combat zone.

My job as officer in charge of the 42nd Infantry Division liaison cell at Camp Dohu, Kuwait, daily brings me into contact with service members who attempt to bring illegal and dangerous souvenirs home from Iraq. While my article takes a humorous look at these mementos of wartime service, I hope you see it is a serious subject.

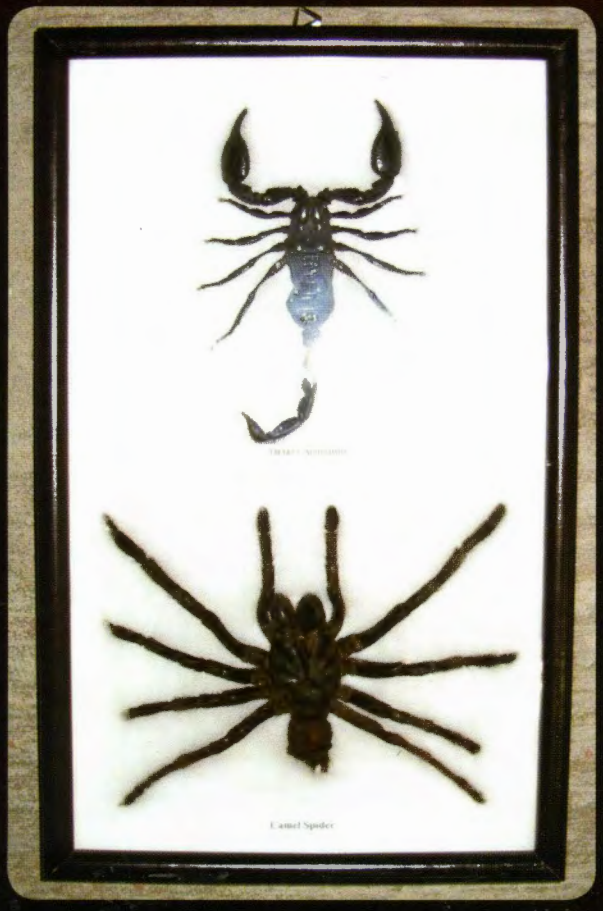
So, you're a service member about to depart the combat zone. Your tour is over and you want a souvenir of your time here, but you're not sure what an appropriate memento from Operation ENDURING FREEDOM or IRAQI FREEDOM is?

I can help.

Part of my job is to brief the troops on what they can and cannot bring back from Southwest Asia. I'd like to share these hints with you now:

Your choice of keepsake must be tasteful, safe, and legal. A military customs inspector at your re-deployment camp determines what is safe and legal; your spouse back home has the final say on taste. While shopping for souvenirs, it helps to remember "W.W.W.S." That stands for "What Would Wifey Say" (married females should substitute the word "Hubby" here). That life-sized brass camel statue which looked so attractive in the bazaar will get through customs but might not pass inspection with "CINC-House." If you can imagine your spouse exclaiming "there's no way you're bringing that thing into my house," then you might want to reconsider your selection.

There are, however, some trophies you just cannot take back to the States, and while these banned items may seem obvious to anybody blessed with common sense, sadly, not everybody is blessed with common sense. That's why our friendly customs inspectors search your stuff before you get to go home.



Here is a partial list of contraband that may not be brought back from overseas, and why:

Sand: There exists a critical shortage of sand in Southwest Asia. Not even one grain can be spared. Besides, there is a real threat that the spirit of an ancient warrior king resides in the sand, ready to rise up in vengeance against anyone who dares disturb his centuries-old sleep. Didn't *The Mummy* movie teach you anything?

Weapons: A select-fire assault rifle is an excellent, even necessary thing to have in the combat zone. Not so much back home. While the neighbors might be impressed with your new AK-47 rifle, local law enforcement authorities will likely be even more impressed and want to talk to you about how you got it – through a bullhorn.

Ammunition and Explosives: Of all things that can be used as a paperweight, the hand grenade is a poor choice. It rolls all over your desk, and can detonate on very little (3-5 seconds, to be exact) notice. Our bomb-sniffing dogs will remind you of this explosive fact at the customs inspection.

Tanks: Modern tank-killing ammunition contains depleted uranium, a radioactive substance that lingers inside the vehicle for years afterwards. A T-72 tank on your front lawn would complement any home's décor, but the radioactivity might harm any neighborhood kids who play on it. Shipping home a 49-ton piece of wrecked enemy armor would require a second mortgage anyway, so leave the tanks where you found them.

UXO: The term "dud" is commonly used to identify both unexploded ordnance and any idiot who plays around with this stuff. Just because it hasn't gone off doesn't mean it won't go off. Keep your hands to yourself and keep your hands.

Cubans: Anything that tastes this good has to be either illegal or bad for you. Cuban cigars are both. Enjoy your Havanas here; at Customs you'll encounter a squadron of talking parrots specially trained to sniff out Communist tobacco.

Pets: The list of prohibited pets includes grasshoppers, lizards, and camel spiders. Admit it; the whole time you were deployed, all you thought about was home. This is their home. If you bring a pet back to the States, that animal will spend the rest of its life missing home – is that what you really want?

Other Hazardous Materials: In this category are scorpions, snakes, and other things that make you go "ouch." Whether dead or alive, squished, stuffed, or encased in plastic, there's no earthly reason why you need a sand viper. It would make a neat April Fool's Day prank, though ...

Hopefully, these hints will help the re-deploying service member find that souvenir that is safe and appropriate, tasteful, yet still able to pass a customs search. Selecting the right memento of your service will lead to years of pleasant memories, something to be remembered long after the sand flea bites heal.

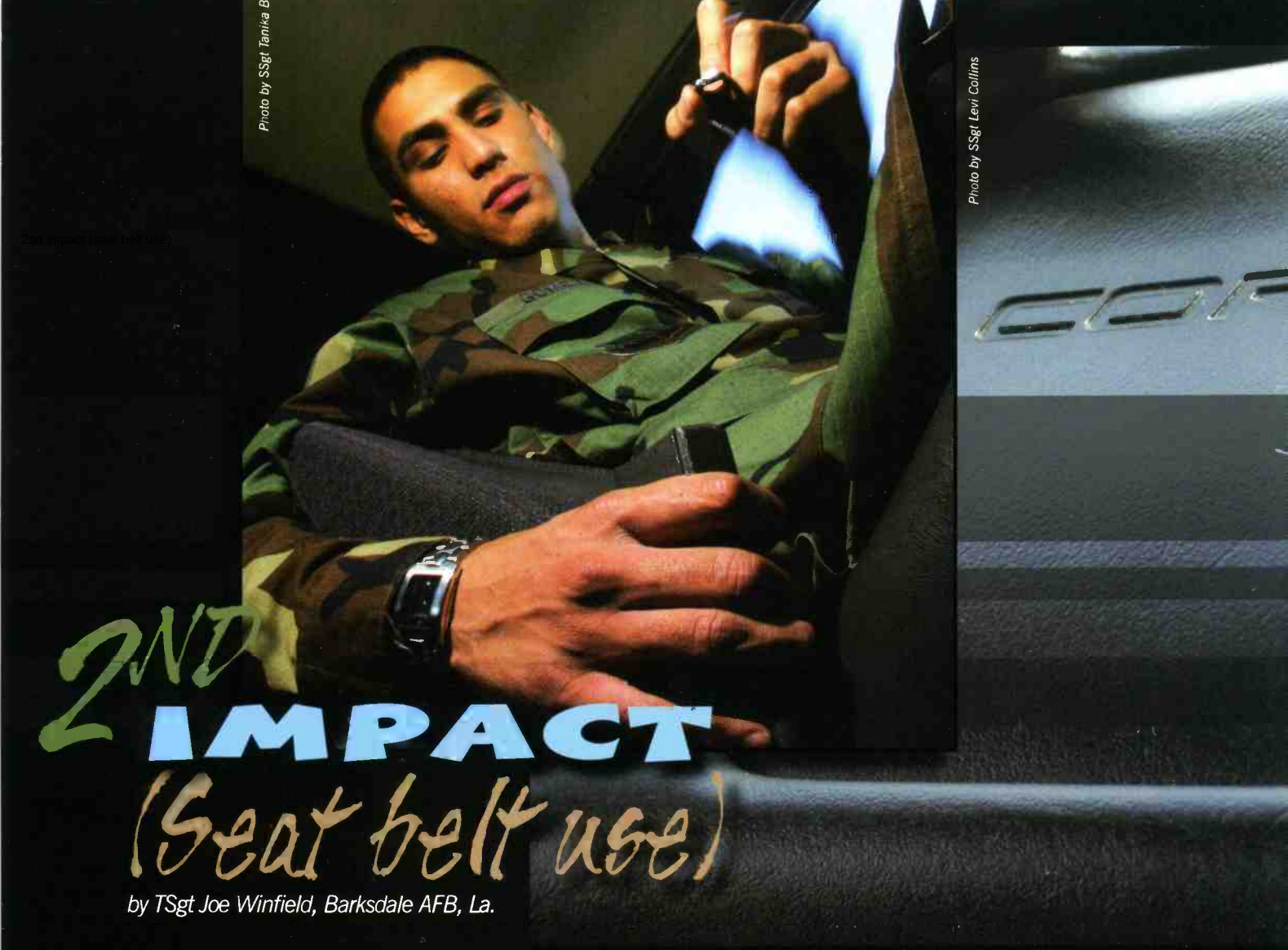


Photo by SSgt Tanika B

Photo by SSgt Levi Collins

2nd impact (seat belt use)

2ND IMPACT (Seat belt use)

by TSgt Joe Winfield, Barksdale AFB, La.

Americans love football, hotdogs, apple pie, and wearing seat belts. Well, Americans have been a little slower to embrace seat belts than the other three icons, but we're coming along, albeit slowly. According to the National Highway Traffic Safety Administration, seat belt usage across the United States is on the rise and recently topped 80 percent. Unfortunately, that 80 percent usage rate is having a carryover effect on our Airmen. While seat belt compliance rates on most bases is over 99 percent, Airmen continue to lose their lives off base by failing to buckle up; indicating massive room for improvement in off-base usage.

In fact, according to statistics compiled by the Department of Transportation, there were 16,566 fatalities in 2004 in which restraints were not used, or an average of 332 deaths annually per state. Furthermore, in FY04 ACC experienced seven fatalities resulting from lack of restraint use — seven valuable Airmen who might have survived, and been alive today had they taken the time to buckle up. This tells us that we in ACC still have work to do when it comes to seat belt usage.

What many people fail to realize is that during most vehicle accidents, occupants experience two separate impacts. First, there is the initial impact when the vehicle hits another object, but this impact alone may not be enough to cause serious harm. The second impact is the culprit behind most car injuries.

Sir Issac Newton's first law of motion comes into play here. Simply put, the law states that every object will remain in motion until acted upon by an outside force, with deadly results.

The second impact occurs inside the vehicle after the force from the initial impact turns the occupants into flying projectiles, slamming them into the dashboard, windshield, or other hardened parts of the interior. Imagine this: a car traveling at 50 miles per hour (MPH) hits a stationary object and comes to a complete and sudden stop. An unbelted occupant and everything inside the car not secured will continue to travel at 50 MPH until something stops it, or redirects it in a different direction. Go a step further and compute the force with which the occupant will hit a stationary object inside the car — the vehicle's dashboard for instance. For an occupant weighing 160 lbs traveling at a speed of 50 MPH, the force generated at the point of impact will be 8,000 pounds! Not too many bones in the body can withstand

that kind of punishment; you can only imagine the damage to internal organs and soft tissue from a blow of 4 tons. Unlike a vehicle that can be repaired or replaced, the human body isn't easily repaired and is impossible to replace.

Once the mishap occurs, nothing can prevent the second collision; it's a law of physics that can't be broken, the only thing that can be done is to reduce its severity. Fortunately, there is a device inside your car that is designed for just that purpose: your seat belt.

The seat belt wraps across the torso and waist of the driver and passenger to give the body something softer than the car's interior to absorb the impact. It also helps protect your body from being injured by the unyielding hard metal and plastic surfaces on the inside of your car.

Seat belts keep you behind the wheel where you can continue to drive and possibly take further evasive action, and also prevent you from being ejected from the vehicle — one of the biggest causes of motor vehicle fatalities.

Many new cars come with airbags, and this feature gives some motorists a false sense of security. Airbags are passive devices, not active systems like seat belts that require your action to latch. Passive can be good, because it's easy, but may not necessarily be as effective. Statistically, fewer injuries and fatalities occur in crashes of vehicles equipped with airbags, (overall, airbags reduce driver deaths by 14 percent and passenger deaths by 11 percent) but the deployment of an airbag alone during a high-speed collision may not be enough to save the life of an unbelted occupant.

Although some new cars offer side airbags, many do not. Dashboard mounted airbags offer no protection at all from side or rear collisions, only from the front. Supplemental restraints don't offer much during rollovers, either. Wearing a lap belt keeps you anchored to the car seat and your shoulder belt keeps your upper body from pitching forward and hitting the airbag as it deploys. Remember, airbags are designed to complement seat belts, not replace them.

Supervisors are often faced with a tough job changing the ingrained habit patterns of Airmen who may have spent 18 or more years of their lives not wearing seat belts. Persistence, sincerity, example, constant awareness, and education are the keys to success and lowering the death and injury rates due to automobile accidents. The alternative to wearing a seat belt really isn't a choice at all, and if made, it has a pretty grim outlook. Without a belt, people can look forward to skull fractures, facial lacerations, broken teeth, ribs and other nasty internal injuries and in the worst cases, death.

Remember, if the first impact doesn't kill you, the second one just might. The final decision is up to you. I know the choice I'll make.

BACK to School

Photos by TSgt Ben Bloker

With the end of summer in sight, August marks the beginning of the school year in some states and children will be heading back to classes and school buses will be out on our streets and highways once again. Safety is of the utmost concern as our children return to school, but following a few basic rules can help ensure a safe environment for our children as they travel to and from school as well as throughout the school day.

For those of us whose children take a bus to school, remind them to stay on the sidewalk, if available, as they walk to the bus stop. Once they arrive at the stop they should be courteous to the other children at the stop and stay away from the street until the bus comes, and while on the bus, children should remain in their seats at all times while the bus is moving.

Children, especially young children, are at their most vulnerable when they are boarding and leaving a school bus, therefore, if you drive your child to the bus stop in the morning and wait with them until the bus arrives, be sure to park in approved areas so as not to add to the traffic congestion. If you walk with your child or meet them at the stop after school, be sure they arrive on time, wait five "giant steps" from the road and don't engage in horseplay prior to the bus arriving in the morning. At the end of the day, ensure they don't dart off the bus and into the street in their anxiousness to tell you about their day. Teach your child to ask the driver for help if she drops something near the bus. If a child stoops to pick up something, the driver cannot see her and the child could be hit by the bus. A book bag or backpack helps keep loose items together.

If your children walk to school, teach them to remain on the sidewalk, if available, and to be aware of the traffic around them. If no sidewalk is available, they should stay close to the roadside and walk against traffic. Teach your children to look both ways before crossing the street and to cross only at intersections. During the winter months, children should wear light-colored clothing or add a garment with reflective material to keep them visible during low-light conditions as the days get shorter.

As school begins across the country, drivers need to be cautious and pay particular attention to the increased number of children walking in our neighborhoods and in school zones. Over the summer, higher speeds are allowed in most school zones, and drivers may become accustomed to those higher speed limits. When school resumes again, drivers need to be aware of school zones, crosswalks and bus stops; carefully obey speed limits, and keep their eyes open for children nearing the roadway.

One of the back-to-school safety topics addressed on the National Highway Traffic Safety Administration Agency (NHTSA) website discusses the bus stop as being the most dangerous part of the school bus ride. Millions of children in the United States ride safely to and from school on school buses each day. Although school buses are the safest way to get them to school, an average of 33 school-age children die in school bus-related traffic crashes each year. Most of the children killed in bus-related crashes are pedestrians, 5-to-7 years old, who are getting on or off the bus. They are hit by the school bus or by motorists illegally passing a stopped bus. Elementary school children become easily distracted and may start across the street without warning, don't understand the danger of moving vehicles, can't judge vehicle speed or distance, and may be blocked from view by the bus. Most importantly, children expect vehicles to stop for them at the school bus stop.

Learn and follow the school bus laws for motorists in your state. Laws exist to protect children getting on and off the bus AND to protect you from a tragedy. Here are some standard rules:

- Motorists coming to a school bus from either direction must stop when the bus

displays flashing red warning lights and extends the stop signal arm.

• Vehicles may not pass until the flashing red lights and signals are turned off.

• Drivers traveling in the same direction as the bus are always required to stop.

• In some states, drivers moving in the opposite direction on a divided roadway are also required to stop. Check the law in your state.

• Never pass on the right side of the bus, where children enter or exit. This is illegal and can have tragic results.

Violation of these laws can result in a citation and fine. In many places, school bus drivers can report passing vehicles! Check with your school transportation office or police department for more information on your state's laws.

Another NHTSA topic addresses a more insidious danger: back-to-school clothing. Drawstrings on clothing can be dangerous, and current styles and fads of children's clothing, especially drawstrings, have brought new injury risks.

How can a drawstring hurt a child? A drawstring at the waist, hood, or neck on clothing can catch in a small gap in playground equipment, a bus handrail, or on a bolt, and a drawstring with a large toggle or knot at the end is most likely to get caught. As a child gets off the school bus, a dangling drawstring or loose object may catch in the handrail. If the bus doors close and the child isn't seen, they could be dragged and run over by the wheels. While clothing changes are very important, school bus manufacturers and school districts are working to change handrails. New handrails are made so they won't catch drawstrings, and older buses are being modified. Bus drivers are trained to watch children as they get off the bus, and your child's bus driver should make sure each child has completely cleared the bus prior to leaving, as well as being on the lookout for clothing that could get caught.

A few simple steps make clothing safer:

• Choose clothes without drawstrings — snaps, Velcro, buttons, or elastic are better choices.

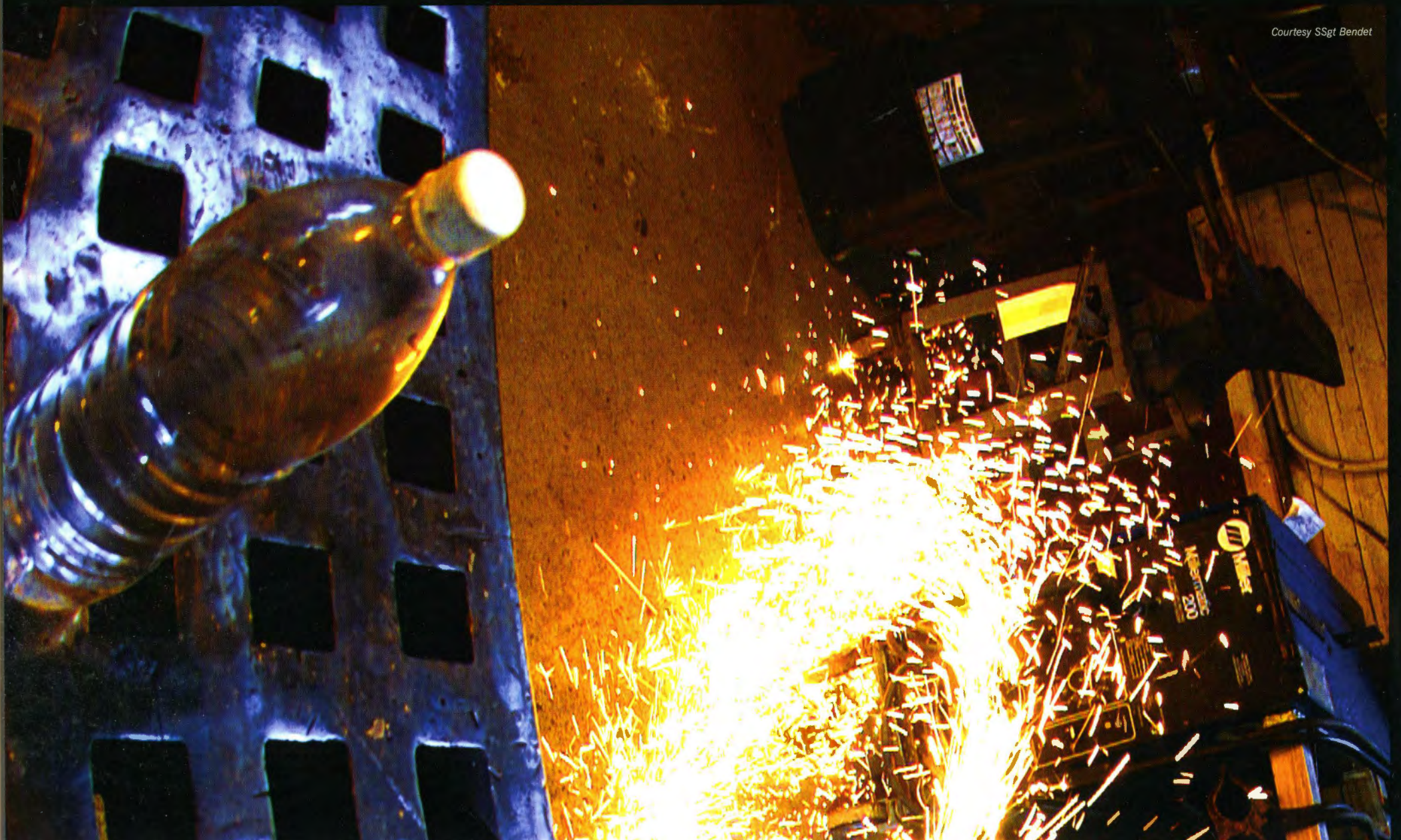
• Remove hood and neck strings.

• Remove drawstrings from the waist and bottom of coats.

• Warn children about dangling key rings, large buckles, and other objects hanging from their backpacks.

The end of summer vacation and the resumption of classes can be a very dangerous time, but by following a few simple rules and exercising common sense, it can be a very exciting and positive time, and help our children have a safe school year.

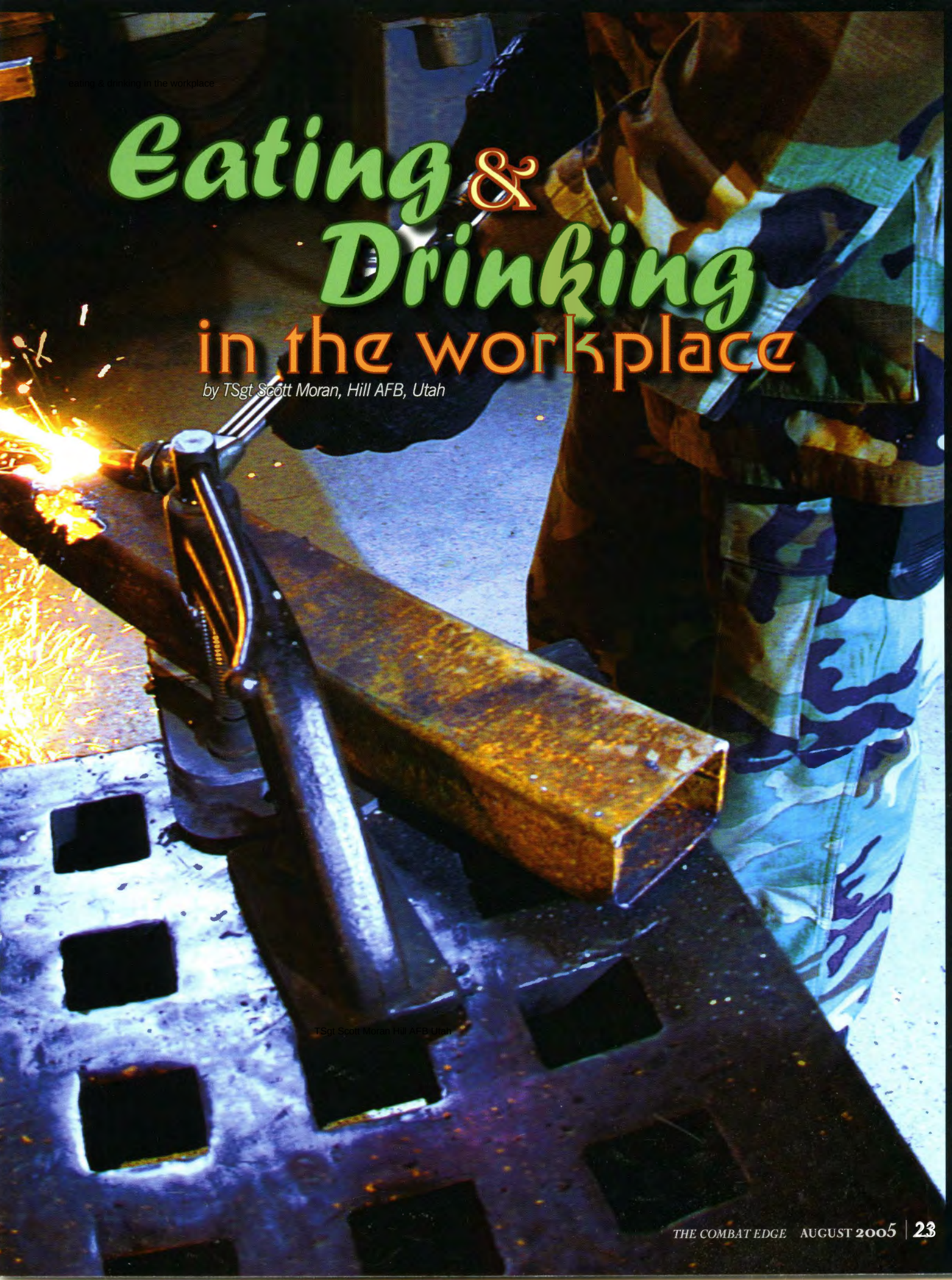
Additional safety tips can be found at the National Highway Transportation Safety Administration Website at: www.nhtsa.dot.gov



Courtesy SSgt Bendet

Eating & Drinking in the workplace

by TSgt Scott Moran, Hill AFB, Utah



TSgt Scott Moran Hill AFB Utah

Courtesy SSgt Bendet

A wise industrial hygienist once told me a true story about a mysterious exposure in a workplace on base. It all started in September 1992, when OSHA published the Cadmium Standard. The new standard required that workers with potential cadmium exposure, no matter how slight the potential, be tested to determine the cadmium levels in their bodies. A number of different shops were tested and it was expected that abrasive blast shops would be the most likely to have workers with elevated levels of cadmium, due to exposure to high airborne concentrations of cadmium. The testing revealed that the abrasive blast workers had no elevated cadmium levels, indicating their exposures were adequately controlled through engineering controls, administrative controls and the personal protective equipment required for the tasks. The workers that showed the highest levels of cadmium worked in a shop where there was no inhalation hazard to cadmium. Upon further investigation, it was determined the primary exposure route in this shop was through ingestion. The workers were performing cadmium plating operations and other workplace tasks. In-between tasks they would often take a drink of soda or a bite of their candy bar, without washing their hands, and continue on with the next task at hand. Little did they know they were ingesting cadmium (and who knows what else) with every sip and every bite.

The example above shows the need to do something to prevent ingestion of hazardous materials. 29 CFR 1910.141 paragraph (g) (Sanitation) addresses the consumption of food and beverages in the workplace. It states "No employee shall be allowed to consume food or beverages in a toilet room or in any area exposed to a toxic material," as well as "no food or beverages shall be stored in toilet rooms or in an area exposed to toxic material." AFOSH Std 91-68, Chemical Safety, mandates that food products and smoking materials be isolated from work areas where toxic materials are stored or used. AFOSH Std 91-501, *Air Force Consolidated Occupational Safety Standard*, which enforces the OSHA standard, states that "No food or drink will be brought into or consumed in areas exposed to toxic materials, chemicals, or industrial shop contaminants. After exposure to any contaminant, shop personnel will wash their hands before eating or smoking."

The number one fundamental step in

preventing ingestion of chemicals is personal hygiene. Regardless of whether the activities you perform require hand protection or not, you should always wash your hands after using chemicals, especially before you eat, drink or smoke.

Workplace supervisors are responsible for enforcing these standards and making sure adequate facilities are available for workers to comply with the standards. Your employees will thank you, and so will their families.

The above information is courtesy of the OO-ALC Center Safety Office Newsletter

Are You Overexposing Yourself?

The previous article used the inadvertent ingestion of Cadmium to illustrate the actions that you can take to protect yourself (personal hygiene and using Personal Protective Equipment), but it didn't provide any information about Cadmium itself. The Agency for Toxic Substances and Disease Registry (ATSDR) is an agency of the US Department of Health and Human Services. Its mission is to serve the public by using the best science, taking responsive public health actions, and providing trusted health information to prevent harmful exposures and disease related to toxic substances.

The ATSDR website provides fact sheets to answer the most frequently asked questions (FAQs) about exposure to hazardous substances and the effects of exposure on human health at: ***http://www.atsdr.cdc.gov/toxfaq.html***. The ATSDR "ToxFAQs™" fact sheet for cadmium states that *"this information is important because this substance may harm you. The effects of exposure to any hazardous substance depend on the dose, the duration, how you are exposed, personal traits and habits, and whether other chemicals are present."*

While exposure to cadmium happens mostly in the workplace where Cadmium products are made, the general population is exposed from breathing cigarette smoke or eating cadmium contaminated foods. Cadmium damages the lungs, can cause kidney disease, and may irritate the digestive tract. It's a natural element in the earth's crust, and it's usually found as a mineral combined with other elements such as oxygen (cadmium oxide), chlorine (cadmium chloride), or sulfur (cadmium sulfate, cadmium sulfide). All soils and rocks, including coal and mineral fertilizers, contain some cadmium. Most cadmium used in the United States is extracted during the production of other metals like zinc, lead, and copper. Cadmium does not corrode easily and has many uses, including batteries, pigments, metal coatings, and plastics.

Cadmium enters the environment from mining, industry, and burning coal and household wastes. Once introduced into the environment, cadmium particles in air can travel long distances before falling to the ground or water. It can also enter water and soil from waste disposal and spills or leaks at hazardous waste sites, where it binds strongly to soil particles. Cadmium doesn't break down in the environment. Therefore, it can easily be taken up by fish, plants, and animals; which are then consumed by humans, and once it enters your body, it stays in the body a very long time and it can build up from many years of exposure to low levels.

In and out of the workplace, cadmium exposure can come about by: breathing contaminated workplace air (battery manufacturing, metal soldering or welding), or eating foods containing it; low levels in all foods (highest in shellfish, liver, and kidney meats). Breathing cadmium in cigarette smoke can double your average daily intake, while drinking contaminated water, or breathing contaminated air near the burning of fossil fuels or municipal waste can add to your exposure levels.

The Department of Health and Human Services (DHHS) has determined that cadmium and cadmium compounds may reasonably be anticipated to be carcinogens, and it can affect your health in several different ways. Breathing high levels of cadmium severely damages the lungs and can cause death. Eating food or drinking water with very high levels severely irritates the stomach, leading to vomiting and diarrhea. Long-term exposure to lower levels of cadmium in air, food, or water leads to a buildup of cadmium in the kidneys and possible kidney disease. Other long-term effects are lung damage and fragile bones. The health effects in children are expected to be similar to those in adults (kidney, lung, and intestinal damage). It is unknown at this time if cadmium causes birth defects in people as it does not readily go from a pregnant woman's body into the developing child, but some portion can cross the placenta, and it can also be found in breast milk.

Animal studies indicate that more cadmium is absorbed into the body if the diet is low in calcium, protein, or iron, or is high in fat. A few studies show that younger animals absorb more cadmium and are more likely to lose bone and bone strength than adults. The babies of animals exposed to high levels of cadmium during pregnancy had changes in behavior and learning ability, and Cadmium may also affect birth weight and the skeleton in developing animals.

How can families reduce the risk of exposure to cadmium? A balanced diet can reduce the amount of cadmium taken into the body from food and drink, and is your first line of defense. In the home, store substances that contain cadmium safely, and keep nickel-cadmium batteries out of reach of young children. If you work with cadmium, use all safety precautions to avoid carrying cadmium-containing dust home from work on your clothing, skin, hair, or tools.

For more information concerning workplace conditions, contact your unit or wing ground safety office. For issues around your private residence or community, ATSDR can tell you where to find occupational and environmental health clinics. Their specialists can recognize, evaluate, and treat illnesses resulting from exposure to hazardous substances. You can also contact your community or state health or environmental quality department if you have any more questions or concerns.

Editor's note: The information for this article was obtained from the ATSDR "ToxFAQs™" fact sheet for cadmium at http://www.atsdr.cdc.gov/tfacts5.html.

Monthly Award Winners

Aircrew Safety
Award of Distinction

On 10 May 05, Maj Keith Reeves and Capt James Price distinguished themselves in their expert handling of a serious in-flight emergency while flying a T-38 aircraft. Shortly after take-off on a local training sortie, the crew noticed the right engine exhaust temperature was out of operating limits. They retarded the right throttle to idle, in accordance with T.O. procedures, to maintain the temperature within limits and decided to return to Whiteman AFB. On the recovery, just prior to crossing the overrun the crew noticed a flash down the right side of the aircraft, felt a large thump, and heard other abnormal engine noises. Capt Price immediately assessed the situation and realized he was not in a safe position for an immediate landing. Capt Price knew his right engine was questionable and did not immediately know how many birds were struck or if both engines sustained damage. Since he was not in a safe position to land and at a heavy gross weight, his initial actions were to place both throttles to military power. He saw a spike in the right engine exhaust temperature fluctuating between 800 and 830 as well as other signs of a compressor stall. At this point, the crew executed the boldface for a single-engine-go-around using the left engine and advanced it to full afterburner. After safely climbing away from the ground they informed tower they had experienced a bird strike, requested a chase aircraft, and retarded the right throttle to idle allowing the engine to stabilize within limits in accordance with the T.O. Another T-38 joined with them on outside downwind and performed a damage assessment, confirming no other damage to the T-38. All normal and EP checklists were accomplished and an emergency was declared on outside downwind with tower, and a single-engine landing was accomplished. The right engine temperature began to rise during rollout and the crew stopped on the runway and shut down engines, whereupon they executed an emergency egress from the T-38. Knowledge, skill, airmanship, and timely actions prevented further damage to the aircraft and resulted in the safe recovery of the aircraft and crew.

Maj Keith Reeves and Capt James Price
509th Bomb Wing
Whiteman AFB, Mo.

Crew Chief Safety
Award of Distinction

On 18 Apr 05, Senior Airmen Jeremy Moore, Michael Nichol, Michael Mowatt, and Daniel Richardson were reconfiguring E-3 aircraft 77-0353 after a ground refueling operation. While resetting circuit breakers in the midsection of the aircraft, they noticed smoke and fumes. SrA Mowatt immediately checked the circuit breaker panel for heat, while SrA Moore, Nichol, and Richardson began to look for the source of the smoke and fumes. They immediately identified a lighting ballast in the midsection of the aircraft on fire. SrA Mowatt quickly located and pulled the circuit breaker to the light assembly, and once the circuit breaker was pulled SrA Moore was able to quickly extinguish the fire. SrA Nichol and SrA Richardson stood by with the fire extinguisher, while SrA Mowatt disconnected external power and notified the expediter to dispatch the fire department. SrA Nichol then removed the ceiling panels to ensure there was no fire or smoldering insulation under the panel. After ensuring the fire was completely out, they evacuated the aircraft and waited for the fire department. The fire department responded to this ground emergency and verified that the refuel crew's actions had completely extinguished the fire. The investigation revealed that the ballast shorted out causing it to catch on fire. The immediate action of removing power to the source of the fire, remaining calm, and not over-reacting while extinguishing the fire clearly limited damage to the aircraft to less than $600.

Senior Airmen Jeremy Moore, Michael Nichol,
Daniel Richardson and Michael Mowatt
552nd Aircraft Maintenance Squadron
552nd Air Control Wing
Tinker AFB, Okla.

Flight Safety

Award of Distinction

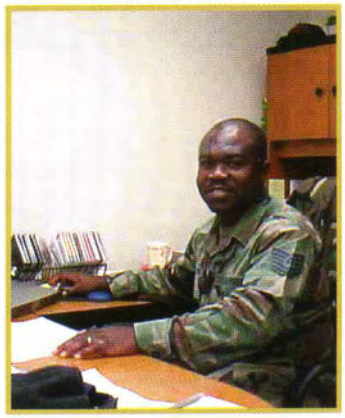
On 5 Apr 05, MSgt Stanley Angus received a call from the Maintenance Operations Center informing him that a B-52 aircraft had suffered a lightning strike on the nose radome while approaching the field. MSgt Angus asked if the aircraft had received any noticeable damage or if the crew was experiencing any difficulties with aircraft systems. The aircrew relayed that no damage was noted and that all systems seemed to be working properly. Despite this optimistic report, MSgt Angus instinctively directed the maintenance expeditor to send additional crew chiefs to meet the aircraft at the end of the runway for a thorough inspection. Immediately after landing, the crew experienced smoke in the cockpit, declared a ground emergency, and evacuated the aircraft. MSgt Angus raced to the scene with two additional crew chiefs and several Electro/Environmental (E/E) technicians, arriving at the same time as the fire department. Seeing smoke billowing from the vicinity of the nose radome and sensor turrets, he quickly directed the crew chiefs to chock the aircraft. Once the aircraft was immobilized, he opened the nose radome with the assistance of the E/E technicians. As soon as all the latches were released, he cleared all other personnel away from the danger area and pushed the radome up to its full open and locked position. Water, debris and glowing embers fell onto his back while sparks flew out of the open compartment. The emergency crew was immediately able to see the source of the smoke and used the fire bottle to extinguish a smoldering fire surrounding the electronic equipment. MSgt Angus sent the crew chiefs and E/E technicians back to the hangar once the fire was out and personally installed the aircraft main landing gear down-locks while waiting for Safety and Quality Assurance to arrive. MSgt Angus's insight, preparation, and actions ensured qualified personnel were in position to bring the incident to a safe conclusion, minimizing damage to the aircraft.

MSgt Stanley M. Angus
2nd Aircraft Maintenance Squadron
2nd Bomb Wing
Barksdale AFB, La.

Ground Safety

Award of Distinction

TSgt Radford spearheads the commander's safety program for the 690 CSS. Under his guidance the squadron safety program was rated Excellent, 100 percent compliant, during the 67 IOW annual ground safety inspections; with the squadron's program management receiving praise as "best seen to date" by inspectors. He initiated an energetic pre-departure briefing process in which every squadron member receives a pre-departure briefing prior to long weekends and holidays, and his efforts ensured 100 percent pre-departure safety briefings were completed prior to start of leave, TDY, or PCS. A dedicated safety professional, he worked hand-in-hand with section safety representatives in preparation for 67 IOW 2005 annual ground safety inspection; providing in-depth briefings to all 129 squadron members. Sgt Radford's efforts ensured the 10 section safety management binders and squadron safety boards contained pertinent and current safety information, while scanning open sources for warnings of potential hazards which could possibly affect squadron personnel or equipment. When an in-depth safety inspection identified faulty fire suppression heads, he reported them to the facility management office, and tracked the AF Form 332 process until abatement actions were completed. Sgt Radford addressed concerns of new evacuation routes to the host fire department and Security Forces personnel, as the existing routes created a bottleneck. With the assistance of the 67 IOW, these issues were addressed and fire evacuation routes are being addressed by the host fire department. His efforts have allowed flight commanders to assess the status of their flight's safety programs and assist or facilitate rapid resolution. Through dedication and devotion to duty, TSgt Radford's squadron has not experienced a lost time mishap for the previous 3 years.



TSgt D. A. Radford, 690th Computer Systems Squadron,
67th Information Operations Wing, Lackland AFB, Texas

Monthly Award Winners

Pilot Safety
Award of Distinction

Maj Granger was flying an F-16 D-model aircraft as a SEFE, call sign Greasy 62, on a daytime fly-pit-fly profile to evaluate an instrument check ride for Capt Bacon, flying in Greasy 61. After hot-pitting, both aircraft performed a formation takeoff and proceeded eastbound toward the training area for a BFM sortie. After passing the coastline and at approximately 20,000 ft and 300 knots, Maj Granger's aircraft experienced a catastrophic engine failure resulting in a loud bang, vibration, and constant engine shudder. Maj Granger immediately turned his F-16 toward Charleston AFB, the nearest suitable airfield. Due to the heavy population in this area, Maj Granger took great care to parallel the coastline while applying critical action procedures to restart his engine. Capt Bacon took up the chase position and declared an emergency with air traffic control. Noticing that Greasy 62's centerline tank had not jettisoned, he commanded a jettison reattempt. Maj Granger again tried to emergency jettison the tank without success. As the formation continued toward Charleston AFB, it became evident that the mishap aircraft didn't have the energy required to reach the runway. Population density was also growing and both pilots were increasingly concerned about where to eject from the aircraft to minimize any injury or damage on the ground. Scanning ahead, Maj Granger saw a large marsh in the Ashley River. Both Maj Granger and Capt Bacon agreed that was where the aircraft needed to impact. Maj Granger coordinated with his backseater to prepare for imminent ejection. At 1,200 ft, Maj Granger extended the aircraft speed brakes to shorten his gliding distance and commanded bailout. Capt Bacon's high degree of professionalism and cool thinking were exemplary while orbiting overhead the survivors. Capt Bacon quickly used the newly acquired Helmet Mounted Cueing System to mark the survivor's position as well as the position of the downed aircraft. Capt Bacon relayed this information to both Charleston Air Traffic Control and the Shaw AFB Supervisor of Flying. Capt Bacon then established radio contact with Maj Granger, who relayed that both pilots were uninjured.

Maj Stephen J. Granger, Capt Christopher A. Bacon
9th Air Force, Shaw AFB, S.C.

Unit Safety
Award of Distinction

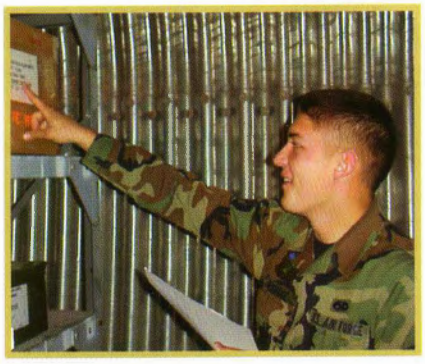
MSgt Eric M. Jutras, SSgt Amanda S. Hill, SSgt Matthew J. St. Andre, SrA Joshua I. Rowe, SrA Andrew M. Smith, and SrA Justin P. Cooper, from the Aircraft Fuel Systems Section play an integral role in the squadron. These fuel technicians were replacing a faulty scavenge pump on an uploaded B-1 forward weapons bay fuel tank. During installation, the secondary sleeve assembly inside the internal pump housing failed in the full open position, causing an uncontrollable flow of fuel from the tank which engulfed the technicians below. Recognizing the severity of the situation, the fuels technicians attempted to fully install the pump to stop the flow of fuel, but their attempt proved unsuccessful, so a Category III fuel spill was declared. Thinking on their feet, the technicians positioned a maintenance stand with a wooden chock under the housing to hold the pump in position. This provided enough upward force to stop the flow of fuel. Several technicians, completely soaked in fuel, were transported to the base clinic to be decontaminated. Thankfully, strict adherence to personal protective equipment prevented injury to personnel. At the same time, the fuel systems spill response team arrived on scene and rapidly contained the spilled fuel before it entered any storm drains, preventing ecological contamination. After the area was declared safe, the tank needed to be drained before removal from the aircraft for repair. The fuels technicians assessed the situation and decided the safest option was to position a telescopic bowser under the sump drain and manually open the tank sump valve. This still put the technicians at considerable risk of saturation as the fuel in the tank decanted with enormous pressure and volume. They performed the task admirably and successfully contained all fuel that spilled as a result of the downward force. An additional six technicians were sent to the emergency room for fuel exposure despite the protection provided by their safety gear. Over the next 7 hours, fuels technicians filled and emptied seven fuel bowsers without further incident. As a result of their actions, superior training, and professional teamwork, these outstanding maintainers manually drained over 1,000 gallons of fuel from the tank and successfully contained the ensuing spill avoiding an ecological disaster.

Aircraft Fuel Systems Section, 28th Maintenance Squadron
28th Bomb Wing, Ellsworth AFB, S.D.

Weapons Safety

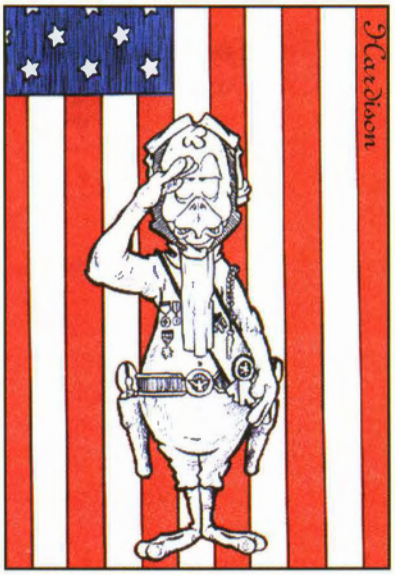
Award of Distinction

On 15 Apr 05, Airman First Class Oldridge recognized a violation of technical data and took decisive action to correct the deficiency. In preparation for the 2005 Holloman AFB Air Show, A1C Oldridge was responsible for escorting contract pyrotechnic demonstration team members to pickup of explosives to be used during the Air Show Demolition Demonstration. In accordance with AFMAN 91-201, Para 2.71.2, explosive laden vehicles must be placarded with the highest explosive hazard for transportation. In this case, the contractor did not have any explosive placards for their transport vehicle. Under constraint of time and the non-availability of the appropriate placards, the contractor decided to transport the explosives without properly placarding their vehicle, a direct violation of safety standards. A1C Oldridge immediately recognized the violation and halted their attempt to leave without the placards. Even under pressure from contract officials, A1C Oldridge stood rigid and did not allow the individuals to leave the area. To prevent the safety violation, A1C Oldridge notified Munitions Control and arranged for the use of a government owned vehicle that already had placards installed. The explosive items were cross-loaded in minimal time and the contract team was soon off to set-up the Air Show Demolition Demonstration.



A1C Derrick G. Oldridge
49th Maintenance Squadron
49th Fighter Wing
Holloman AFB, N.M.

ACC SALUTES SUPERIOR PERFORMANCE



Lt Col David R. Green
RED FLAG Ops Officer
414th Combat Training Squadron
57th Wing
Nellis AFB, Nev.

Capt William Skeeters
1st Reconnaissance Squadron
9th Reconnaissance Wing
Beale AFB, Calif.

SSgt Richard Mireles
SSgt Brandon Wannarka
SSgt Greg Slavik
A1C Chance Babbit
A1C Lance Kraftenberg
Flight Line Expeditor/Crew Chief
49th Aircraft Maintenance Squadron
49th Fighter Wing
Holloman AFB, N.M.

TSgt Algernon Johnson
Ground Safety Technician
9th Reconnaissance Wing
Beale AFB, Calif.

TSgt Rhonda M. Gibbs
Facility Management
20th Medical Support Squadron
20th Fighter Wing
Shaw AFB, S.C.

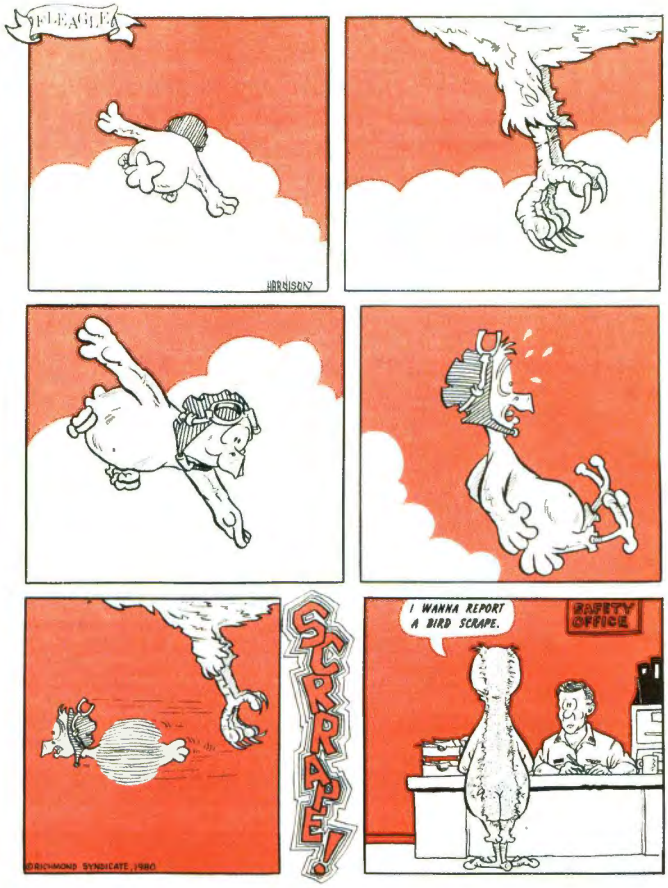
SSgt Michael D. Hunt
Missile Maintenance Team Chief
2nd Munitions Squadron
2nd Bomb Wing
Barksdale AFB, La.

A1C Dustin L. Koch
Explosive Ordnance Disposal Apprentice
20th Civil Engineer Squadron
20th Fighter Wing
Shaw AFB, S.C.

20th Equipment Maintenance Squadron
20th Fighter Wing
Shaw AFB, S.C.

Fleagle

Towards the end of a recent cross-country TDY, Fleagle ran afoul with a large flight of migrating Geese. We're happy to report that Fleagle and his wingman, Mr. Stan Hardison are recouperating at Pea Island, North Carolina. Both will be back at it and flying as soon as they are cleared by the Flight Surgeon's office. In the meantime, enjoy a few of Fleagle's biggest BASH hits from the past.



FY05 Aircraft

As of June 30, 2005

	Fatal	Aircraft Destroyed	Aircraft Damaged
8 AF			
9 AF			
12 AF			*
AWFC		* x6	
ANG (ACC-gained)			
AFRC (ACC-gained)			

FY05 Ground

As of June 30, 2005

	Fatal	Class A	Class B
8 AF		4	
9 AF		4	
12 AF		6	1
DRU's			

FY05 Weapons

As of June 30, 2005

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

Aircraft Notes

First, a moment of silence for the U-2 aviator we lost in an AOR mishap. ACC had 5 Class As in June. Two were non-rate producing Predator mishaps. The other two were F-16s. One aborted takeoff for a blown tire and the aviator got it stopped with minimal damage, estimated somewhere in the Class C range. However, putting out the brake/hydraulic fire also damaged the engine driving the cost into Class A range. The other F-16 aviator was able to get the aircraft on the ground at a divert field after the engine caught fire, but the aircraft veered right uncontrollably during the landing roll. So, the aviator ejected just prior to departing the prepared surface. Check yourself before you wreck yourself. Fly Safe!

Ground Notes

The 101 Critical Days of Summer campaign continues to be our off-duty focus, however, safety rates and mishaps are tracked throughout the year. To date, ACC currently has experienced 14 Class A mishaps, which is a reduction of 18 percent from last year's totals. Despite our best efforts and warnings, there is a disturbing trend involving fatal mishaps. The first is that fatal mishaps are occurring, the second is that in 70 percent of the PMV4 mishaps, the deceased were not wearing seat belts. Buckle-up whether you are on or off base. It's a decision we can all live with.

Weapons Notes

Weapons Safety is still having a stellar year when it comes to Class A, B, and even C mishaps. Our Class D mishaps, however, continue to rise. We can't seem to get folks to follow technical data. We need to get the word out. Spot inspections and publicity is the key. Use any tools available, from weapons safety flashes to newsletters to get the word out. Do your part to ensure all explosive operations performed in your unit are in strict compliance with technical data.

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

Symbols for Mishap Aircraft

Congratulations to Air Combat Command, the recipient of the FY04 Major General Benjamin D. Foulois Memorial Award.

This award recognizes the most effective flight safety program of all major Air Force commands.

ACC's proactive approach to safety contributed greatly to meeting the Secretary of Defense's challenge to reduce mishaps with over a 60 percent decrease in FY04 -- achieving a Class A flight mishap rate of 1.34 percent, the lowest in ACC history.

The achievements of ACC exemplify the high standards of the Major General Benjamin D. Foulois Memorial Award and reflect great credit upon the Command and the United States Air Force.

Photo by AIC Austin Knox