

TAC ATTACK

MAY 1988



ANGLE OF ATTACK

This month's cover features the F-4 Phantom II— TAC's most combat-proven fighter aircraft. It remains today one of the TAF's most versatile combat resources.

Birdstrikes continue to be a problem for us, particularly as seasonal bird migrations continue and our spring weather grows more pleasant. You and I aren't the only ones who like to spread our wings when the sun's shining bright and the skies are clear. Pay special attention to the most likely trouble spots in your local flying area or check with your flying safety folks if you're not sure where they are. If you encounter significant bird hazards while you're airborne, inform the air traffic control folks and the supervisor of flying so others can benefit from your sightings.

I'd like to share a few insights with you concerning the status of General Russ's Chief of Safety policy. To ensure the highest level of professionalism and expertise in those critical leadership positions, General Russ directed that all Chiefs of Safety would either have served as a squadron commander or currently be on the TAC squadron commanders list. As of the end of 1987, 83 percent of our Chiefs of Safety met those criteria. Of 20 safety chiefs assigned since the new policy was introduced (and who had not already served as commanders), nine have received assignments as squadron or detachment commanders, four as operations officers and two as wing ADOs.

One of the subjects we need to keep emphasizing everyday in our flying operations is basic aircraft flying. Several flying mishaps in recent months have



highlighted the importance of **maintaining aircraft control** as your first priority, no matter what else is going on. Remember to do that first, then **analyze the situation** and, finally, **take proper actions** to alleviate the problem.

Our "We Care About You" program has made a significant improvement in our ground mishap rate. I've said it before but it never hurts to remind you that the turnaround in our negative mishap trend is due to the efforts of you and your people. "We Care About You" is certainly more than a catchy phrase; it's a fact — we do care about you. Let's all continue to work together to make those four words a way of life in TAC. We'll all be happier, safer and healthier as a result.

Jack Gawelko
JACK GAWELKO, Colonel, USAF
Chief of Safety

TAC ATTACK

DEPARTMENT OF THE AIR FORCE



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TACSP 127-1

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Distribution F(X) is controlled by TAC/SEP through the PDO, based on a ratio of 1 copy per 10 persons assigned. DOD units other than USAF have no fixed ratio; requests will be considered individually.

Subscriptions for readers outside DOD are available from the Superintendent of Documents, Government Printing Office, Washington, D.C. 20402. All correspondence on subscription service should be directed to the Superintendent, not to TAC/SEP.



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TAC Attack (ISSN 0494-0380) is published monthly by HQ TAC/SEP, Langley AFB, VA. POSTMASTER: Send address changes to *TAC Attack*, TAC/SEP, Langley AFB, VA 23665-5563. Second-class postage paid at Hampton, Virginia, and additional mailing offices.

VECTOR AWARENESS:

THE SOLUTION



over your shoulder for the adversary. You're at 500 feet AGL and everything feels right, feels good. The wingman's no factor; he's on your left, you're pulling right, all you need to do is spot and negate the bandit moving in for a gunshot . . .

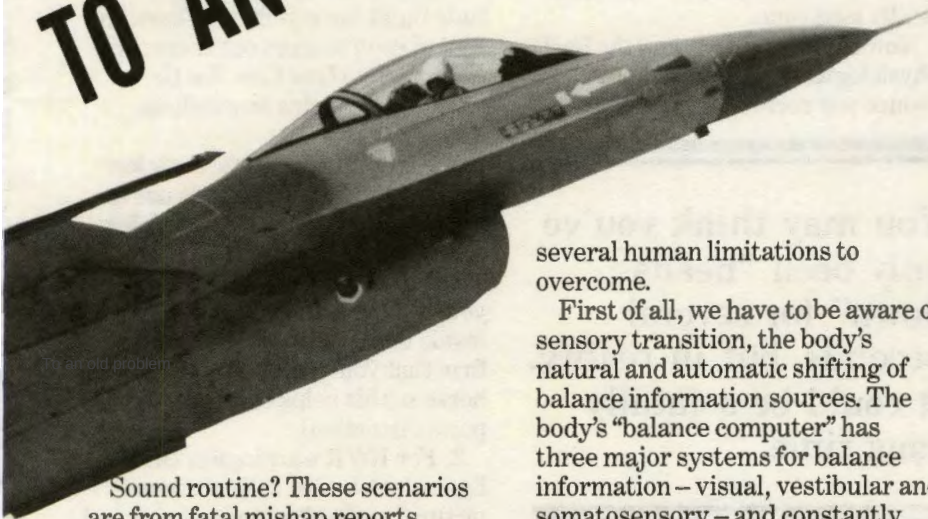
Capt Robert M. Hesselbein
176 TFS/SE
Truax Field, Wisconsin

You've just rolled wings level on downwind after successfully delivering your last level bomb onto the target. The 500 foot egress course to the IP is set up in the INS, all you need to do is safe things up, rejoin with the wingman and head for home. You look down at the armament control panel, safe up the gun and master arm switches, turn the release mode knob to Off and deselect the weapon stations . . .

"Viper 16, hard right. Bandit 6 o'clock, closing!"

With that command ringing through your earpiece, you push the power to mil, bank hard into the G's and start a turn as you look back

TO AN OLD PROBLEM



Sound routine? These scenarios are from fatal mishap reports describing what qualified, professional and dedicated pilots were doing when their aircraft struck the ground. Performing routine tasks, these men became victims of "controlled flight into terrain." This mishap category alone has cost the fighter force many skilled pilots, over sixty aircraft and half a *billion* dollars since 1980.

A lot of descriptive terms are used to explain ground collision mishaps – spatial misorientation/disorientation, loss of situational awareness, etc., but let's put it in the broader sense. *Each mishap occurred when the pilot lost accurate vector awareness.*

"Vector awareness" is a simple term. It can be defined as "an awareness of the aircraft's true movement in space," or more simply, "really knowing where the aircraft is going."

Sounds simple enough, but maintaining consistent vector awareness in the aircraft can be tough. From a physiological viewpoint, we have

several human limitations to overcome.

First of all, we have to be aware of sensory transition, the body's natural and automatic shifting of balance information sources. The body's "balance computer" has three major systems for balance information – visual, vestibular and somatosensory – and constantly analyzes and confirms inputs from all three.

Visual, the only accurate balance source available to us when we fly, is our primary system. The ambient, peripheral range of our vision gives us our immediate sense of "up and down" by analyzing lateral lines around the fringe of our vision. Ever walk and read a book at the same time? You may have walked into an unseen telephone pole, but balance was no problem because your peripheral vision could still see horizon lines. Our "heads up" sense

Visual, the only accurate balance source available to us when we fly, is our primary system.

of wings-level in the aircraft is based on the same peripheral process.

As every good pilot knows, vestibular and somatosensory balance systems work well only in a 1-G environment.

As every good pilot knows, vestibular and somatosensory balance systems work well only in a 1-G environment. The acceleration and G-plus fighter situations leave them unreliable, or worse, destructive to maintaining vector awareness. Besides being inaccurate, these balance systems require an initial 3 to 4 degree roll or pitch change per second to alert the pilot to *any* vector change. Studies have shown that if this initial threshold is not exceeded, your balance computer automatically determines "no change" through even greater roll and pitch change rates.

Because of these limitations, sensory transition will automatically set you up for a mishap situation. When you move your vision into the cockpit for mission tasks – switch changes, map reading, etc. – the primary sense of balance can automatically shift to the inaccurate balance systems, or just as bad, use your peripheral vision and interpret cockpit panel lines as being "level." The same bad situation occurs when you're looking out of the top of the canopy. There are no horizon lines to provide visual balance data.



VECTOR AWARENESS

Remember: the balance computer will assume no change in vector unless roll or pitch change thresholds are exceeded. What's the result? You can end up heading for the dirt while thinking you're in level flight.

If the vector awareness challenge wasn't tough enough, another deceptive physiological challenge we face is temporal distortion, the loss of accurate time measurement. Remember the old saying, "time flies when you're having fun?" Well, time also flies when you become mission tasked. It doesn't require saturation, it merely requires you to become involved with a task such as copying coordinates, looking down at a map, searching for a bandit, anything requiring mental

effort. You may *think* you've only been "heads down" for several seconds, but in reality, it could be a fatally long time.

Now that we understand the basic physiological limitations that reduce our vector awareness, let's

You may think you've only been "heads down" for several seconds, but in reality, it could be a fatally long time.

deal with them and get the mission done.

First, review the basics of low altitude flight management. There are a lot of good sources out there (Milt Miller's *How Low Can You Go?* videotape remains an excellent source).

Next, determine some basic low altitude techniques you can use to maximize vector awareness. A few starters could include:

1. Use the "one switch" rule. Force yourself to perform *only one step* inside the cockpit and then reconfirm that your vector is above the horizon (this helps eliminate temporal distortion).

2. For RWR warnings or caution lights, look inside, take a "mental picture" of the situation you see, and analyze it while you check your vector.

3. Consider how you perform low altitude turns. Create a technique which allows you to clear your six o'clock position, check your wingman, do what you need to do *before* you start the turn. When you turn to find a bandit, check your vector, quickly search a patch of sky, and then recheck your vector.

Finally, take a minute before your flight briefing to do a "personal preflight." Think about how your morning has gone. Almost run a stop sign en route to the squadron? Make a bunch of minor errors on the lineup card? Maybe you're only running at 90 percent instead of the normal 99 percent, and today isn't the best day to be cosmic with your tactics.

Until ground collision warning systems are installed, the sole responsibility of avoiding the ground rests with you. Fly smart, be tactical and keep your vector awareness up. ➤



AIRCREW OF DISTINCTION

Captain Richard W. Harwood, RF-4 instructor pilot, and Captain Gene A. Britt, instructor weapon systems officer, had been leading a four-ship on a night air refueling mission for about thirty minutes when Capt Harwood's seat suddenly ran to the full down position. Shortly after that, the flight controls became stiff and the cockpit began to fill with smoke. Both crewmembers immediately selected 100 percent oxygen on their regulators.

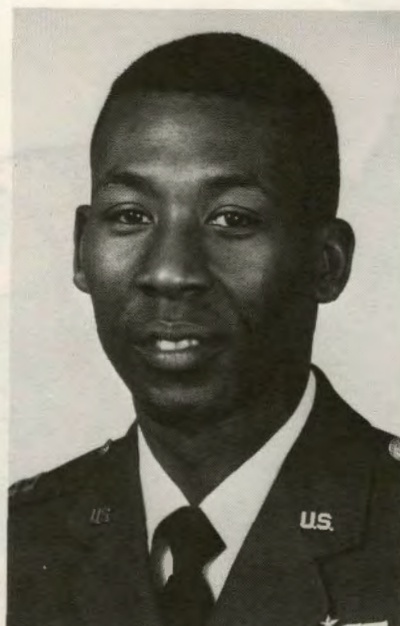
Noting their position, Capt Harwood cleared his second element off to the tanker's wing and began a rapid descent with his wingman as a chase. Since they were on the tanker's frequency and would be arriving at the divert field unannounced, Capt Harwood selected 7700 on the transponder to alert the local approach control. As they continued to descend, the smoke began to clear, but the crew started to experience random flight control inputs and increasing stiffness in the stick.

After the crew found a frequency for the local controlling agency and contacted them, they were advised that the active runway for landing was 36. Since they were already lined up on runway 18, Capt Harwood requested and was given permission to land opposite traffic. After lowering the gear and flaps at six miles, the rudder began to deflect from side to side; but Capt Harwood was able to control it by stepping on the rudder pedals. At this point, the stick became extremely stiff and he had to use both hands to maintain aircraft control.

Capt Harwood and Capt Britt successfully countered an



Captain Richard W. Harwood
16 TRS, 363 TFW
Shaw AFB, SC



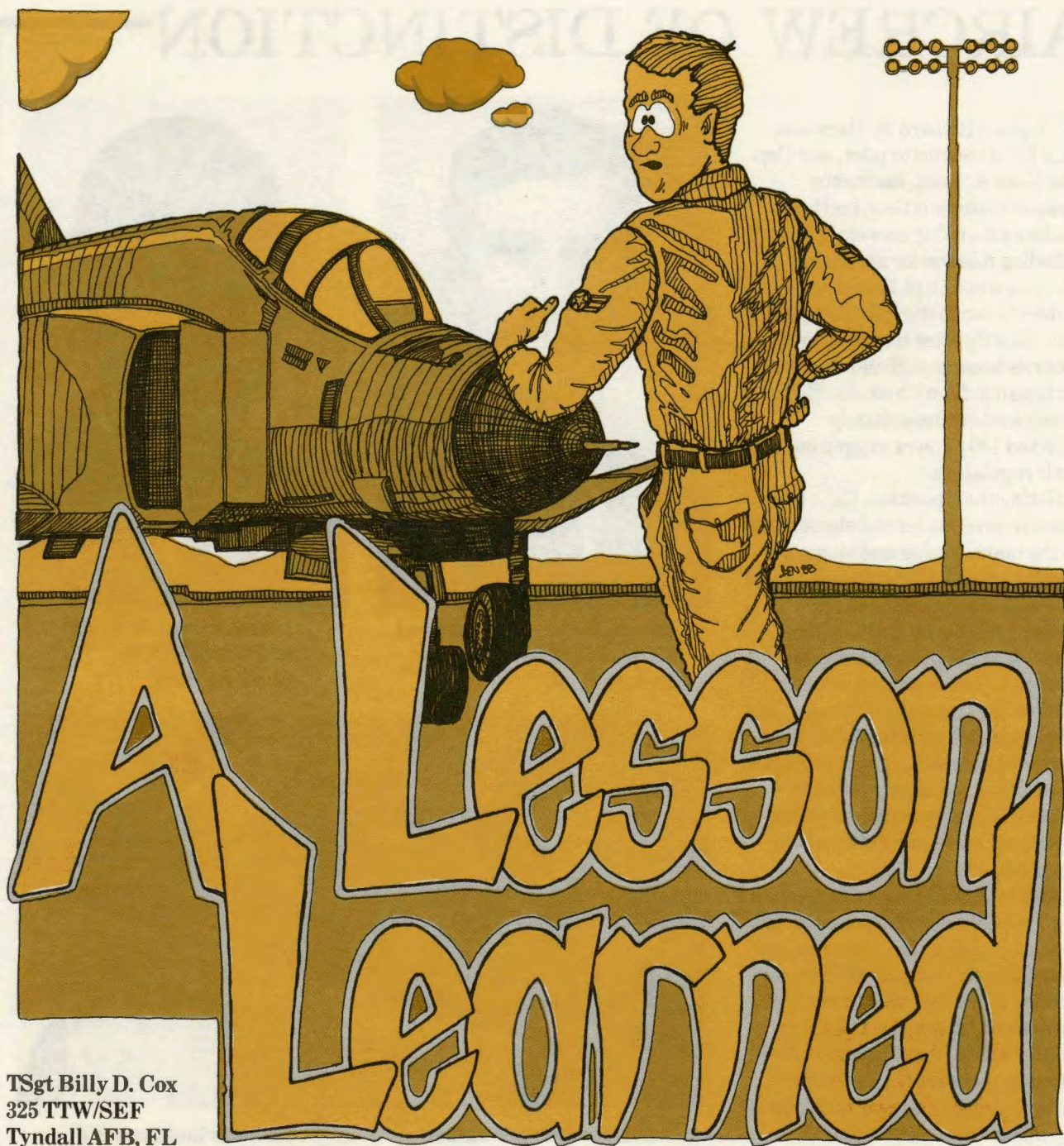
Captain Gene A. Britt
16 TRS, 363 TFW
Shaw AFB, SC



extremely hazardous situation which quickly went from bad to worse. Their timely decisionmaking and decisive actions got their aircraft on the ground within two and one-half minutes of the onset of the emergency. Post-flight inspection of the aircraft revealed that a shorted seat activator had started the cockpit fire and caused the seat to run

past the lower limit, causing progressive interference with aircraft flight controls.

The outstanding airmanship and crew coordination displayed by Captains Harwood and Britt saved a valuable USAF aircraft from serious damage or loss and highlights them as TAC Aircrews of Distinction.



TSgt Billy D. Cox
325 TTW/SEF
Tyndall AFB, FL

It was summer in South Carolina and hotter than the hinges of Hades. I was a young sergeant then and had crewed F-4s for over three years. I had my five-level and knew my way around "the Rhino" pretty well.

I had been directed to preflight a previously unscheduled jet for a cross-country hop. Naturally, everything from the tailhook damper to the LOX bottle needed servicing. There was no centerline tank installed and no one to help me until

our scheduled sorties were launched. Higher headquarters wanted the jet ASAP, so I dutifully set my hair "on fire" and went into full afterburner to achieve the "impossible." The last thing I would do was hang the centerline and per-

form the leak and ops checks when I had some help; the rest I could handle alone. There was no use having someone else in the way when I got started.

I had been directed to preflight a previously unscheduled jet for a cross-country hop.

So, away I went, the World's Greatest Tactical Fighter Crew Chief, doing what I did best; never guessing that the next few hours would forever change my way of thinking and mode of operation.

At the base where I had been stationed prior to Shaw, I had pulled some time on mid-shift servicing LOX, basic pneumatic systems and tires. Some of the "older guys" (young buck and staff sergeants) kind of "helped" the new guys (like me) get accustomed to doing those jobs. One of the things they showed us was an ingenious way to quickly inflate tires with a hi-pack utilizing the high pressure (3000+ psi) side of the machine. It worked. Guess what? So does getting a fly off your nose with a shotgun blast. Both are just about as smart.

Naturally, everything from the tailhook damper to the LOX bottle needed servicing.

"You have to be quick," I was told, "or you'll overinflate the tire." That guy must have been a Rhodes scho-

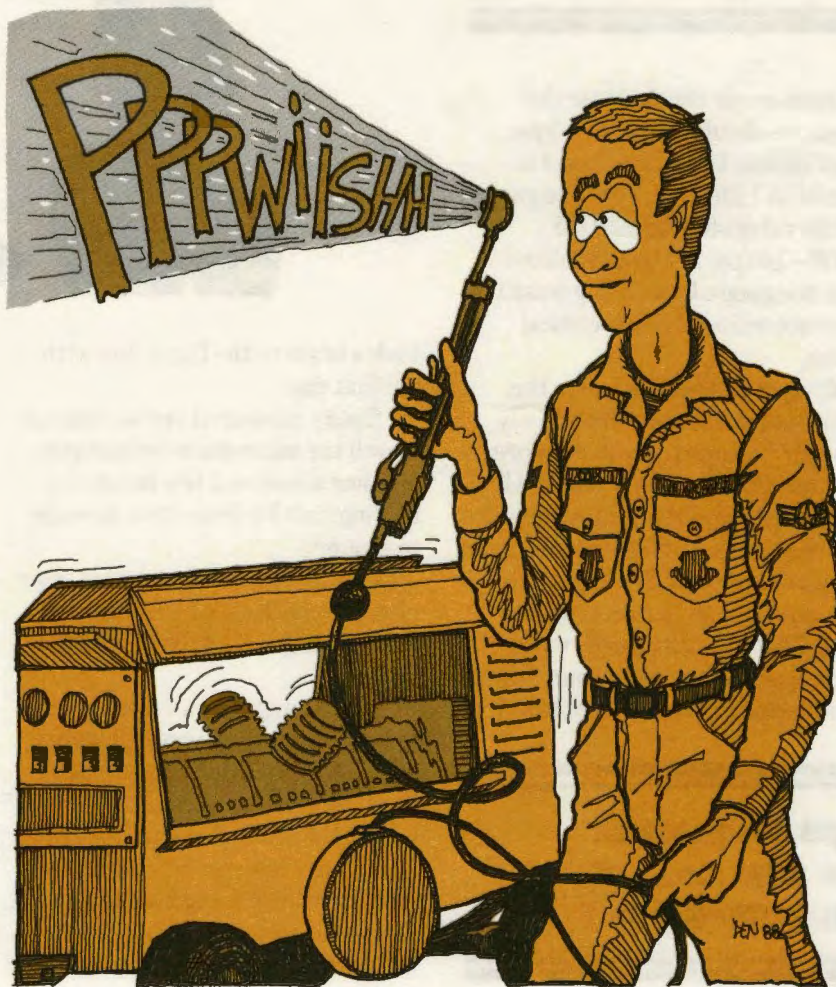
lar and I must have been first in line as Chump of the Year to allow myself to be led down that path. I did as I was "instructed" and only occasionally wondered whether or not this was such a great idea.

Meanwhile, back in sunny South Carolina, I'd finished my preflight except for hanging the centerline tank, servicing the basic pneumatic system and checking the tire pressure. I borrowed a tire pressure gauge from another crew chief down the line, then called for a hi-pack.

As I let pressure build up in the hi-pack, I checked the tire pressure. Both mains and the right nose were

One of the things they showed us was an ingenious way to quickly inflate tires with a hi-pack utilizing the high pressure (3000+ psi) side of the machine.

good. The left nose tire was pretty low. I unrolled the high pressure hose and performed my magic,





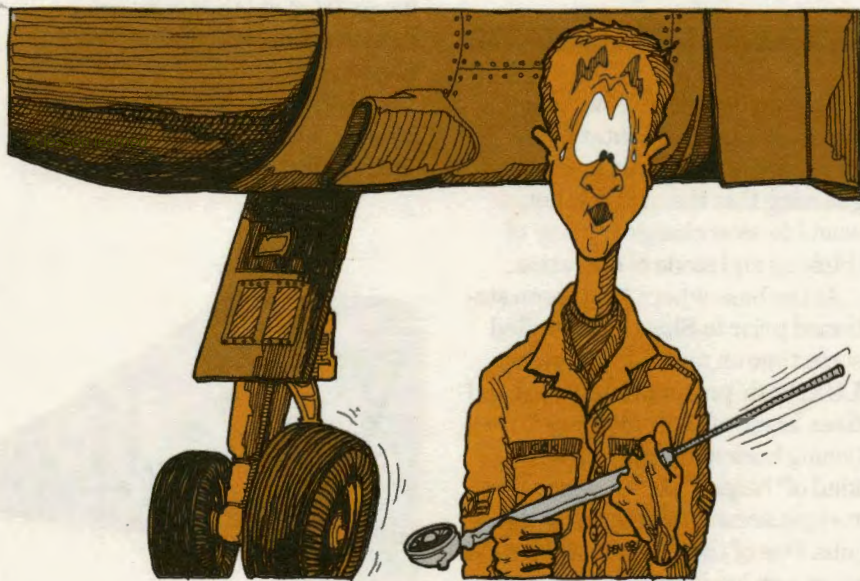
A LESSON LEARNED

I did as I was "instructed" and only occasionally wondered whether or not this was such a great idea.

without an air chuck. Nose tire pressure should read 160 ± 5 psi. *That should be enough*, I said to myself as I finished. I put the gauge on the valve stem and **HOLY COW - 460 psi !!!** Then I realized that the gauge I was using wasn't even according to the technical order.

My eyes suddenly became the same size as the nose tires. I only *thought* I couldn't sweat anymore in that hot summer sun - **WRONG!** Cold beads of perspiration popped out on my forehead like a bad case of smallpox. I shouldn't, no I couldn't, tell anyone that I'd fouled up like that! That's what happens when your ego is bigger than your brain. In retrospect, I'm not even sure I

I put the gauge on the valve stem and HOLY COW-460 psi!!!



took a brain to the flight line with me that day.

I finally mustered up the courage to pull the valve stem out and get another wheel and tire assembly, fearing that I'd done some damage to that one.

Lesson learned? You can bet your next paycheck that I sure learned one! Luckily, I survived to tell the story.

Try to remember a valuable lesson you've learned yourself so you can pass it on to one of your "new guys" or even one of your "old heads." Check the unbridled enthusiasm of that young troop so he'll keep himself and others out of harm's way. Keep an eye on the older guy who has "been doing it that way for

years, why change now?" Review your own methods of teaching. Would you do it that way if quality assurance (QA) was watching? Does something in the back of your mind send warnings to the left side of your brain that maybe, just maybe, you're screwing up? Keep this in mind the next time you're tempted to take a shortcut that seems more attractive than the published tech data.

Over the years we have devised some cosmic ways to get the job done, most of them unsafe. There is no reason for you or I to "reinvent the wheel." Published tech data can show you how to do it just as efficiently. Remember: safety is evolutionary, not revolutionary. ➤

TAC CREW CHIEF SAFETY AWARD



Airman First Class Paul R. Sudweeks is a hardworking individual who has demonstrated outstanding initiative and job performance as an F-16 assistant dedicated crew chief. He is well versed in preflight, postflight and thruflight inspection techniques, resulting in his aircraft having a fully mission capable rate of 90 percent during the past quarter. He has also ensured that his aircraft is always maintained in excellent condition, with fewer than three delayed discrepancies at all times.

On one occasion, Airman Sudweeks' outstanding technical knowledge and persistence was demonstrated when he recovered an aircraft after the first flight and began his thruflight inspection. Knowing the most current number one and two bearing engine chip detector foreign object limitations, he inspected the chip detector. When he found foreign objects on the chip detector, Airman Sudweeks began a process with the engine shop and quality assurance which resulted in an engine change for iron particles. Further analysis showed that the number two and number three bearings and bearing races were deteriorating and unserviceable for further flight. A1C Sudweeks' attention to detail and professionalism prevented the possible loss of a valuable combat aircraft and have earned for him the TAC Crew Chief Safety Award.



A1C Paul R. Sudweeks
388 AGS, 388 TFW
Hill AFB, Utah

TAC tips

TAC Tips

INTERESTING ITEMS, MISHAPS WITH MORALS, FOR THE TAC AIRCREWMAN

Get involved

There once was a farmer in Texas who used to go out to his fields the day before plowing and kill every rattlesnake he could find. When asked if it wasn't a dangerous thing to do, he replied: "I reckon so. But if I don't kill 'em today when I'm lookin', they might git me tomorrow when I ain't."



If safety is simply the preservation of assets, then to preserve human and material resources, hazard detection and elimination must be our top priorities. Unfortunately, all too many hazards come to light as the result of a major mishap. Being aware of an unsafe condition or practice and doing nothing to correct it reveals a lack of professionalism. It shows a lack of pride in one's command and profession.

Do you –

- know an aviator whose skills are a little weak and who always needs a nudge to get his act together?
- know someone who is self-medicating?

- promote the "I can hack it" attitude and fly an aircraft that is not OK?
- selectively disregard standard operating procedures in order to meet operational commitments?
- believe that crew rest is for wimps, not for hackers?
- know someone who routinely takes risks with an aircraft in the name of "exploring the edge of the envelope?"
- pass over a hydraulic leak on preflight because "it's only a small one and I'm sure a troubleshooter has already looked at it?"
- walk by, ignoring maintenance troops using unsafe procedures to work on an aircraft?
- emulate the Sierra Hotel pilot that always hits the ramp with his sleeves rolled up, helmet in hand, shades on, eating a candy bar?
- allow shortcuts in maintenance to get an aircraft "up?"
- forget about proper hearing protection in noise areas?

The majority of our safety requirements have been written in blood. The farmer recognized that he was exposed to a hazard and took positive steps to eliminate it. How about you? *Get involved.*

(Adapted from the *Navy Weekly Summary of Aircraft Mishaps.*)

Breathing rarefied air

Two captains were cruising at FL270 in a two-seat fighter when the front seater realized that he felt light headed, nauseated and had blurred

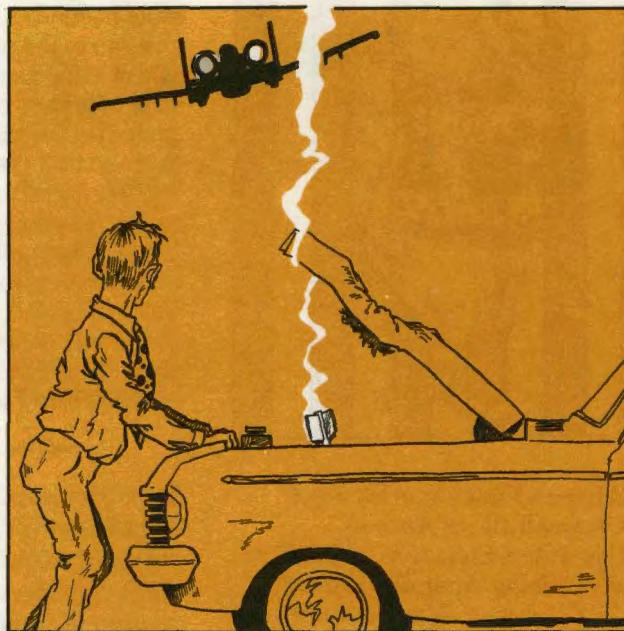
peripheral vision. He selected 100-percent oxygen and the symptoms disappeared immediately. When he returned to normal oxygen, the symptoms came back; so he reselected 100-percent oxygen and the symptoms once again went away.

After all that, the front seater finally decided to mention his problem to the fellow in the rear cockpit and ask how he felt. The back seater said he had been on 100 percent for quite some time but only thought his symptoms were due to his inexperience in the aircraft. The rear cockpit pilot's symptoms also disappeared after he used 100-percent oxygen. They declared an emergency and immediately descended below 10,000 feet. The aircraft was landed without any further problems.

Here was a mishap just waiting to happen. Two pilots, both experiencing their hypoxia symptoms, but not communicating that information to the other crew member. If you notice anything unusual about the way you feel or strange odors in your aircraft, knock it off, get on 100-percent oxygen and *let somebody know you have a problem*. In a single-seater, tell someone else in your flight or on the ground. If you've got somebody else up there with you, let him know. You may both be messed up or it may only be *your* equipment that is malfunctioning. There's nothing heroic about handling an aircraft emergency or physiological incident in silence, so get the word out.

Bullseye

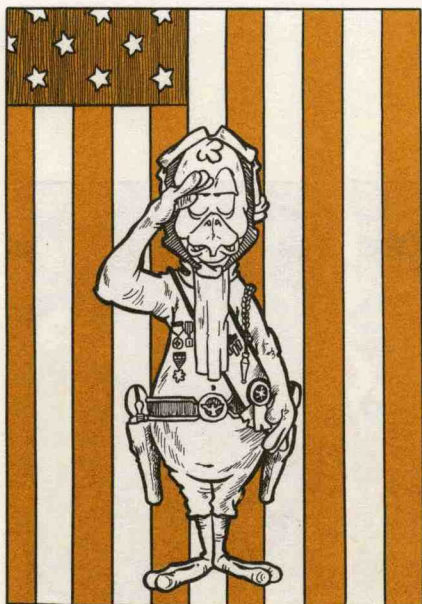
Four A-10s were working high threat tactics in support of an Army exercise. Everything seemed standard – the FAC brief, hold at the IP, run-in, bombs on target and head for home. Mission successful with no glitches. Right? Well, that's what the pilots thought until they landed and were informed by Army military police that a BDU-33 had struck a civilian POV driving on a public highway near their holding point. The driver of the POV thought he saw something to his right followed by a loud thump and then his engine ceased to function. He thought he had hit an animal. Imagine his surprise when he stepped out and found a practice bomb imbedded in the front



of his engine compartment.

How did the practice bomb come off and find its way into the front end of a POV? All of the pilots clearly knew the target area, so target misidentification was not a factor. After careful analysis and review of both the weapons systems and HUD film, it was determined that a valid pickle pulse had been sent to the TER, releasing the bomb. The most likely cause was an inadvertent depression of the pickle button.

If this was the only incident of its type this year, we might be tempted to chalk it up as "one of those things." Unfortunately, we see dozens of inadvertent releases each year. Many are due to unintentional depression of the pickle button. It must be remembered that the pickle button is no respecter of anatomy. It doesn't care if it's depressed by your thumb, your elbow, your forehead or your map bag. If the weapon system is "greened up" and the release button is depressed, for any reason, something is going to come off the aircraft. What happens after that is strictly up to Murphy. At best, the situation will be embarrassing; at worst, it could be fatal. So how about giving the pickle button the respect it's due. Consider an inch or two of airspace above and around the pickle button as sacred. Nothing enters that airspace, except your thumb, and then only when the correct target is in sight and the pipper's tracking. That way you can prevent Murphy from helping *you* shack the wrong target.



Airman First Class Wesley C. Chappell, 355th Aircraft Generation Squadron, 355th Tactical Training Wing, Davis-Monthan AFB, Arizona, demonstrated quick thinking and appropriate actions in response to an aircraft ground emergency. The aircraft involved in the incident had returned from a mission and been taxied back to its normal parking spot. When the crew chief attempted to install the landing gear safety pins, he was unable to insert the nose gear safety pin. Noticing what was hap-

pening and realizing that the crew chief needed assistance, A1C Chappell ran to the phase dock hangar and obtained a set of aircraft tripod jacks. He then positioned them under the aircraft and installed them so that the aircraft could be saftied for an uneventful shutdown and necessary maintenance.

A1C Chappell's swift response and alertness to the safety and well-being of his fellow worker resulted in the safe conclusion of a potentially hazardous situation and have earned him a Fleagle Salute.

TSgt Richard C. Blomgren and SSgt Franklin P. Smith, F-16 crew chiefs, 57 AGS, 57 FWW, Nellis AFB, Nevada, were working near an aircraft where two fuel technicians were performing an operational check on the inflight refueling system. As fuel spray from the refueling door ignited, flames engulfed the top of the aircraft and started two fires underneath the jet. Sergeants Blomgren and Smith ran to the aircraft and worked together to extinguish the fires.

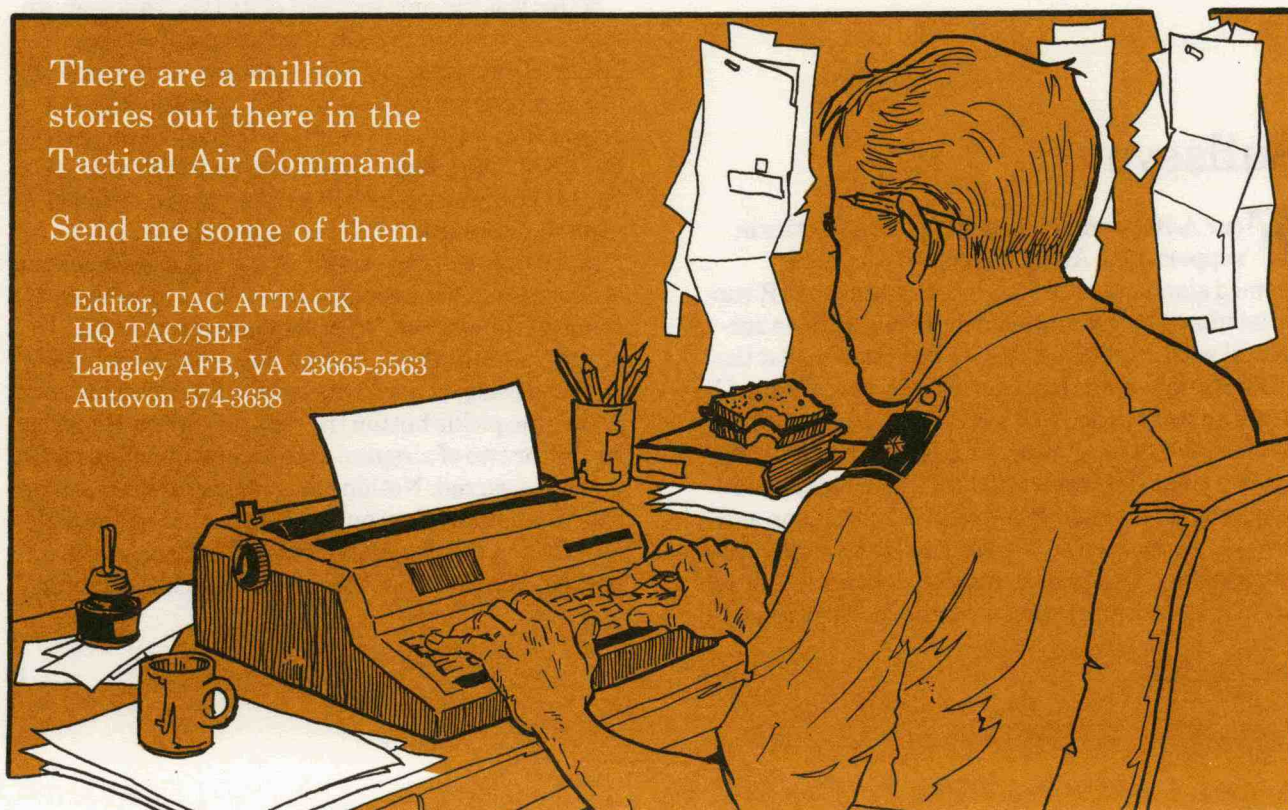
When they were unable to effectively reach the fire on the aircraft's backbone, TSgt Blomgren climbed on top of the burning aircraft's wing while SSgt Smith assisted him with fire extinguishers. The timely and professional actions of TSgt Blomgren and SSgt Smith prevented the possible loss of a valuable combat aircraft.

SSgt James R. Jones, 9 TIS, Shaw AFB, SC, has contributed greatly to the 9th Tactical Intelligence Squadron's outstanding safety record during the past three years. During that time he has trained more than 250 people in a variety of vehicles without any equipment damage or personnel injuries. SSgt Jones has also implemented a number of programs for vehicle maintenance and crew chiefs which have contributed to increased unit morale and safety awareness. The results of his efforts are demonstrated by the 9 TIS's outstanding safety record and have earned SSgt Jones a Fleagle Salute.

There are a million stories out there in the Tactical Air Command.

Send me some of them.

Editor, TAC ATTACK
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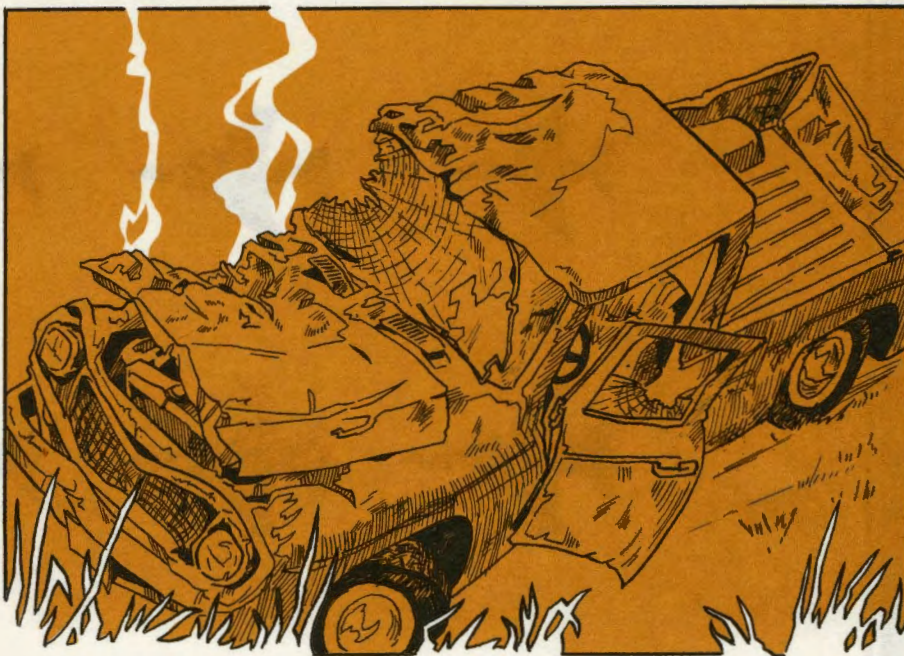
TRAGEDY

Janet Gaines
TAC Attack

Late one Tuesday evening, I received a startling telephone call. It was only a few days before the Thanksgiving holiday and everyone was mentally gearing up for the festivities and the start of the holiday shopping season. But for two families, unfortunately, all previous plans were changed in a matter of seconds because of a tragedy they never expected.

Earlier in the day, my co-worker had had an appointment at his daughter's school with her and her teacher. After his return to the office, I stepped out for approximately five minutes. Usually, I knew the whereabouts of office personnel; so when I returned, I was surprised to find the office empty. For some reason that caused me to feel apprehensive. At quitting time, I was still wondering what had happened to my co-worker as I closed the office for the day. The phone call which I received later in the evening confirmed my uneasy feeling. I was told that earlier in the day my co-worker's sixteen-year-old daughter had been involved in an auto accident and had subsequently died on the operating table. I knew then why my co-worker had left so suddenly.

It was the beginning of a tragedy which would affect many of us and which none of us was ready to experience. I then asked, "What happened?" and was told that the girl's boyfriend had picked her up shortly after the parent/teacher/student conference. He had often done this since they had been dating for some time. Only a short distance from the school, the truck went off



the shoulder of the road and while making an effort to get it back on the paved surface, the driver swerved sideways into oncoming traffic. An oncoming car hit the truck broadside on the passenger's side.

The school football team was in the middle of daily practice when their concentration was broken by the sounds of screeching tires and crashing metal. The coach and team ran to the scene of the accident to give assistance. The coach immediately recognized the occupants of the truck. Ambulances and the police were called while the coach remained with the young girl who attended the school and was also a fan of the football team. Many of her friends watched in disbelief as the ambulance carried the accident victims away. The driver of the truck received a broken arm while the girl received the full impact from the

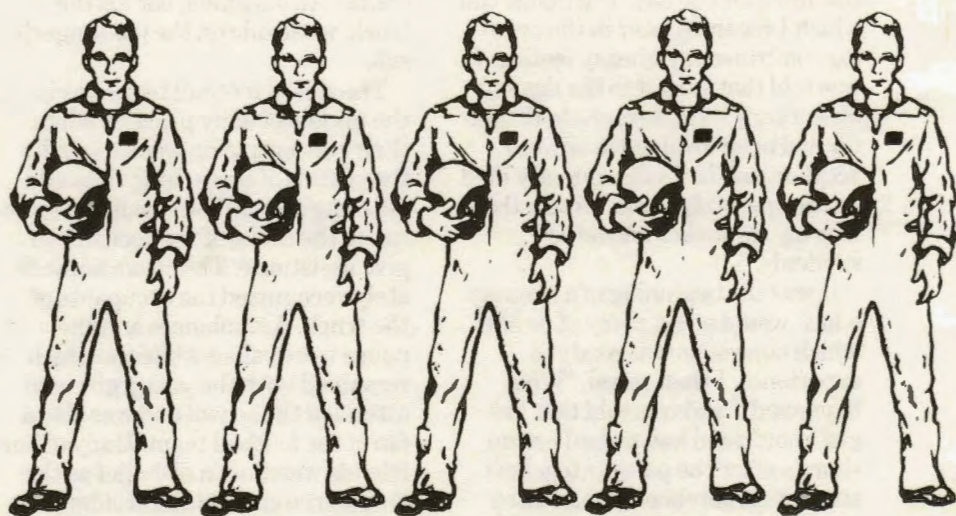
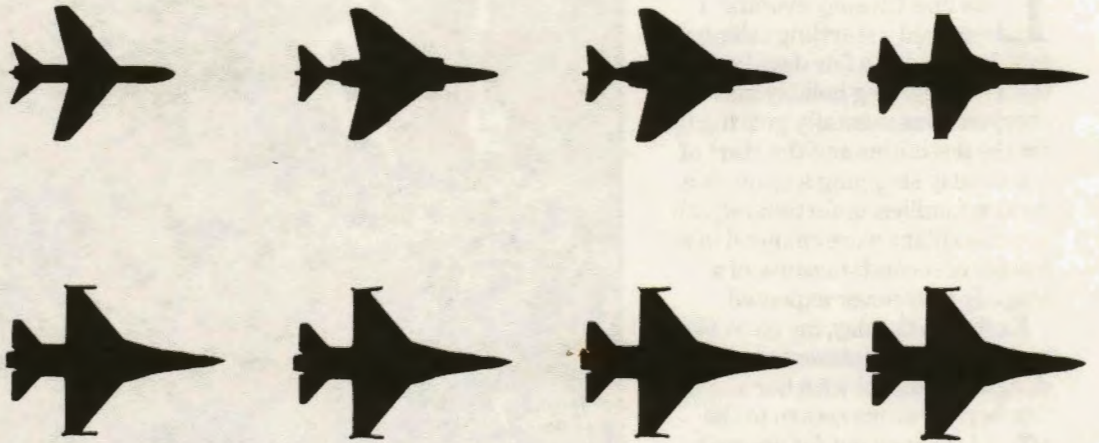
oncoming car and received internal injuries.

Certainly, I was not ready to hear the shocking events which had taken place. None of us ever are. This tragedy not only made an impact on the immediate families involved, but on the entire community — relatives, neighbors, friends and acquaintances. My reason for this article is not to inform you of what led up to this tragedy — but to emphasize the need for safe driving practices and the need to buckle up every time you enter a vehicle.

This article might never have been written had the two young people practiced safe driving habits and **BUCKLED UP** — no matter how long or short the trip. Even though seatbelts are now required by law in the state where this accident occurred, **IT ALWAYS PAYS TO BUCKLE UP.**

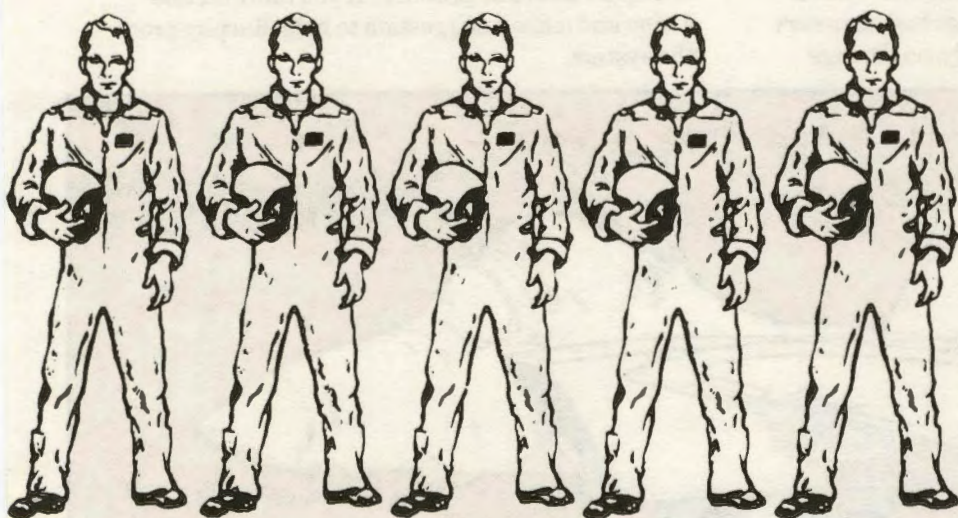
OUR TAC AND TAC-GAINED

OCT - MA



UNITS' LOSSES IN THE AIR

R (FY 88)



CHOCK TALK

INCIDENTS AND INCIDENTALS WITH A MAINTENANCE SLANT

Wrong Fluid

Before takeoff for his first flight of the day, an F-15 pilot noticed that his right engine oil pressure was much lower than normal, although it was still within limits. During the "Before Takeoff" engine run-up, the oil pressures continued to show much lower than normal, so he ground aborted and taxied back to the chocks.

While that was happening, the crew chief of another aircraft discovered oil leaking out of the AMAD that both looked and smelled unusual. When he looked in the oil sight gauge, it was obvious that two entirely different fluids were present in the oil sump. A test of the liquids showed that the oil had been contaminated by the addition of LCS fluid.

The ground abort aircraft and the one with the oil leak were only two of eight Eagles that had been serviced with the wrong fluid. Fortunately, no damage

was done to the aircraft whose engines had been started.

Maintenance found that a single oil service cart had been inadvertently filled with the LCS fluid, probably the night before. The oil and LCS fluid cans were identical in size and color except for the lettering on the sides. Both fluids were stored side by side in both the AMU and on the flight line expeditor's truck. The unit where this occurred immediately segregated the two fluids into separate storage locations and painted all of the LCS fluid cans with blue stripes to aid in proper identification. Since then, the item manager has taken action to make the cans more distinctive.

Have you got any aircraft servicing fluids that might be confused because of similar markings or container shapes and colors? Check around your daily operating area and make sure you aren't setting yourself up for a similar problem. If you find one, take action and make a suggestion to help Murphy-proof the system.



Wise on cracks

An aero club maintenance chief was repairing a flat tire on a Cessna when he noticed a crack in the engine mount where it is welded to the nose gear lower mount yoke. After grounding that aircraft, he inspected six other planes and found cracks in the same area on four of them.

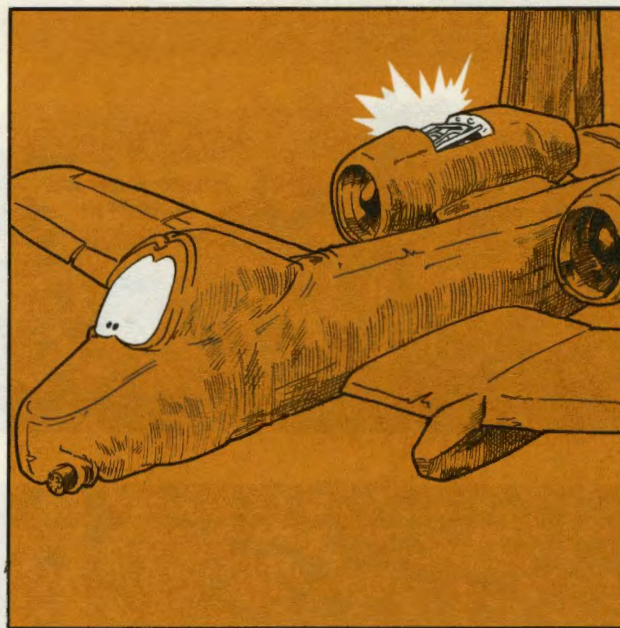
The cracks were in a position on the mount where the nose gear would collapse if a complete fracture should occur. It was unknown whether hard landings or torque caused by high power settings during magneto checks or takeoff rolls had caused the problem. No manufacturer's letter or airworthiness hazards had been published on the potential hazard.

This fellow prevented a potential problem in several valuable aircraft because he was looking at the entire area where he was working, not just at the flat tire. Keep an eye out for problems that may not have come to light. You may be the first person in the right place to keep a much more serious problem or loss from occurring.

Anteater tension

An F-111 Aardvark was just completing its third touch-and-go landing when the pilot noticed the number two engine rpm decreasing and the fuel flow reading zero. He aborted the takeoff and rolled to a stop without further problems.

The maintenance folks found that the engine flamed out when the throttles were placed to idle at landing. A check of the throttle rigging showed that it was well outside of required TO limits. The long throttle cable had been replaced a month earlier, but the AR shop had failed to note that a rigging check was required. The AR shop chief didn't think such a check was necessary since work had only been done on the long throttle cable. Putting the new cable in changed the tension between the long and short cables which also changed the idle tension.



Comedy of errors?

The flight of two A-10s was just tooling along minding its own business when the wingman noticed that his leader's aircraft was missing a panel from the top of the number two engine. After the aircraft landed, maintenance found that door assembly N-8 was sure enough gone, and the barrier maintenance folks found it lying in the grass at the approach end of the runway.

A look at the aircraft forms showed that the missing door had been removed the previous day by the engine shop folks in order to work on the aircraft's bleed air system. They had made multiple red X entries in the same block of the 781 stating that panels N-52 and N-8 had both been removed to allow more work to be done. The forms also stated that both panels had been reinstalled, and the red-X was cleared by a seven-level technician.

When asked about the work that he had done, the crew chief who signed off the corrective action admitted that he hadn't personally replaced the N-8 panel. He had relied on the word of another individual that the job had been done correctly. The supervisor who cleared the red X misinterpreted the forms and only inspected panel N-52. The end result of all this was that the missing panel hadn't been properly reinstalled and wasn't inspected by the responsible supervisor. Is this part of the cause for dropped objects at your base — poor forms writeups and erroneous assumptions?

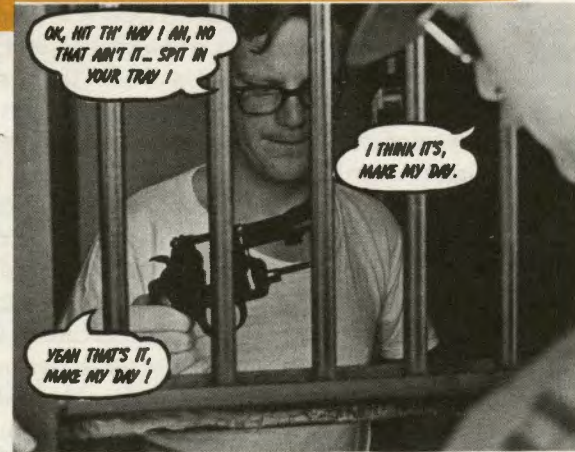


HE FORGOT HIS FRIES AGAIN.
HE'S BACKING UP.

FUNNY PHOTOS



AND UNTIL YOU START BRUSHING YOUR TEETH
EVERY DAY, YOU'RE GONNA WEAR THIS THING.



OK, HIT TH' HAD I AM, NO
THAT AIN'T IT... SPIT IN
YOUR TRAY!

I THINK IT'S,
MAKE MY DAY.

YEAH THAT'S IT,
MAKE MY DAY!



CUSTOMS THINKS
WE'RE SMUGGLING CHEESE.



I FEEL
SO SILLY.



YOU MAY BE
THE HOT SHOT PILOT
BUT I'VE GOT
THE CUTEST UNIFORM.



OLD ZEB JONES
WINS THE WATERMELON GROWING CONTEST
EVERY YEAR.



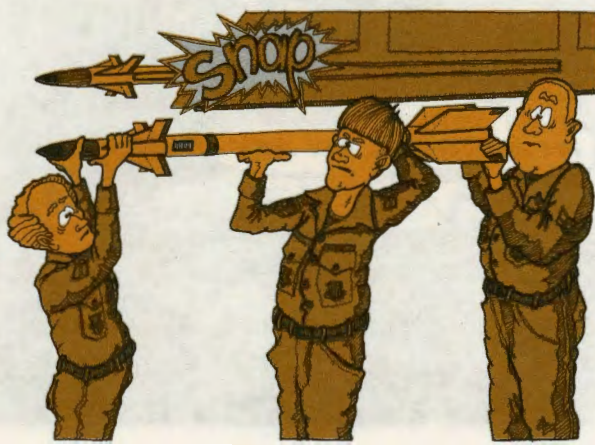


WEAPONS WORDS

Would you let go?

Do you feel you got your money's worth when an item does exactly what you bought it to do? We in the Air Force are particularly concerned that an aircraft, a part or a tool do what we paid good money for them to do. One hundred percent reliability is a goal we always desire.

Sometimes a part's reliability can cause a problem. A load crew found that out the hard way when they tried to download a captive AIM-9 missile. When the crew arrived at the jet, they noticed that the rail nose fairing was already open, the umbilical cable from the



missile to the aircraft was disconnected and the shorting plug installed. OK, let's get on with the job and get it finished.

As the members of the load crew began to take the missile off the rail, part reliability reared its trustworthy head. The umbilical cord block retainer, which is designed to keep the umbilical on the airplane when the missile fires, does the same thing on the ground. As the crew took the missile off, the block retainer kept the umbilical — just like the book said. It sheared the umbilical cord off, and the missile had to go back to the depot for several thousand dollars of repair work.

Lest you get the wrong idea, the problem here wasn't with the retainer block but with the load crew. They failed to follow the tech data for removing the missile which included disconnecting the block from the retainer. When you put something on an aircraft, make sure it's on to stay and fastened securely all around. When you get ready to take it off, just the opposite is true — unhook, unsnap, unscrew and undo everything the TO says before you try to take the panel, munition or part off.

What goes up!

A load crew was preparing an ICT (integrated combat turn) area and prepositioning GP bombs on Y-stands. The team decided that the first bomb needed to be repositioned; but it wasn't accessible from the front, so they decided to pick it up from the back. The jammer driver positioned himself to look to the rear and began backing out of the turn area and into the next parking area which was occupied by an F-16. As he did, he rested his hand on what he thought was the gear shift lever. When he passed under the left wing of the aircraft, the jammer came to a sudden stop. Imagine the driver's surprise when he looked forward and saw the lift arms fully extended with the table of the MJ-1 firmly stuck in the left leading edge flap of the Falcon.

Have you broken the code? Instead of his hand resting on the gear shift lever, it had been resting on the table lift lever with enough pressure (believe it or not) to let the lifting hydraulics work as advertised and raise the table to full extension over the distance traveled. The cost? Over \$2,000 for the wounded Falcon and an extremely bruised ego. Among many obvious lessons to be highlighted, there is one that requires widest dissemination: control levers are not arm or hand rests, so don't use them as if they were.

TAC OUTSTANDING ACHIEVEMENT IN SAFETY AWARD

SSgt DaCostaGomez was supervising an F-5E aircraft tow from the ramp area of the flight line to the fuel repair facility. As he worked, he saw a flight of four TDY F-15s approaching from the opposite direction so he directed the tow team to park the F-5 near the red line in order to let the taxiing flight pass safely.

As the lead F-15 taxied by, SSgt DaCostaGomez noticed something fall from the aircraft's left main landing gear area. (He quickly decided that the missing part could be detrimental to the integrity of the aircraft's landing gear.) Since the lead F-15 had already taxied past, SSgt DaCostaGomez ran

towards the second F-15 and motioned for it to stop. He displayed the object, a twelve-by-two inch piece of alloy, to the pilot and motioned for him to radio the lead F-15. The flight leader, already in the end-of-runway (EOR) inspection area, told the maintenance crew to double check the left main gear and adjacent areas for any missing parts or damage to the aircraft. The EOR crew checked the area, but saw nothing missing and reported no damage.

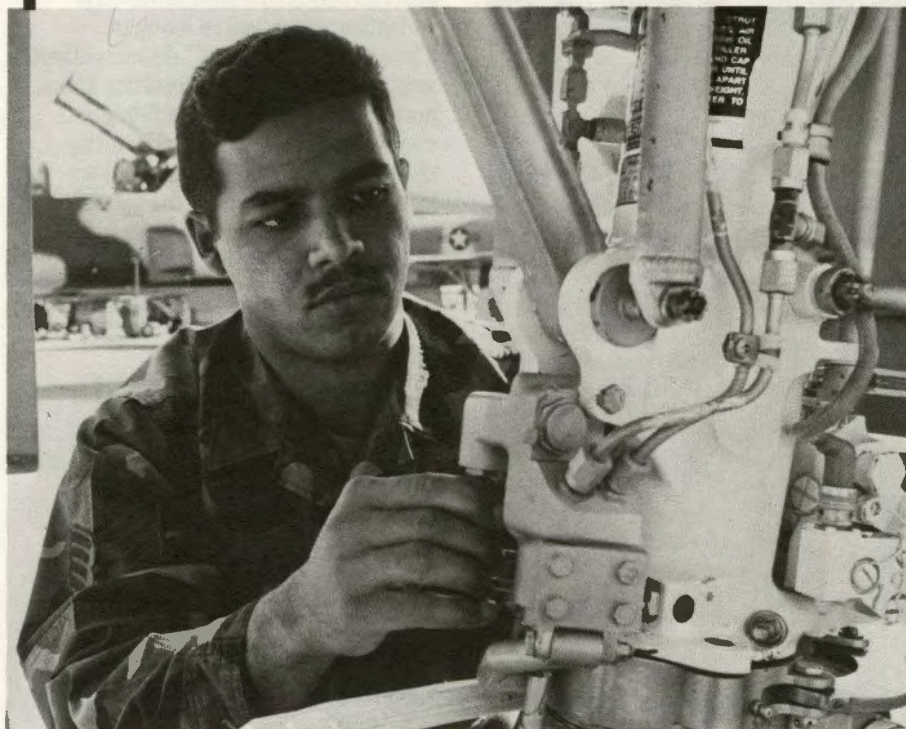
SSgt DaCostaGomez continued to maintain visual contact with the lead F-15, expecting it to taxi back to the parking ramp. He was astonished when he saw the aircraft



SSgt Guillermo A. DaCostaGomez
57 AGS, 57 FWW
Nellis AFB, NV

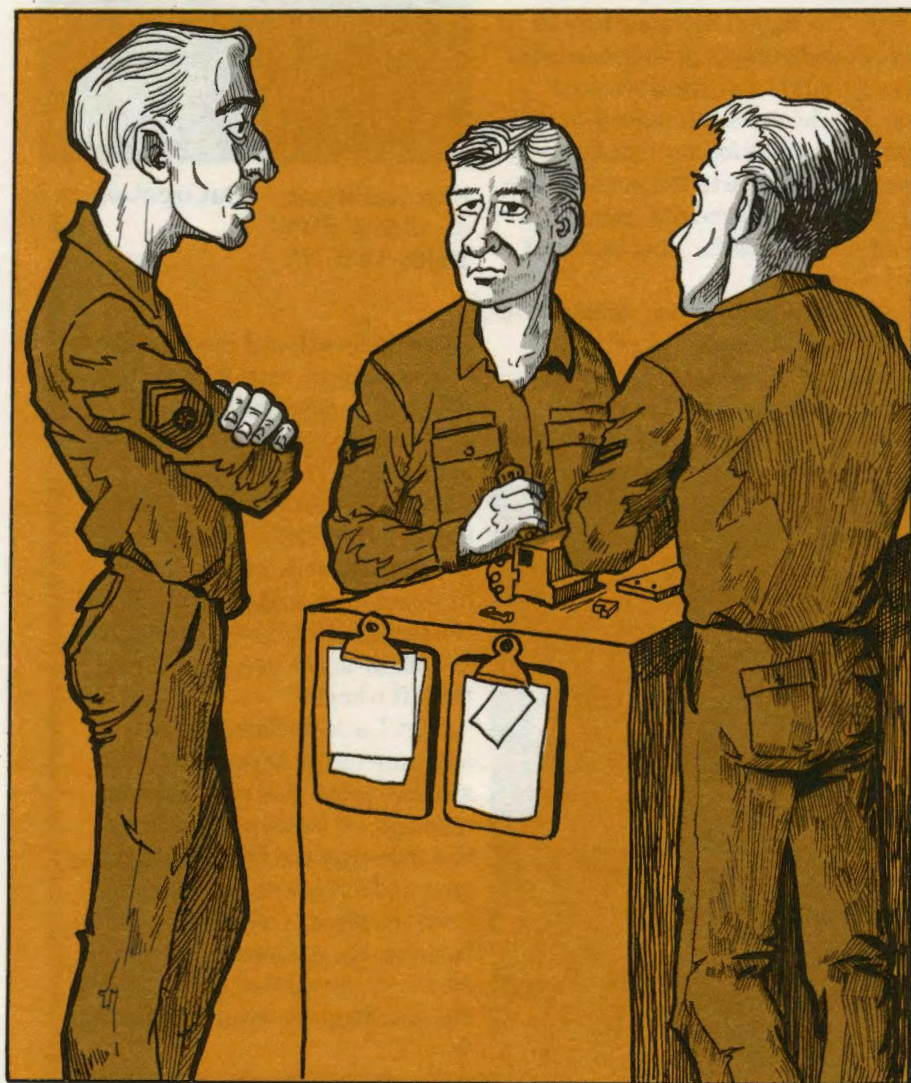
lining up for takeoff! Since he didn't have a radio, he went directly to the F-15 unit and briefed the duty officer on what had occurred. The incident was then relayed up through channels and the F-15 was recalled from flight. Fortunately, the aircraft landed without any problems and further inspection of the main landing gear showed that the fallen object was a piece from the left wheel.

SSgt DaCostaGomez's quick assessment, decisiveness and persistence prevented two potential mishaps – the possible further breakdown of the F-15 main landing gear and foreign object damage from the piece of metal lying on the taxiway. His demonstrated professionalism has earned him the TAC Outstanding Achievement in Safety Award.



THE SET UP

The Set Up



It had been a rough week. We had gone through an SIORI, had some "birds" break and put in a lot of hours. Even though we had some problems, we were able to recover nicely and the entire exercise came off real well – but we were tired. All my friends and I wanted to do was collapse around a cold brew or a shooter and unwind. We were just about ready to pack it in and turn Jim's wheels toward the village when Chief Storsky came up and started talking.

"Guys, you did a super job – better than anyone expected under the conditions you had to work in. Thanks from all of us!" As he walked away, we chatted to ourselves about how nice it was to hear a few good words from the boss. Jim fired up the engine on his Camaro and we started out of the parking lot. While waiting for the traffic to clear, we talked about getting a quick shower,

All we wanted to do was get done, go to town and have a humdinger of a time.

going to town, stopping for pizza and beer, then heading for the Rock Club off the interstate.

All of a sudden, there was a tap on the window and Chief Storsky's face was there in the glass. I cranked down the window, and he said, "Fellows, how about coming back here for a minute, I want to talk to you." We backed up and I was hoping nothing had gone wrong. Man, we needed a break – not more work! When we got into a parking space, he asked the five of us to step out of the car.

"What's up, Chief?"

"Gents," he said, "you need a break, but you're also tired! When I was your age, the first thing we wanted to do after a hard week was turn some beers and have a good time – and we did!"

Hey, the Chief was right on target!

"But I learned an awful hard lesson while running around."

"What was that, Chief?"

"A very close friend of mine, like you guys are to each other, got himself killed in a car wreck because he became 'a set up' and didn't realize it!"

"What do you mean by set up?" Bob asked.

"Well, we had had two days of immersion flying, most of us had averaged about four hours sleep each night and we hadn't eaten much on the last day. All we wanted to do was get done, go to town and have a humdinger of a time. We went back to the barracks (that's what we called them), tossed down a few brews, showered and took off. When we got to town, we went to our favorite pub. There we drank some

more beer, ate snacks (popcorn and peanuts) and carried on with our friends. Before we knew it, two and a half hours had passed and we decided it was time to get something to eat – because we were feel-

The car skidded, and the next thing I knew, we were rolling over and over.

ing good! There were four of us and my best buddy, Steve, had the car. As we left the pub parking lot, we had the radio blaring and Steve laid on the accelerator. Dirt and stones went flying, and we hooped and hollered and took another slug of now warm brew. As the chopped Chevy sailed down the road, we were joking about what we were going to do later, when the car went off the side of the road. We cursed at Steve, and when he tried to get back onto the road, he lost control, the car skidded, and the next thing I knew, we were rolling over and over. Steve and Jack died in that wreck."

"You came out okay, huh, Chief?"





THE SET UP

If you make an error or you're on the receiving end of some other person's mistake, you need an edge. The edge is that piece of material and metal in your car.

"No, I didn't guys," he said as he opened his shirt, showing us numerous scars running up, down and sideways. "A lot of what is inside this body came from other people, and some parts are still missing. Oh, I function OK, but there is a lot of things I can't do. I lost a lot that night – some close friends, and part of me. We had seat belts but we didn't use them. We were sure it couldn't happen to us."

"You guys are pros. You work hard and I know you play hard, but don't become a 'set up.' When you leave here, don't start drinking booze. Yeah, I know a cold beer or shot of liquor doesn't hurt, but it does in the condition you all are in. Think about it – you're prime candidates for the 'set up' – and only you can make sure it doesn't happen. Get cleaned up and have a good meal. If you're going to have a drink, make it soft drinks, or iced tea. If you're bound and determined to have a beer or two, end it there. There's a time and place to do your drinking and it's certainly not where you're going. I'm not trying to be your father, but guys, I've been there! It's something you don't want to live with. It's mental and physical pain. It's family hardships, and it's really hard on your friends and co-workers."

"You guys mean a lot to me and the boss. Without you, it doesn't happen. That's why you hear the old man talking about using your seat belts. If you make an error or you're on the receiving end of some other person's mistake, you need an edge. The edge is that piece of material and metal in your car. Please use your belts; put the odds in your favor. See you all Monday; have a nice weekend."

As he walked away, we were silent and then Tom laughed and said, "Do you believe that? Shoot, let's go!" When we got in the car and started moving, I noticed Jim reached over and put his harness on. I'd never seen him do that before. As we headed towards the dorm, Jim said, "I think the Chief's right. Let's wait until tomorrow to do the Rock Club. Let's just go to the Pizza House and come back."

Tom said, "Not me, babe. I'm going to the village and rock." Bill agreed with Tom, and when we reached the dorm, we went in separate directions. Jim, Charlie and I cleaned up, went to dinner, and came back to the base about 10 p.m. We were really tired, and the rack felt so good. I slept for about 12 hours, when a knock on my door woke me. There stood Jim.

"It's Tom and Bill."

"What's wrong, Jim?"

"They were killed on Bill's motorcycle last night! One of the guys downstairs said they were drunk and ran into the side of a car. They had gone through a red light."

I couldn't say anything. They were good friends of mine. Had we helped set them up? We didn't try to stop them, but they were big boys who could decide what to do themselves. Maybe if we had kept on their backs, it wouldn't have happened. It's over – we learned the same lesson Chief Storsky had talked about – but we didn't have to.

We all enjoy a good time but we need to be smart about it. I'm 21 years old and I've got a lot to do and see. Giving it all up for a one-night fling is dumb. There's no way anybody will ever "set me up" again – and I'll do my best to make sure it doesn't happen to anyone else. ➤

TAC OUTSTANDING ACHIEVEMENT IN SAFETY AWARD

Major Larry Scantlin was the single controller on duty in the 354 TFW command post on a Monday after noon. The only flying activity was an A-10 returning from a cross-country sortie at 1730L. He noted that the local weather was deteriorating, so he began to closely monitor weather conditions at all airfields throughout the southeast United States. By 1700L he determined that all military airfields in Georgia, North Carolina and South Carolina were either reporting or forecasting 400-foot ceilings and one mile visibility or worse. Since weather conditions at Myrtle Beach were considerably lower than forecast and the inbound pilot's alter-

nate was also below minimums, Maj Scantlin initiated action to contact him. When the pilot reported a few minutes later that he was 65 miles from Myrtle Beach, Maj Scantlin warned him of the degraded weather and immediately called the deputy commander for operations. (DO).

While briefing the DO, he established a phone patch with Myrtle Beach Approach, through which the DO directed the pilot to divert to Shaw AFB, the base with the best weather available in the area. Maj Scantlin then established contact with both Shaw Approach and the 363 TFW DO to notify them of the incoming diverted aircraft. At



Major Larry W. Scantlin
354 TFW
Myrtle Beach AFB, SC

that time, a new weather observation at Myrtle Beach showed a 200 foot ceiling and $\frac{3}{4}$ mile visibility (the weather continued to deteriorate down to 100 feet and one-half mile at the planned landing time).

Maj Scantlin continued to monitor Shaw's weather and kept the Myrtle Beach DO informed of changing conditions. The A-10 pilot finally landed safely at Shaw with a 300-foot ceiling and one mile visibility.

Maj Scantlin's timely actions, extensive aviation knowledge and skillful execution of emergency procedures were responsible for the safe recovery of a valuable combat aircraft. His superb performance and professionalism have earned him the TAC Outstanding Achievement in Safety Award.





DOWN TO EARTH

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

Arson for moppets

One out of every five arson fires in the United States is started by a child. Parents need to educate children about how dangerous fire is and how difficult it is to control, says Dr. Sheldon Kramer, a psychologist at United States International University.

Starting fires is a normal phenomenon in young children, Dr. Kramer says. Between the ages of 2 and 10,



children tend to be curious about fires, and those older than 3 like to mimic adults by striking matches. Many children feel that fire has magical qualities.

But children with no experience with fire won't know that it is dangerous. Parents can show their youngsters a fire-damaged building, take them to see movies on fire safety and teach skills for responsibly handling fire in a fireplace or on a camping trip, suggests Kramer. Toddlers caught playing with matches should be reprimanded immediately, and parents should make it clear that all stoves are off-limits to small children.

Poisonings can be prevented

About 4,000 accidental poisonings causing death occur in the United States each year. About half of these poisonings are children under 5 years of age. Prevention of poisoning requires adequate knowledge of the hazardous properties of substances by users. Listed below are steps to be taken in your home to prevent accidental poisoning.

1. All medicines, insecticides and rodent killers should be stored in locked cabinets.
2. Lye, polishes, kerosene and other household chemicals should be stored on a shelf that is not within reach of children or near food storage areas.
3. Dangerous solutions should not be left in drinking glasses or other containers (juice bottles, soda bottles, etc.) from which someone might drink.
4. Prevent inhalation of fumes when spraying paint, insecticides or other chemicals. Have plenty of ventilation and wear mask and gloves if you cannot ventilate the area.
5. When you have finished using any medicines or toxic chemicals, any left over should be discarded.
6. Read the label before using products and taking medicine.
7. Parents need to know the action of and reason for medications for their children and themselves.
8. Playing games while giving medicine to children could cause the child to take some and have an overdose (e.g., calling medicine candy).
9. Frequently check on the activities of small children to prevent poisoning.
10. When you carry medicines in your purse, be careful where the purse is stored so small children cannot get into it.

Hot liquids can burn

Hot liquids, not fires, are the major cause of burn injuries and the most likely victims are young children.

Scald burn accidents cause two-thirds of all burn injuries to children from ages 3-8. The kitchen is the



most likely place for burns to occur, but children are also burned in the bath. The following tips are offered:

- Adjust the thermostat setting on your water heater to assure that the water is not hotter than 130 degrees. At this temperature, it takes 30 seconds to produce a third-degree burn. It takes five minutes to produce the same burn with 120-degree water.
- Do not leave a child unattended in the bathtub.
- Face children away from faucet handles to reduce the risk of them turning on hot water.
- Teach children that the bathroom is not a place to play. Keep toys out of the bathtub to reinforce this concept.
- Place pots on the stove with the handles facing the back to prevent small children from knocking or pulling them off the stove. Cook on the back burners when possible.
- Never hold a small child in your arms while consuming or carrying hot liquids or food.
- Avoid deep fat frying as grease temperatures of 400 degrees can cause a serious burn in two or three seconds.
- Avoid putting hot liquids or food on tables covered by placemats or tablecloths. Small children can pull the tablecloths off and be severely burned.
- Place all hot items in the center of the kitchen or dining room table.
- Never allow cords from appliances to dangle over the edges of the countertop.

PASS IT ALONG...



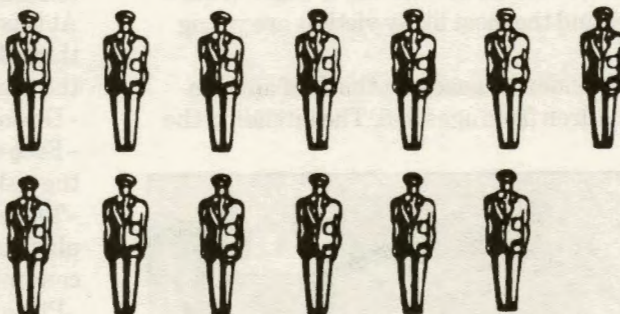
nine people are waiting

TAC LOSSES ON THE GROUND

OCT - MAR (FY 88)

OFF-DUTY MISHAPS

Automobiles:



Motorcycles:

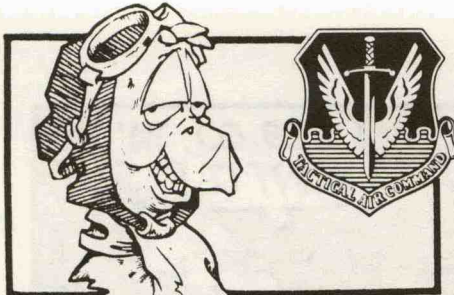


Pedestrian:



Private Aircraft:





TAC TALLY

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

*(SUCCESSFUL / UNSUCCESSFUL)

Total			TAC			ANG			AFR		
MAR	THRU	MAR	MAR	THRU	MAR	MAR	THRU	MAR	MAR	THRU	MAR
	FY 88	FY 87		FY 88	FY 87		FY 88	FY 87		FY 88	FY 87
6	15	21	4	11	13	2	3	6	0	1	2
5	10	14	3	7	10	2	2	3	0	1	1
2/0	8/0	18/1	1/0	6/0	10/1	1/0	2/0	7/0	0/0	0/0	1/0
0/2	0/3	0/1	0/1	0/2	0/0	0/1	0/1	0/0	0/0	0/0	0/1

TAC'S TOP 5 thru MAR 1988

1st AF	
CLASS A MISHAP-FREE MONTHS	
91	318 FIS
38	325 TTW
26	57 FIS
5	48 FIS

9th AF	
CLASS A MISHAP-FREE MONTHS	
61	33 TFW
34	507 TAIRCW
25	31 TFW
20	354 TFW
14	23 TFW

12th AF	
CLASS A MISHAP-FREE MONTHS	
37	58 TTW
30	35 TTW
24	474 TFW
22	388 TFW
20	602 TAIRCW

ANG	
CLASS A MISHAP-FREE MONTHS	
208	110 TASG
183	138 TFG
165	177 FIG
160	114 TFG
146	180 TFG

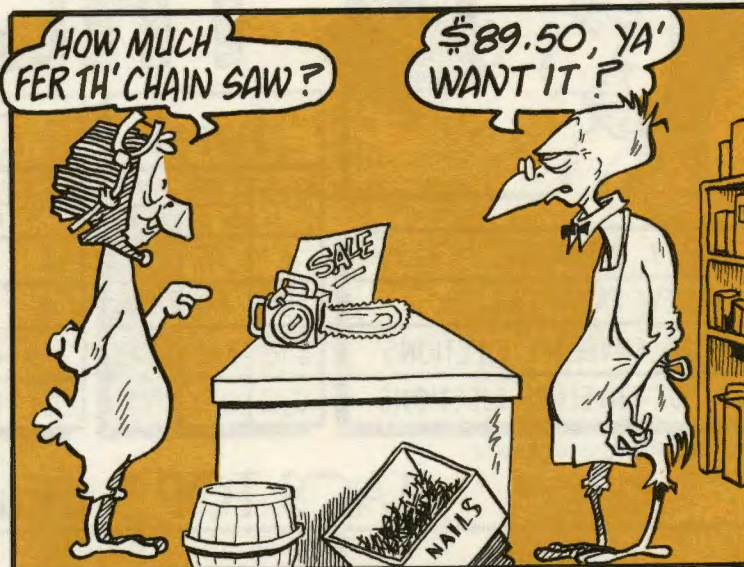
AFR	
CLASS A MISHAP-FREE MONTHS	
91	482 TFW
81	924 TFG
69	906 TFG
43	507 TFG
30	917 TFW

DRUs	
CLASS A MISHAP-FREE MONTHS	
138	28 AD
8	USAFTAWC

CLASS A MISHAP COMPARISON RATE

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

TAC	FY 88	6.4	3.4	3.0	2.7	2.5	3.4						
	FY 87	7.5	5.8	5.1	4.7	4.2	3.7	3.3	2.9	2.9	3.1	2.8	2.9
ANG	FY 88	0.0	0.0	0.0	0.0	0.9	2.4						
	FY 87	4.0	6.6	4.7	3.5	2.8	4.5	3.8	3.3	3.4	3.0	2.7	2.5
AFR	FY 88	0.0	0.0	0.0	0.0	4.7	3.9						
	FY 87	21.8	11.7	8.5	12.6	10.2	8.3	7.0	12.2	10.8	9.6	8.5	7.8
Total	FY 88	4.3	2.9	2.3	1.8	2.2	3.1						
	FY 87	7.3	6.3	5.2	4.8	4.1	4.1	3.6	3.4	3.4	3.4	3.1	3.0
MONTH		OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP



SHUPP!

