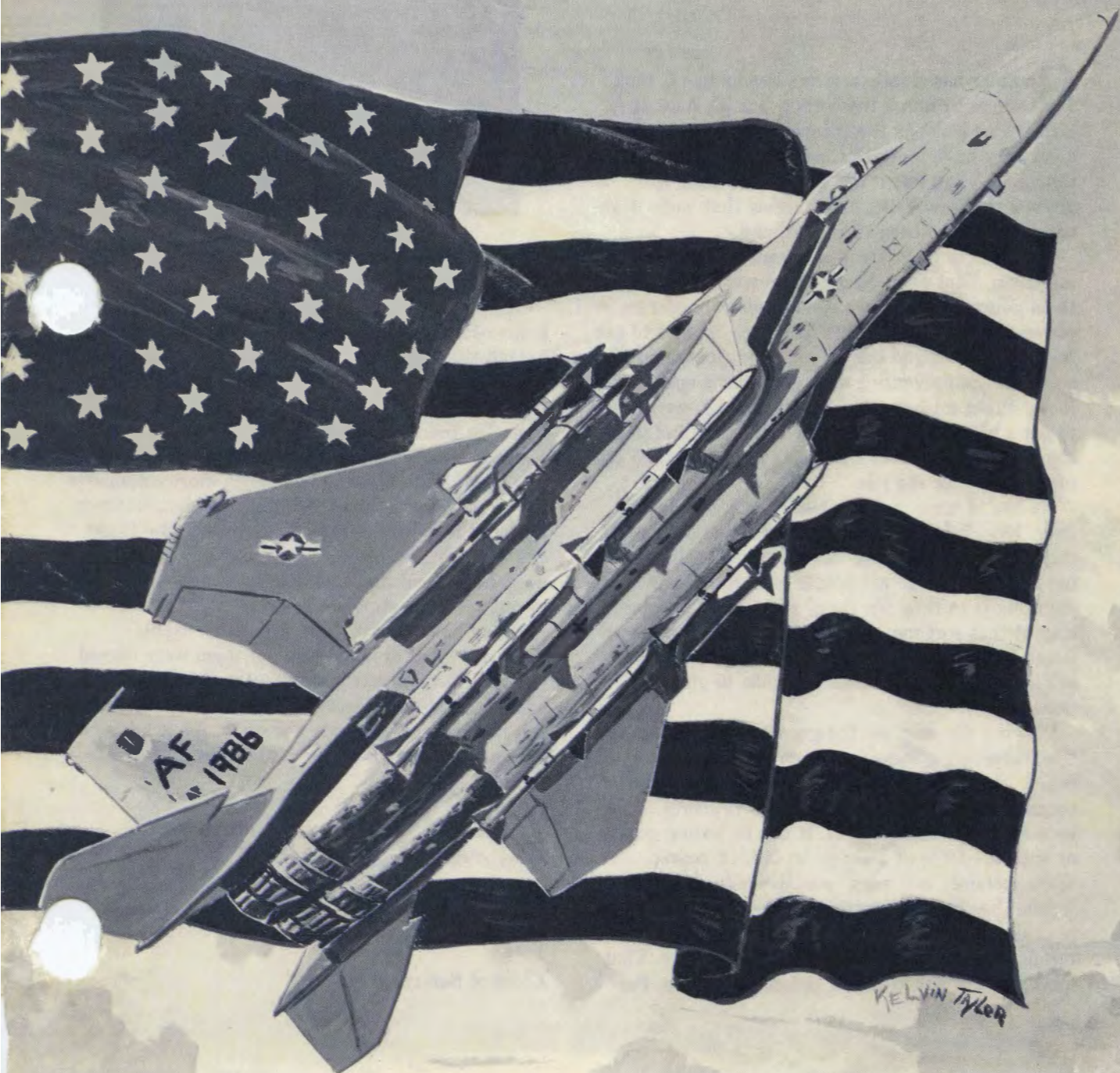


TAC ATTACK

JULY 1986



ANGLE OF ATTACK

Summer has finally arrived. Seems like it took forever to round the corner, but it's here at last! It also looks as though our awareness in some areas may have rounded the corner as well. I thought we had left it out in the cold after we greeted the New Year, but it seems that some negative trends have been turned around.

Our rates in most areas command-wide are starting down. That's the direction we want to keep them going. One area we need to work harder on is preventing civilian injuries. They are up, and to get them turned around our attention must remain focused on the preventive side. Another is operations factor flight mishaps. It seems as though we need to get a better handle on unsound tactics and undisciplined acts. To do this takes hard work and the proper tools for the job.

My bag of tools includes what I call creative 2x4s. Evidently some have mistaken the term and thought I advocated the "2x4 only" mentality, meaning the only way to get people in uniform to do anything is to threaten them with a 2x4. Leadership of that sort may be necessary and effective at times, but it falls short when a situation calls for self-sacrifice or motivating our folks to give 110 percent.

Viewing the only use for a creative 2x4 as punitive, however, ignores the creative side of the board. That's the side that can be used for effective communication. It works *if handled properly*. It can be very subtle or ver direct. It can be swung gently or with the force of a Casey at bat. Of course, there certainly is a very punitive side. When a "crime" has been committed, our leaders should not hesitate. Above all, for the 2x4 to be an effective means of communication, it must be creative. That means you've got to **think** before you swing. Per-



haps a couple of examples from opposite ends of the continuum will help.

During a 2v4 DACT, lead sends number two home after he goes through the area floor for the second time. That's a creative 2x4 that stings because it sends a message loud and clear—that kind of performance is unacceptable. There are no excuses for there are none in combat.

Here's another example: During debrief, Blue Four tells lead he would have been more responsive in the target area had the flight and element leads prefaced their radio transmissions with the flight call sign. That's subtle . . . but well placed. To a good flight lead that 2x4 will be just as effectively swung (and the sting received) as the first one.

In our line of work there are many usable 2x4s still lying around. Some of them were carved by great leaders that fought in the First and Second World Wars, Korea and Vietnam. Every squadron has some. Every unit has some. All it takes is the courage to pick one up and the intelligence to swing it creatively.

EDSEL J. DE VILLE, Colonel,
USAF
Chief of Safety

TAC ATTACK

DEPARTMENT OF THE AIR FORCE



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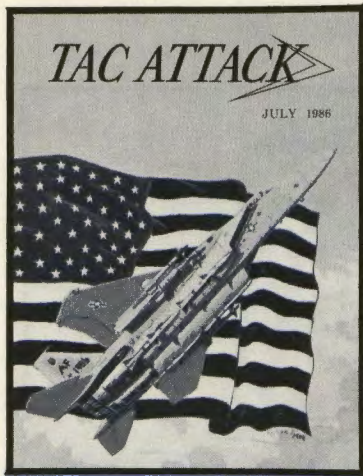
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GETTING OUT OF DODGE CITY: TACTICAL EGRESS

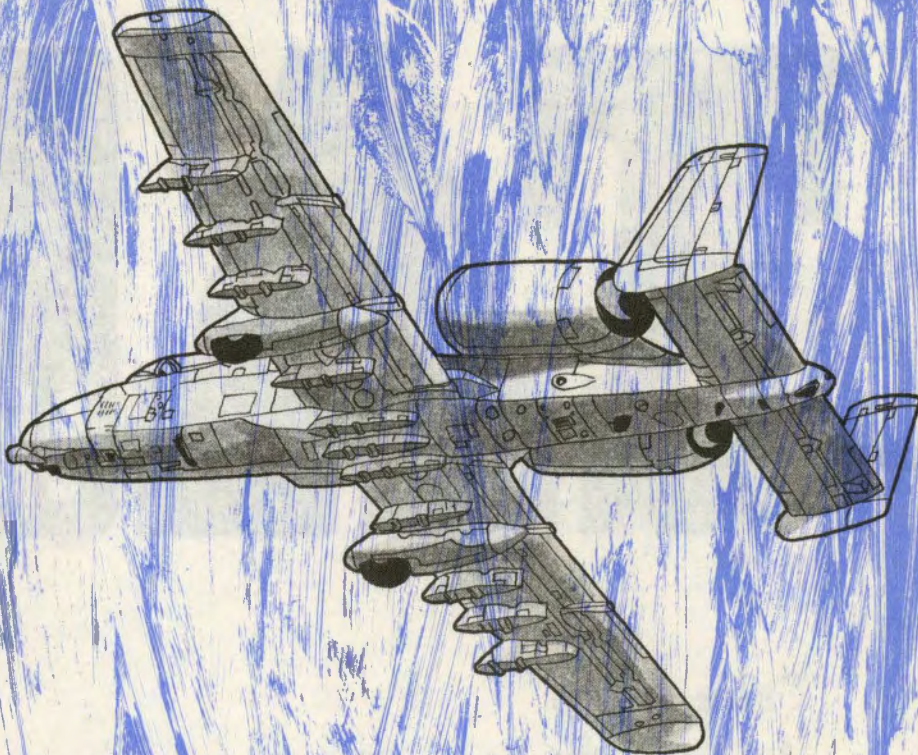
Maj Brad Smith
HQ TAC/DOOWT

You're feeling pretty good—having just successfully delivered your load of munitions on your assigned target. This is the payoff from your best tactical execution—the culmination of hours of planning and briefing, in painstaking detail, on how to defeat the enemy's impressive list of SAMs, AAA and interceptor forces. You're a success—you've fought your way into the target area and wreaked havoc on some of your enemy's favorite assets. Right? Not so fast—getting to the target area and destroying the target is only part of your problem. The next part of your mission, tactical egress, could make or break your day.

Approaching the forward edge of the battle area on the way back from the target, you've got several critical factors to deal with. Surprise is no longer in your favor; the enemy is infuriated, and virtually 100 percent of his target area air-to-air and surface-to-air forces are trapped at your six o'clock. Special attention is clearly essential during egress. No one can argue against the importance of sound tactical fighter employment during ingress and target area weapons

delivery. Equally important, however, is the need to egress safely following weapons release. Your mission isn't over until the rubber is back on the ramp, or in the shelter, and your engines are shut down. You can't afford to





relax during any portion of the mission, especially RTB.

The tactical considerations necessary for target destruction, when weighed against force survival, must be dealt with for ingress, in the target area, and egress. How you as a flight lead or wingman handle these three elements can make the difference between success and ultimate failure—the loss of an aircraft and crew.

We've all been there—you've come off the target. You're giving it your best ZSU break and looking over your shoulder to pick up any incoming enemy aircraft while trying to cover your wingman's six and regain mutual support. You think you're doing great until you refocus at twelve o'clock and see your windscreen filled with dirt. Today you're lucky—a gut wrenching pull kept you alive—some of our friends weren't so lucky.

The ground is a serious operational threat that all of us tend to forget from time to time. Avoiding a modern enemy's most capable defenses and putting weapons accurately on the target is only to run into a hillside though inattention is not the stuff of which smart heroes are

made. Had you hit the ground in this situation, some would have attributed your accident to task saturation. True? Task prioritization or misprioritization is probably a more accurate assessment. Failure to do the most important thing first—fly the aircraft. Consider the following priorities for a successful tactical egress from the target area:

- Recover from your delivery maneuver and escape the ordnance frag envelope.
- Once clear of the frag pattern, maneuver to avoid other aircraft and enemy ground threats—then return to the planned altitude environment. Devote 100 percent of your attention to flying the jet, and that includes a good crosscheck. At low altitude, your biggest threat is *the ground*.
- Once safely established in your planned altitude structure, regain mutual support while executing the egress.
- Delay any switch changes, fuel checks or other cockpit actions that will draw attention

away from the primary task of flying your aircraft until a successful target area egress is accomplished.

- Monitor and be prepared to react to enemy defenses homebound just as you did heading toward the target. Your primary mission inbound was to successfully attack the target. Your primary mission outbound is to get the jet and your warm body back so you can fight another day.

Successful mission planning requires that we put the same detail into egress planning as we do for ingress and weapons employment. To successfully carry out the plan, we must recognize our limitations, prioritize our efforts and devote 100 percent of our attention to precise aircraft positioning and control anytime risks are high.

You can't do it all—all the time. Don't become so involved with the tactical situation or training scenario that you misprioritize your efforts or fail to accomplish your primary task—fly your aircraft. ➤

TAC

tips

INTERESTING ITEM

Take it up

An upgrading F-16 pilot and an IP were flying a low level in their B-model when the upgrading pilot saw a large bird approaching just above their flight path. The bird dived, hitting the aircraft just forward of the canopy rail, and entered the cockpit. While both pilots were unharmed, the canopy flexed from the strike and hit the IP on the helmet.

When it comes to a showdown between you and a feathered friend, make it your habit pattern to pull up; but don't yank an overload of G's. Most birds will tuck their wings and dive when they sense an oncoming threat. By pulling up, hopefully you'll shield the more vulnerable parts of your aircraft from being struck and give the bird your sturdier underside for a target. Pulling up to avoid a bird also reduces the chances of collision with the ground or of running into other unseen obstacles. But, remember, any pull up should be made only if it makes sense. If you pull up and miss the bird but depart the aircraft and have to jump out . . . that doesn't pass the test. If the bird is too close for you

to do anything, remain level and duck your head before you take the strike. That way at least you'll have your head on to help you get your crippled bird back on the ground.

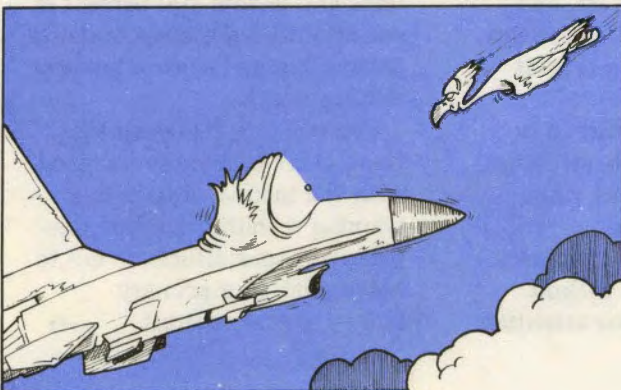
What is a habit

A habit is a response that develops when you repeatedly perform any action in the same way such as a preflight or a checklist. After performing the task a number of times, your brain disengages and your body takes over. Often, after doing the task, you can't specifically remember doing each step, but the evidence will show that you did. If you do the tasks correctly (and safely) as you learn the habit, chances are you did them right this time. But would you bet your life on it?

Habits generally come into play when you are distracted, fatigued or become too familiar with your environment. In other words, when you are not concentrating on the job at hand.

Well then, are habits good or bad? That depends. Habits should never be depended upon as an absolute authority. But if you develop good, safe habits, they may keep you from lousing up a task. If you routinely take shortcuts, you're setting yourself up for a rude awakening. Eventually that habit will take over while you are slightly inattentive, and, if it was unsafe, you'll pay the penalty.

If a repetitive task is interrupted by unusual events, take time to make sure that you're doing the task correctly. Either review what you have ac



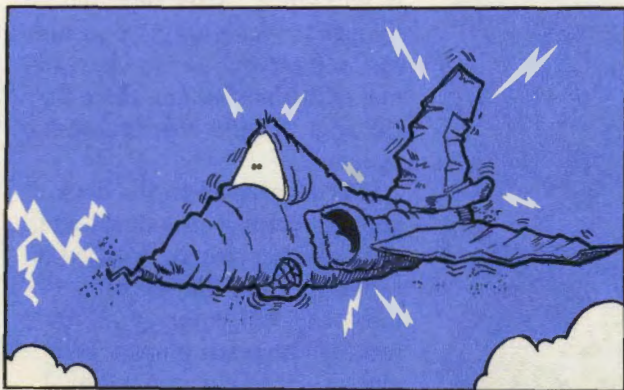
MS, MISHAPS WITH MORALS, FOR THE TAC AIRCREWMAN

complished or do it over. Don't take it for granted, think about it. Good habits should not be depended on to keep you out of trouble—but bad habits should never be tolerated.

Adapted from *Weekly Summary of Aircraft Mishaps*
by LCdr Jim Green, VAW-121

ZZZAP

A flight of F-106s completed a routine intercept sortie and split up for single ship recoveries. One of the aircraft was flying in light rain when it was struck by lightning. The strike entered at the pitot tube, knocking out all AC power before it



exited at the tail. It took three attempts before the pilot was able to reset the generator. Other aircraft damage resulting from the strike included the starboard wing and a small portion of the tail section that was knocked off. The weather briefing for that

day's sortie had called for a chance of thunderstorms in the area, but the pilot hadn't flown near any visible thunderstorm activity.

On another occasion a flight of F-15s attempted to find workable airspace for ACM with the weather layered from 1000 to 31,000 feet. The flight lead saw a possible break in the weather below him and put his wingmen in radar trail position for the descent. Passing 25,000 feet, the flight encountered heavier clouds and light precipitation. Shortly after that, the number two man noted a bright flash outside his aircraft. He immediately began a climb to get on top of the weather and a 180-degree turn to stay in the airspace. During a second 180-degree turn, the pilot saw another bright flash near his aircraft. Following a damage check, he made a safe recovery at home base.

Both thunderstorms and the possibility of lightning strikes are an everyday reality during this time of year. We all know to give thunderstorms plenty of room. But, it's not only in or near thunderstorms that we can get into trouble. Thick cirrus clouds from decaying thunderstorms can be one of the most likely places for a lightning strike to occur. When thunderstorm activity is in the forecast, reduce the chances of lightning strike or electrostatic discharge by avoiding the thicker regions of cirrus cloud decks that were once associated with thunderstorms. Even though you may not see obvious vertical thunderstorm development or visible lightning, the possibility of being zapped is still there.



THE

Mr. Cal Faile
TAC Ground Safety

Every year thousands of people die from drowning in water-related activities and hundreds more are injured through unsafe acts. The disheartening fact is that the vast majority (at least 98 percent) of the deaths and injuries are preventable. Usually, all it takes is simple preparation and planning. But even more important is good judgment and forethought regarding your activities around the water.

Each of us hates to admit we've made an error in judgment. We normally think it's the other person who makes mistakes, not me. Wrong! Several years back, while camping with my family, I got up at daybreak to go fishing. After repeated attempts to wake my 14-year-old son, my temper got the best of me; and I headed out alone for the lake, fishing gear and motor in hand.

When I arrived at the dock, I laid the fishing gear down and, not thinking clearly, stepped into the unstable flat-bottom, 14-foot boat. Still angry with my son for not getting up to help me with the boat and motor, I maneuvered awkwardly toward the transom (that's the back). As I leaned over to put the motor place—you guessed it—the boat and I parted company. It went

HAZARDS OF H₂O

hazards of H₂O

one way while the motor and I went the other into 10 feet of cold water.

It happened so fast that I didn't even have time to let go of the motor. Suddenly, I popped to the surface and saw adjacent boats moving away from me. I tried desperately to touch bottom (which just wasn't there) and still hold on to the new 50 motor in my right hand. When I realized I wasn't sinking because I had my personal flotation device (PFD) on.

Finally I was able to grab another boat and work my way back to the dock. I looked around sheepishly to see if anyone had seen my dumb stunt. No one was in sight. That meant no one was there to help me either. Then I realized that I wasn't angry any longer. The water had cooled me off quickly in more ways than one. I also realized how fortunate I was that I hadn't suffered serious injury from adjacent boats as I fell into the water. I was thankful for the PFD. Since then, my PFD and I have been inseparable around the water.

From that experience, I learned the value of using good judgment, preparation and planning. Everyone should thoroughly plan water-related activities whether it's swimming, skiing,

boating or fishing. I also found that having a cool head around the water is a must for operating safely.

With that in mind, here are some important things to remember that will make your water activities more enjoyable:

- Provide and make sure everyone wears proper personal flotation devices.
- If boating, develop a float plan. Decide where you are going, how long you will be gone and your expected time of return. Let someone on shore know your plan and then stick to it.
- Check your boat, engine, etc., to make sure they are in safe condition. Don't overload or overpower your boat and balance your load.
- Check weather conditions. Take a portable radio for updates while you're out.
- Dress properly and don't forget suntan lotion.
- Light snacks and soft drinks on long outings will help keep your stamina up. No alcohol—boating and alcohol don't mix.
- If a storm comes up, head for the nearest shore. If you get caught in one, stay low in the boat and point the bow into the wind and waves.
- In large bodies of water, pen flares will help identify your location to others if you get lost. (A compass could prevent you from getting lost.)
- Watch your speed. Know and obey traffic laws in the water and while towing.
- Again, wear your PFDs.

By the way, after drying out the motor and myself, my son and I fished all day. We didn't catch a thing, but I didn't get angry again. I learned that lesson the hard way. ➤



DOWN TO EARTH

ITEMS THAT CAN AFFECT YOU AND YOUR FAMILY

Doctors still sounding headphone alarm

The evidence is growing that overuse of portable stereos with headphones can lead to hearing damage, says the American Academy of Otolaryngology—Head and Neck Surgery (AAO-HNS), Inc.

The AAO-HNS points out that in industry, the federal government limits noise exposure at 100 decibels (dB) to two hours per day. There are no such standards for recreational noise, and many headphone stereos produce sound levels of greater than 100 dB. Listening at these levels can produce temporary hearing loss, while prolonged exposure could result in permanent damage.

A recent study showed that after 3 hours of listening to portable stereos, 7 out of 16 subjects suffered a temporary hearing loss of 10 to 30 dB. The subjects were teenagers who reported listening to their headphone stereos 2 to 3 hours daily; they

were asked not to use their stereos for 24 hours before the experiment.

The researchers found that temporary hearing loss levels increased with the level of noise: those who listened at 90 dB showed little or no hearing loss, those who listened at 98 dB averaged a 10 dB loss and the one subject who listened at 104 dB showed a 30 dB loss. Hearing for all volunteers returned to normal in 24 hours.

This particular experiment was prompted after a doctor examined a teenager for an unexplained high-frequency hearing loss. The patient's hearing had returned to normal when he was seen at a six-month follow-up visit. The patient's mother told the doctor her son's headphone set, which he used several hours a day, had broken since his first visit.



Split rim tire explodes—shatters lives

Mr. Cal Faile
TAC Ground Safety

Recently, two people in another command were killed when the split rim of an aircraft tire explosively separated during maintenance. In a similar mishap, a TAC troop was more fortunate and only received fractures to his wrists and some fingers. In each mishap, tire shop personnel had not removed the valve core before disassembling the aircraft split rim tire assembly.

HERE ON THE GROUND



There were other factors involved besides not following tech data and procedures: lack of experience, inadequate supervision, rotating personnel from other duties to perform tire shop tasks, un-

manning and inadequate facilities. You need for a bottom line here. Just make inspecting your tire shops a first priority and correcting any of the above problems a higher priority.

Swim don't sink

Water recreation is a popular outdoor pastime during the summer months. Perhaps that's why there are 100,000 water-related deaths every year—drowning is second only to motor vehicle accidents as a cause of accidental death among those 1 to 44 years of age.

Most drownings occur in natural water environments—lakes, rivers and oceans. About 15 percent of all drownings occur in swimming pools or in such home furnishings as bathtubs.

The majority of all drowning victims never intended to go into the water, but slipped or fell from a dock, boat or bridge. This underscores one way to prevent drowning: learn to swim from a qualified instructor.

Even experienced swimmers should avoid swimming alone and children should be supervised. Stay out of the water during severe weather, and don't swim at night. If you end up being caught by a current, go with it, but angle towards the shore.



If you see another person in trouble in the water, avoid the temptation to jump in after him unless you know you have the ability to rescue him. Instead, try to throw him a flotation device or reach out to him with a long object.

If you are boating, wear an approved personal flotation device (PFD) and make sure it's properly fitted. Don't go boating or swimming if you've been drinking alcohol or using medication. The Coast Guard estimates that half of all drowning victims had been drinking.

Never dive into unknown waters or into an above-ground pool. When you are diving in an approved area, extend your arms firmly over your head and keep your hands together to protect your head.

Finally, know where to get emergency help.

TAC SPECIAL ACHIEVEMENT in SAFETY AWARD

Because of an inflight J-85 engine fire mishap and its close proximity to critical components of both hydraulic systems, the 405th Tactical Training Wing Commander appointed Lieutenant Colonel James D. Thames, Major Darrell W. VanKlompenburg, Captain Paul Bordenave and Master Sergeant Melford R. Stensrud as a special board to investigate the mishap. Colonel Thames and his team were selected to receive this safety award because their perceptive, detailed and complete investigation quickly identified a major defect in all J-85 engines which could have caused a future aircraft mishap.

This incident was investigated as if it were a Class A mishap due to the depth of the investigation required to adequately analyze this particular problem. As board president, Colonel Thames made the decision to dismantle the engine locally under the guidance of the J-85 engineering representative from the San Antonio Air Logistics Center instead of having the engine transported to Kelly AFB for teardown. This decision saved time and allowed the investigation to move to a quick and full conclusion.

The investigative team narrowed the cause of the mishap to the poppet drain inside the fuel inlet manifold. Through a very detailed and critical analysis, several irregularities were revealed in the



Maj Darrell W. VanKlompenburg
Lt Col James D. Thames
MSgt Melford R. Stensrud
Capt Paul Bordenave
425 TFTS/555 TFTS, 405 TTW

manufacture and assembly of the poppet drain as well as a significant human factor engineering design flaw.

Within eleven days of the mishap, a Cat I MDR was sent to all J-85 users advising them of the potential problems and also providing AFLC, TAC and ATC of the problem with appropriate recommendations to remedy the problem.

TAC SPECIAL ACHIEVEMENT in SAFETY AWARD

The 422d Test and Evaluation Squadron, 57th Fighter Weapons Wing, Nellis AFB, Nevada, had an outstanding year during 1985. The squadron recorded a zero mishap rate for Class A and Class B mishaps and a 0.5 Class C mishap rate. The outstanding safety record of the squadron is particularly notable because of the complexity of the squadron and its flying operations both on and off station.

The 422d flew in over 30 operational test and evaluation (OT&E) and tactics development and evaluation (TD&E) projects during the year. These tests included AGM-65D IR Maverick (A-10), infrared missile defense (F-4), all-aspect adversary tactics (F-16) and low-altitude escape maneuvers (F-16). Great precautions were taken to ensure that each test was conducted in a safe and logical manner.



The outstanding safety effort by the 422d contributed to the dissemination of safe and effective hardware, software and improved tactics for the TAF.

CARING IT MAKES THE DIFFERENCE

CMSgt Ronald Christiansen
Chief, TAC Ground Safety

When I started my Air Force career in 1958, my two worst enemies, or so I thought, were my boot camp drill instructor (DI) and my first shirt. It seemed they were always on my back and wanted to know everything about me.

The DI kept worrying about my reflectorized arm bands and light wands. The first shirt wanted to know where I was going on leave, how far I was driving, if my car could make it, if I had enough leave time, if I checked the weather, if I knew who to call for help and on and on and on. If that wasn't enough, he wanted to know if I had plenty of money to handle the trip and any problems. A regular bunch of old nags!

I was glad when they were gone or busy somewhere else so they wouldn't bother me. When I didn't see the shirt for a while, I figured I must be doing OK; and then one morning, there he would be. His office was in the barracks, and no one wanted to visit him there; but now he was in my work area. I knew something had to be wrong or he wouldn't be there. Oddly, all he wanted to know was how my trip went, how my family was and that it was good to see me back at work. The old buzzard really was interested in me—a one striper.

We chatted a few minutes and he told me I was invited to a party in his orderly room on Saturday at 0630. I knew what was in store for me then! On Saturday, with scrub brush, mop and

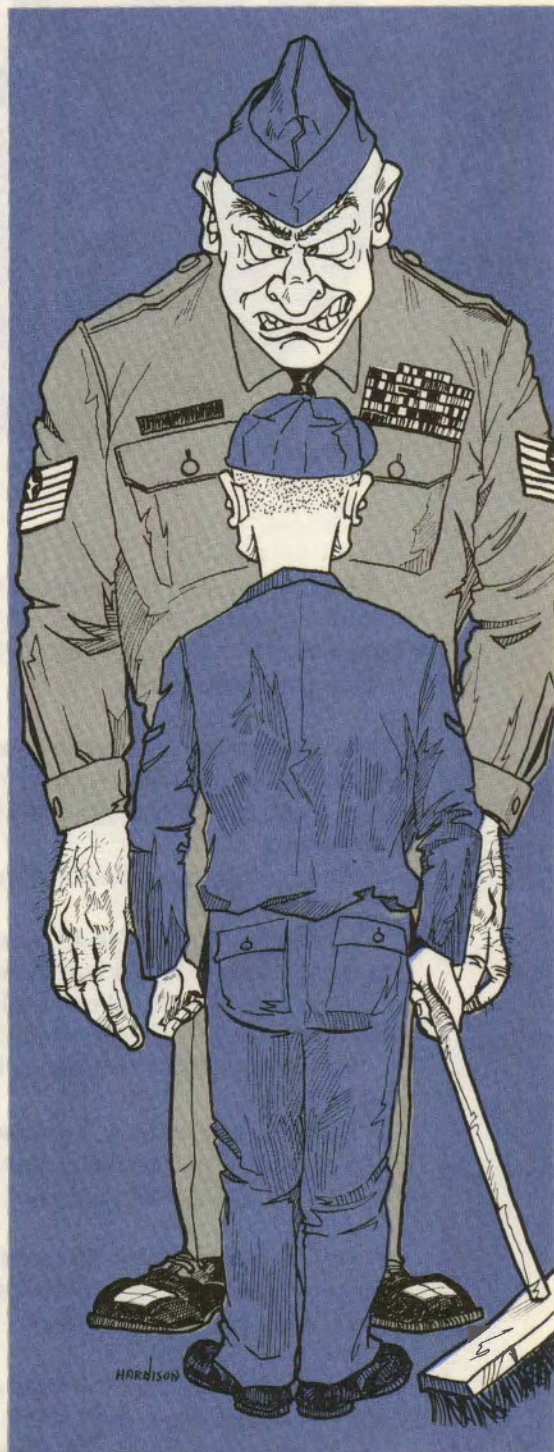
scouring powder, I spent the day on my knees, cleaning. Oh, I wasn't there alone. The first shirt made sure I was out there on time, giving instructions and inspecting the job. When I finished, the shirt told me that if I ever parked my car on his grass again, I could do the entire building.

The shirt could be the rottenest and nicest person in the world at the same time. He used to make us listen to safety briefings at commander's call and then ask us questions on what we had heard. He would talk about boozing it up and killing ourselves. If you wanted to drink, he would show you where and how you would get home. If he ever found you falling down drunk or acting like a jerk, you were in deep, deep trouble.

That old first shirt and several others I knew as I grew up really made me grow up. I never realized what they were doing for me till many years later. They cared about me and every other person in the outfit. When someone got hurt, they hurt as well.

I've known many modern-day supervisors with the same beliefs, and a whole bunch of young airmen with the same attitude I had. We learned and we learned smart, so that now we're even better prepared to help the new Air Force professionals along their journey.

Caring does make the difference—a lifesaving difference—and I love those folks who went out of their way to keep this fellow alive.





A leading cause of fire death is the **deadly triangle**: smoking, drinking and watching TV in an upholstered chair. Don't risk nodding off with a cigarette in your hand.

Here are some of those actual statements submitted by real people on their accident reports:

"A truck backed through my windshield into my wife's face."

"An invisible car came out of nowhere, struck my car and vanished."

"I had been driving for 40 years when I fell asleep at the wheel and had an accident."

"I was sure the old fellow would never make it to the other side of the road when I struck him."

"My car was legally parked as it backed into another vehicle."

"I thought my window was down, but I found it was up when I put my hand through it."

Courtesy Family Safety & Health, Winter 1985-86

If you have to get on your roof to clean gutters or make repairs, don't wear street shoes—they don't grip. Wear **rubber-soled shoes**.

Don't drive with paper or light-colored objects on the dashboard. They will reflect onto the windshield and make it difficult to see.

You can **prevent scalding** in your home by setting your hot water heater to 120 or 130 degrees F.

Soon, you'll be seeing the light—if you drink and drive. Fewer **drunk drivers** will escape detection when police departments start using a new device called a passive alcohol sensor. It attaches to a flashlight and quickly measures the amount of alcohol in a person's breath when held near the face.

Out of the mouths of babes—a midwestern grade-school class produced these gems of safety wisdom: "Drivers should try to remember not to drive too closely apart."

"Safety is not playing tag in the car."

"Safety is not being on the same spot that a car is on."

"Hygiene is to keep healthy on the inside, while safety is to keep healthy on the outside."

Courtesy Family Safety & Health, Winter 1

If you use **Chewable Vitamin C**, you could be risking damage to your teeth. Dr. John Giunta of Tufts University, School of Dentistry, warns that the chewable vitamin causes the pH of saliva to drop, leading to erosion of tooth enamel, especially on the back teeth. It's better to swallow Vitamin C than to chew it.

Screens are not fall protectors warns the Screen Manufacturers' Association. Screens are designed to keep insects out, not keep children in. In fact, screens are designed to be removed easily so children and adults alike can quickly escape in case of a fire or so firefighters can enter a room easily. To keep the little *buggers* inside, don't place a child's bed or crib in front of a window. The same goes for furniture that an older child could use to climb up to a window. If you must open a window in a child's room, open it no more than four or five inches. A curtain or shade may keep a curious child from being attracted to the outdoor scene. If you have a particularly active child, take special precautions. Use window guards or a gate to keep the child from the window, but don't barricade a window so securely that it couldn't be used as escape route in a fire.

Doctors have cured *Space Invader's Wrist* and *Dog Walker's Elbow* and now they are looking into two new painful afflictions: *Pricer Palsy* and *Ski Boot Embolism*. *Pricer Palsy* affects grocery-store cashiers. It's a numbness in the hand caused by dragging products over a UPC scanner (twisting the hand and at the same time flicking the wrist). *Ski Boot Embolism* is caused by ski boots that are too high and too tight. The boots impair blood circulation to the foot and can cause clots to form in the legs.

Know how to get out during a **hotel/motel fire**.

- Walk down the corridor and find the fire exits. If there is a fire, don't use the elevator; it could take you to the fire floor.

- Check out the exits. Do the doors open easily? Are the stairways clear?

Count the doorways and note any other features between your room and the exits. If the hall is dark or filled with smoke, you'll need to know your way as you crawl along the wall on the floor.

- Keep your key close to where you sleep so you can grab it on your way out. You'll need it if smoke blocks your exit and you must re-enter your room until help arrives.

- Try the windows. Do they open? Would you have to break a window to escape? Which window would you use in an emergency?
- Look out the window and observe your surroundings. Could you drop to the ground or onto a sundeck safely in an emergency?

According to the Motorcycle Safety Foundation, a **helmet** (full-face) is the most important piece of riding gear to protect the motorcyclist. Research shows that a rider's chances of escaping a serious injury are three times higher if wearing a helmet.



**GET
IT ON!**

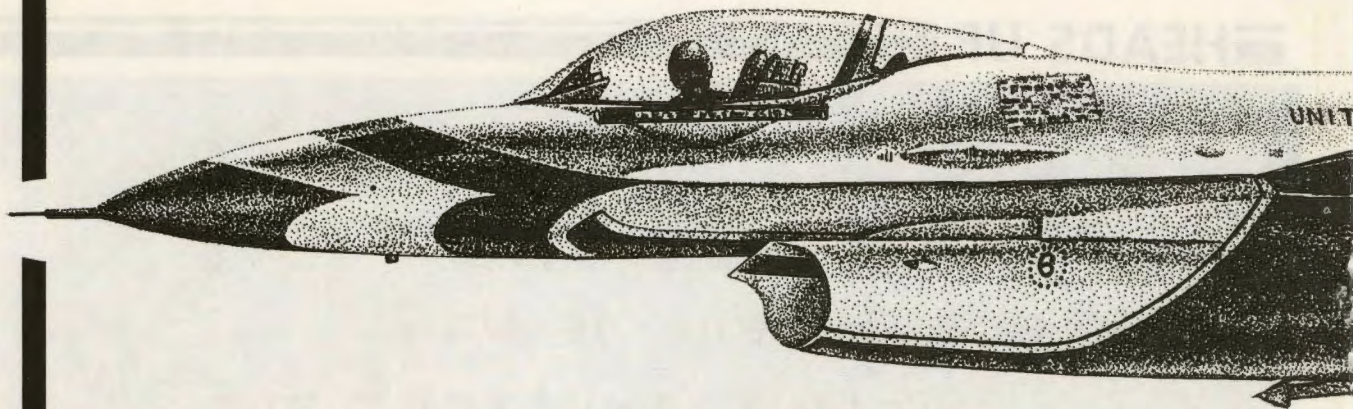
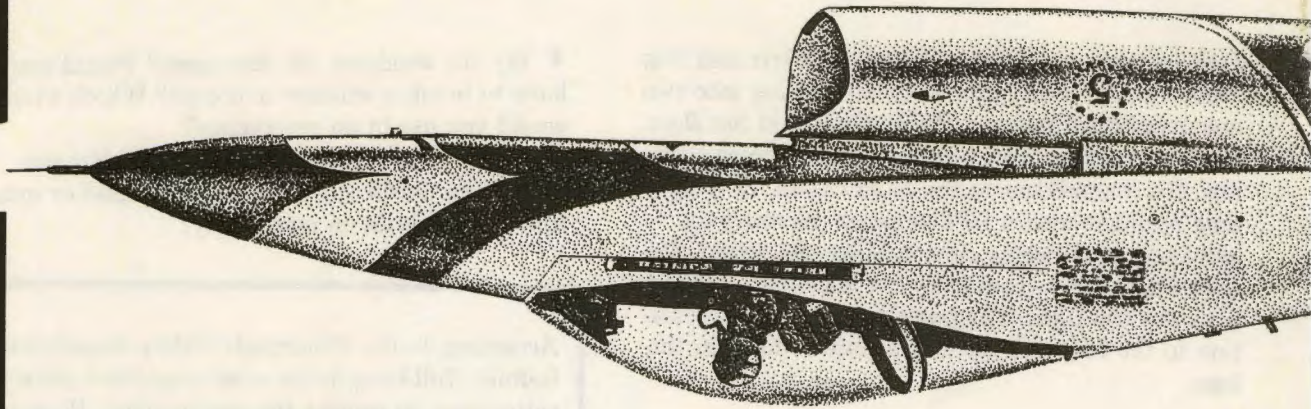
MOTORCYCLE SAFETY FOUNDATION

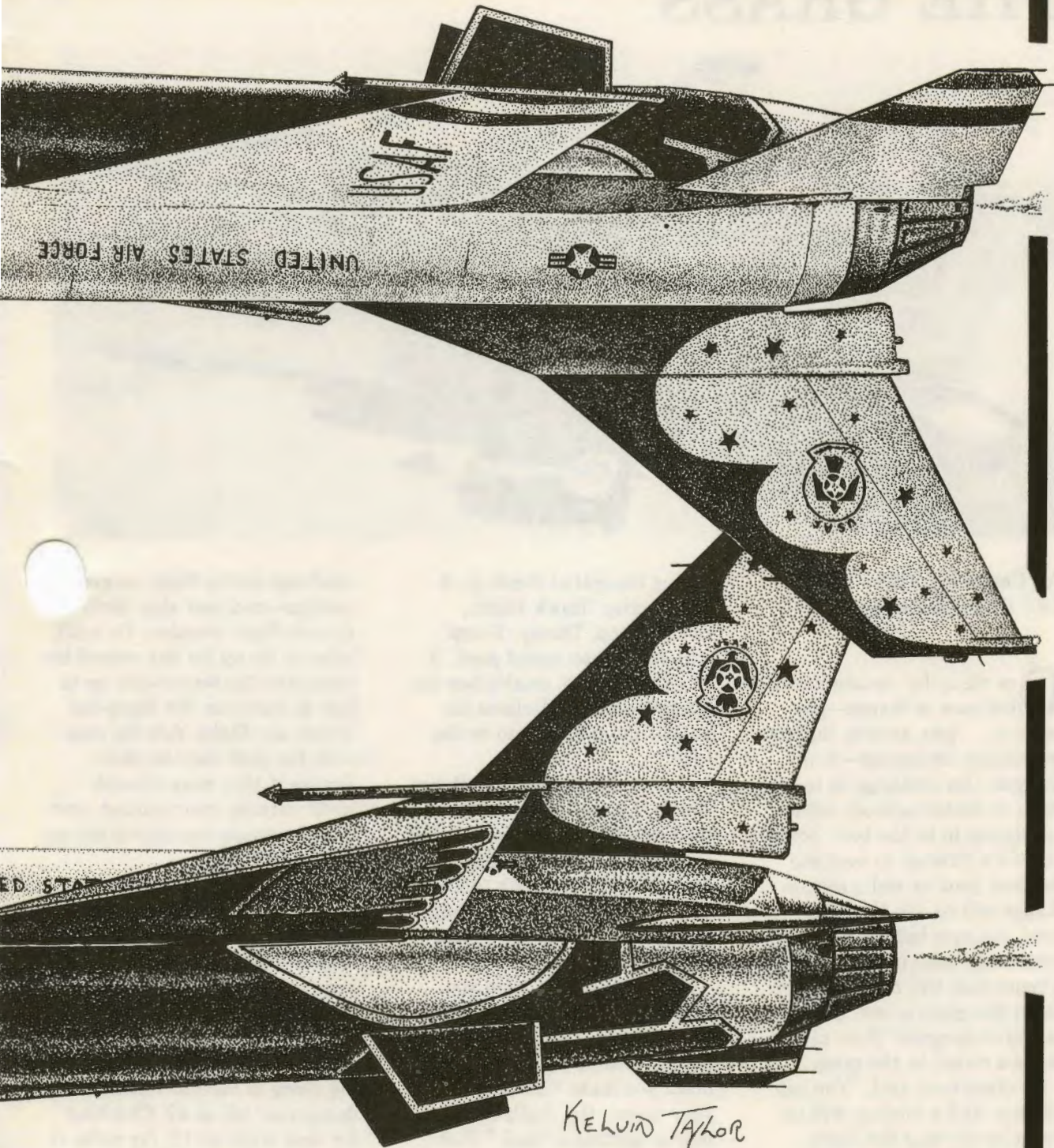


HEADS UP

Next month, in the
AUGUST
issue of *TAC Attack*,
look for a special article from
General Russ to flight commanders.

THUNDERBIRDS





KELVIN TAYLOR

HERE'S A NICKEL ON THE GRASS



Col Coupe De Ville TAC Chief of Safety

One thing for certain in our business is change—you name it . . . jets, tactics, threats, technology, leadership—it all changes. Our challenge is to adapt to better methods while continuing to be the best. Sometimes it's difficult to evaluate just how good or bad a certain change will be. On the other hand, we have been handed down some solid indicators of excellence that will never change. Radio discipline is one. So for all you silver-tongued "Aces to be," here's a nickel on the grass . . .

It's often been said, "You can tell how well a mission will be flown by the way the flight checks in." There's an awful lot of truth in that statement. For us old heads, it means much more than whether or not someone had a problem prior to or

during the initial check-in. A sharp, crisp "Hawk Flight, check—Toop, Threeep, Fourp", does more than sound good. It sets the rhythm, establishes the discipline and underlines the goal of the mission—to be the best.

Unfortunately, we all fall victim to the routine of things—a tendency to relax when the difficult is over and the familiar begins. The problem isn't "doing the same old thing," it's doing something *familiar* without a *challenge*.

How many times have you rolled in for a 30-degree dive? When would you call it routine? Never, because no matter how often you make that pass during your career, the challenge remains—getting a "bull." That's why many smoking holes are dug during the so-called "ho hum" part of the mission—no challenge. That's the leader's responsibility. He must present a

challenge to his flight on every mission—and gear that challenge to each flight member. He can't relax or let up for one second because he's the leader—it's up to him to maintain the discipline within the flight. Ask the ones with the gold stars on their sleeves if they were relaxed while earning their combat time or if discipline was important on every mission.

The thing that upsets me is how easily discipline can begin to erode as the result of a subtle radio transmission. Most of the time the troops in the flight don't even realize it. Herein lies the real problem.

Here's an example. You're flying along in tactical formation, doing your job as #2. Checking for near rocks at 12, far rocks at 12, lead looks good, now check six . . . cross check the big picture . . . remember to use flare/chaff . . . is it "flash" time yet . . . review our tactics once

e. You've got your mental crosscheck going smoothly at the speed of heat. Then you hear the mike switch being keyed—anticipate a wing flash—when you hear, "Hey, Joebag, sure is a great day. Look at that beautiful river and home at your left 8 o'clock low."

Will you reply? Most of us do. Then what? What's happened to your mental crosscheck? It's "outta there." And, if a few more comments unrelated to the task at hand are exchanged, the chances of re-establishing the correct rhythm are lost. The same can happen when nicknames are used (in a critical emergency nicknames can help but that's another story). Failure to use the flight call sign starts the erosion of discipline, too. A simple informal radio call. A simple

of relaxation can key the trigger to self-discipline breakdown. We have all heard it deteriorate at one time or another in flights to a point where someone—usually from another flight—finally keys the mike and calls "Take the garbage off the radio."

Disgusting, isn't it? But why? Well, mainly because we allow it to happen. But I see two primary reasons. The first is self-discipline. If you are the leader, you must resist the temptation to garbage up the radios with information/comments that should have been covered during the briefing or transmissions unrelated to the mission. If you are flying the wing, resist the urge to answer such transmissions and have the courage to debrief it. Self-discipline is a critical element of a fighter pilot's personality—without it you're just her pilot.

The second reason is we're overloaded with radios. Radio

operators during the brown-shoe days should have had it so good. Some of us have grown accustomed to having our "personal" flight radio and frequency. Naturally, no one else is listening (an important check and balance that's missing); so we tend to use the frequency as we would a private telephone—before you know it the flight call sign sort of fades away, replaced by first names of the flight members or even nicknames. That leads to a more informal attitude, which leads to . . . I could go on and on.

"Self discipline is a critical element of a fighter pilot's personality—without it you're just another pilot."

What gets me in the pit of my gut is when you hear someone actually joke over the radio about a bad bomb or a dumb maneuver they made during an engagement. They should be busy analyzing what they did wrong instead of using any one of the 3033 Amarougian excuses for their poor performance. That's what it is and should be to them—unacceptable performance.

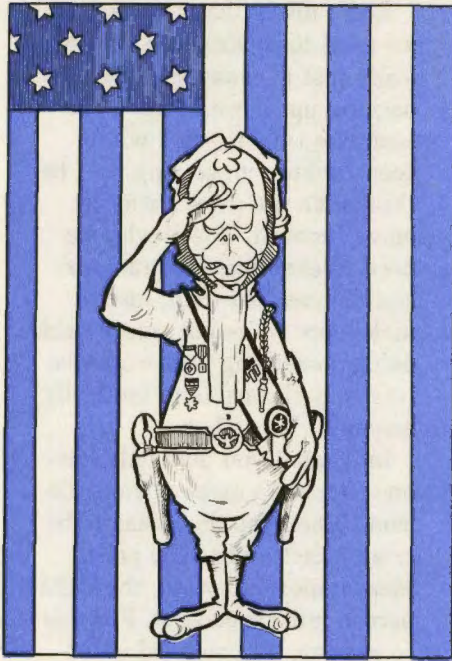
Another thing that has grown out of "a radio and frequency for everyone" is the fighter-to-fighter brief. I've heard some that were more detailed than any I've heard in the briefing room. That's backwards. Even a crawfish will back up only so far before he realizes it may be fun and a fast way to evade, but it's no way to fight. So, he puts up his claws and heads back in the right direction.

Radio discipline is something we need to re-examine periodically just to make sure we're not backing up. If we don't, we're soon like the crawfish who's been backing up so long that he thinks it's the proper way to move forward. That's why we need to examine our radio discipline now and then, just to make sure we're not comfortable doing something that would be totally backward (and tactically unsound) in combat.

In combat you may only have one chance to make a transmission. When you do, it has to be crisp, exact and to the point. Most important of all, the right person must receive it. For this to happen, all you need is the proper call sign. It works like magic.

Well, if you think I haven't been throwing this nickel your way—try this. For you jocks using several radios, pick one radio on your next mission—only one—and use it, nothing else. See if you are briefing properly—or need to revamp your tactics. For the rest of you interested in being the best, make R/T a debrief item—don't just mention it—I mean debrief it. One thing more, take a recorder (VTRs don't last the entire flight) and charge two-bits for every "Uhhh" you hear in your flight. It's amazing, just amazing, how quickly the "Uhhhs" fade out completely from the squadron R/T. Is it really the two-bits lost or because someone gave them a gut check?

Radio discipline, just like formation, is a key indicator of how squadrons perform. R/T that's crisp, sharp, to the point—with a toop, threeep, fourp response—means pride, high performance standards and . . . you mess with us, we'll rip your lips off. ➤



FLEAGLE SALUTES

Ann James W. Perry, 84 FITS, Castle AFB, Calif., had just graduated from technical training and had been assigned to the 84th for only two weeks when he noticed that a fuel manifold line appeared to be chafed. Further investigation revealed that the fuel line was being chafed by the elevator torque tube. After notifying his supervisor, the torque tube was repositioned and the fuel line replaced. The fuel line had been worn down through its outer rubber covering and was nearly worn through to the center. Had a leak occurred, the fuel would have leaked onto the engine diffuser causing an engine fire. A one-time inspection of squadron T-33s revealed this to be an isolated case; however, other T-33 users were notified of the potential hazard.

TSgt James P. Christopher and **TSgt Gerard C. McKervey**, 169 CAMS, 169 TFG, McEntire ANGB, Eastover, S.C., prevented the possible loss of a valuable aircraft and possible injury to personnel. TSgt Christopher was in the process of defueling an F-16A aircraft and was being assisted by TSgt McKervey, another crew chief. After fuel had begun to flow, the defueling adapter fasteners beneath the right wing failed, causing the adapter to separate approximately an inch. Fuel began to flow onto the parking ramp. TSgt McKervey made an effort to hold the adapter and defueling hose up and was able to slow the leak. TSgt Christopher alerted the flight-line expeditor who summoned the fire department. TSgt Christopher also manned a portable fire extinguisher in the event of a fire. When the fuel was stopped, approximately 500 gallons of fuel had been spilled.

A1C Jimmy D. Gonzales, 163 CAMS, 163 TFG, March AFB, Calif., prevented a serious airborne emergency and probable loss of an aircraft. While checking the nosewheel area of an F-4C prior to takeoff, A1C Gonzales noted an absence of bleed air exhaust on the right side of the nose underneath the aircraft. Due to his knowledge of the bleed air system, he deduced that there had to be either a massive bleed air duct leak or a failure of the cabin air conditioning system. Investigating further, A1C Gonzales discovered that the right forward part of the fuselage was extremely hot. He immediately directed the aircrew to shut down both engines. The aircraft was

towed back to the parking area where further investigation revealed that the bleed air duct had a hole in it which allowed extremely hot air to escape and contact sensitive components. A bleed air duct failure is one of the most serious emergencies an aircrew can experience in the F-4.

Capt Jeffrey L. Duncan, 1 TFTS, 325 TTW, Tyndall AFB, Fla. Since being assigned to the squadron, a new F-15 training squadron, Capt Duncan took a nonexistent flying safety program and in five months received an excellent rating from the TAC MEI team. His extensive use of the squadron small computer provided sound documentation and aided job performance in all areas of flight safety to include mishap investigation, spot inspections, safety education and training. He developed a safety education program for F-15 students that stresses F-15 safety concerns and even covers the human factors side of becoming a fighter pilot, using topics like flight discipline, self-discipline, ego, stress, fatigue and task saturation. For the situational emergency procedural trainer, Capt Duncan devised a series of emergency flashcards, providing a scenario, cockpit indications and recommended solution.

1st Lt Richard Brickert, 185 TFG, Iowa Air National Guard, Sioux City, Iowa, was flying in a two-ship of A-7Ds on 24 Sep 85 when a large bird struck his aircraft. The bird broke his left windscreen and hit Lt Brickert in the shoulder, causing temporary numbness from the imp.

The blood and bird remains as well as heavy rain entering the cockpit severely restricted visibility and caused Lt Brickert to pass the lead to his wingman. Left with only FM radio communications within the flight, the two pilots flew 25 miles to the nearest military airfield where Lt Brickert was lined up for an ILS approach. Due to limited forward visibility, a heavyweight landing condition and standing water on the runway, Lt Brickert made an approach-end barrier engagement, safely stopping his aircraft on the runway.

SSgt Gary D. Velasquez, 405 AGS, 405 TTW, Luke AFB, Ariz., is an exceptional NCO who leads the 426th Aircraft Maintenance Unit in safety awareness.

unit safety monitor, he has established a comprehensive safety program to ensure safety is an integral part of flight-line maintenance. He personally briefs all new personnel and includes special safety emphasis for all airmen assigned directly out of technical schools. By personally monitoring aircraft maintenance within his unit, he has not only motivated personnel, but the increased awareness has reduced the number of safety incidents within the entire squadron. The benefits of his safety program were underscored this quarter when his unit consistently earned high ratings on all safety-related quality assurance evaluations, resulting in his unit's selection as AMU of the Quarter for this period.

Capt Jeffrey D. Main, 27 TASS, George AFB, Calif., 602 TAIRCW, is an outstanding officer who has done a magnificent

job as the 27 TASS Flight Safety Officer. Capt Main arrived in the 27 TASS and immediately put together a top-notch flight safety program. This was doubly difficult since the squadron was being formed with aircraft from overseas and with about half the pilots brand new to the aircraft. The squadron completed its first year of operation with no Class A or B mishaps despite having to contend with high pressure altitude, extremely hot temperatures and strong winds associated with operating in the Mojave Desert. In addition to setting up the squadron flight safety program, Capt Main integrated the squadron program with that of the 831 AD. He became actively involved with the George AFB Midair Collision Avoidance program, Bird Air Strike Hazard program and other safety councils. He became a primary player in establishing a safe interface between the existing F-4 units/aircraft and the newly arrived OV-10s of the 27 TASS.

SrA Alan L. Bechtol, 405 AGS, 405 TTW, Luke AFB, Ariz. SrA Bechtol's swift and accurate response prevented extensive damage or destruction of a valuable aircraft and refueling truck as well as preventing injury to the truck driver. He was refueling his assigned F-15 aircraft after it returned from a training mission. With the refueling initiated, SrA Bechtol turned to speak with the fuel truck driver. As they conversed, SrA Bechtol noticed liquid seeping from the truck's engine compartment. Suddenly, there was a puff of smoke, and the pool of liquid that had collected under-

neath the truck ignited. Reacting quickly, SrA Bechtol alerted three co-workers of the danger and informed the truck driver to stop the refueling process. Aware that the fire could easily spread and engulf his aircraft, he quickly disconnected the fueling hose between the truck and his jet. Grabbing a fire extinguisher, he joined his co-workers in extinguishing the fire before it could reach the cab of the truck.

SSgt Vincent J. Altobello, 4507 CAMS, 507 TAIRCW, Shaw AFB, S.C., has made significant and lasting contributions to this unit's weapons safety program. His expertise and technical knowledge of the O-2A weapons system ensures that only highly qualified load crews are certified and maintain the highest degree of proficiency. His expertise proved invaluable recently when the new revised O-2A aircraft loading TO was distributed. SSgt Altobello quickly detected several steps within the manual that could possibly cause a safety mishap if followed. AFTO Forms 22 were submitted and approved, and the TOs were changed.

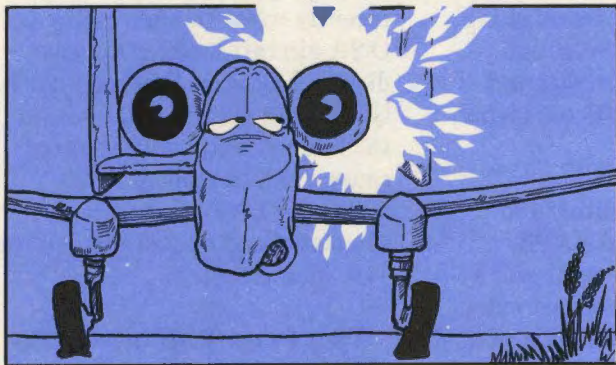
TSgt Larry R. Hatfield, 355 EMS, 355 TTW, Davis-Monthan AFB, Ariz., is a resourceful and highly competent NCO who is dedicated to identifying and resolving potential safety hazards. Since his appointment as branch safety NCO, no reportable accidents have occurred involving branch personnel either on or off duty. This significant improvement is attributed to the in-depth and comprehensive safety instructions that he administers to branch personnel on a weekly basis.

CHOCK TALK

INCIDENTS AND

Not a storage bin

An A-10 pilot was scheduled for an early morning launch on a weapons delivery mission. As he started the left engine, the crew chief noticed a large flame shooting out of the exhaust and told the pilot to shut the engine down. There hadn't



been any indications of fire or other problems inside the cockpit.

During engine inspection, they found the remains of a pair of plastic ear protectors. Someone apparently left them in the intake during the pre-flight inspection process. While the crew chief's preflight checklist directed him to "inspect the engine inlet and exhaust for foreign objects," both he and the pilot failed to notice the mislaid protectors.

The hours of darkness make it much more difficult to notice such problems as tools lying around, panels not properly fastened and fluid drips that are much more apparent during the daylight hours. If you're working during the periods of dawn or

dusk, remind yourself to use an extra measure of care needed to look into nooks and crannies that are easily seen during the daytime.

One way to prevent objects from being left behind on the aircraft and becoming FOD is to view your aircraft as a "no storage" area. Make a habit of not using intakes, exhausts or any other part of your jet to store tools, forms, clothing or anything else that might be forgotten and embarrass you later. Know what tools you brought to do your work and make sure you have them all when you leave.

What's in your pocket

During an A-10 postflight following a two-ship drange mission, two nicked fan blades were discovered. The blades were repaired by blending, but a borescope inspection of the engine revealed considerable compressor damage. When the engine was torn down, many compressor and stator blades were nicked, gouged, bent or torn.

From marks on the engine outer fan casing and the internal damage, the foreign object must have been a small, threaded object with a circular cross section. A thorough search was made of the damaged aircraft as well as the other one that accompanied it during the last flight. No missing fasteners from either aircraft were found. It was very unlik-

INCIDENTALS WITH A MAINTENANCE SLANT

ly that the engine ingested something lying on the ramp or kicked up by a tire on takeoff roll.

A likely explanation is that a small, threaded screw or bolt fell out of someone's pocket and lodged in place until the engines picked it up.

Take inventory the next time you get ready to hit the flight line. Do you carry anything in your pockets that seems to continually fall out like change, a pocketknife, a comb or spare parts? Do your pockets look like a chipmunk with its cheeks crammed full of nuts, just looking for a place to unload? If you can get rid of some of that stuff, do it; and take a look around to make sure you haven't left something behind at the jet that you'll miss later.

Pain in the ear

The F-15 pilot closed his canopy before taxiing to the runway but noticed, after a minute at idle power, that the cabin pressure was increasing rapidly above the normal level. As he pulled back on the canopy control handle, a loud bang was accompanied by the canopy popping open about a foot before it settled back on the sill.

The cockpit pressurization problem was caused by the pressure regulator which was incorrectly safety checked in the test position. The regulator switch had mistakenly been secured in the wrong position during a recent canopy change. Both the environ-



mental control system specialist who did the test and the supervisor who signed off the work thought the switch was in the flight position. A closer examination of the switch found that the flight and test positions are color coded and there was a 90-degree difference between the two settings. Both the specialist and the supervisor should have been able to readily detect the error if they had given the task the attention required.

Take time when you complete a job to make sure you've done everything correctly. Ask yourself if you left anything out or accomplished anything out of the prescribed order. But don't just rely on your mental double check, give your work a visual once-over again as well.

If you're responsible for inspecting someone else's work, expect mistakes. That's why you're required to inspect *completed* work. A healthy attitude of caution and skepticism can go a long way in ensuring that when you sign a job off, you know it's been done right. True teamwork should help us catch each other's mistakes before they become problems, not reinforce mistakes that have already been made.

DROPPED

Capt Myrna Fuller
TAC/LGMF

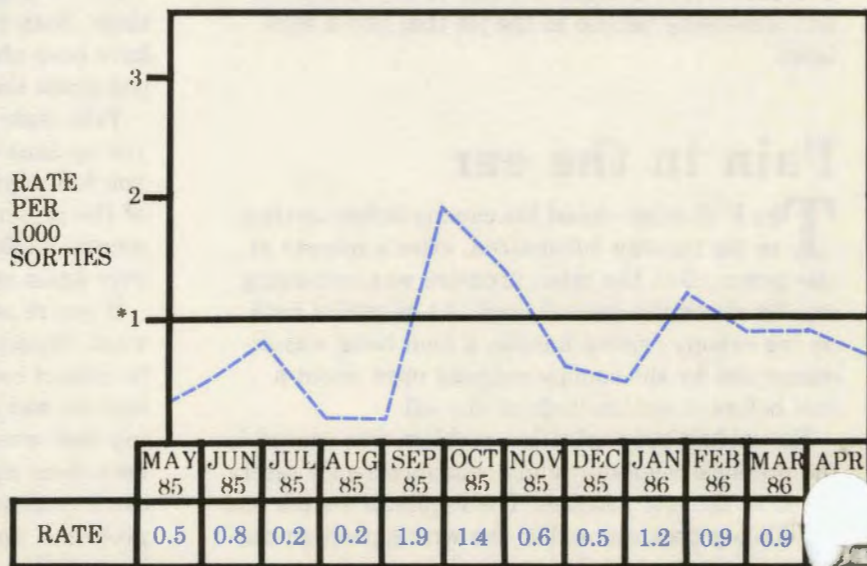
Have you ever seen a million dollars fall from the sky? That's roughly how much dropped objects have cost Tactical Air Command units so far this fiscal year (\$1,018,042), and that is only the price of the parts. When you add the cost for man-hours, downtime, investigation and reporting as well as the resulting loss in aircrew training and sorties, the price tag goes out of sight. What can we do to prevent this unnecessary expenditure?

First, you should take a look at *what* is falling off your aircraft. At one time or another virtually

everything from a five-cent washer to the most sophisticated electronic countermeasures pod has been inadvertently dropped from our aircraft, but the most frequently dropped objects are panels. Access panels are removed often, reinstalled just prior to flight and apparently aren't properly secured. The solution is simple: completely remove or open, completely install or close and put a red X entry in the forms. This means *all* access panels, skin panels, inspection plates, doors and covers.

When you replace or close a panel, do it completely and properly. It's too easy to overlook a panel that *looks* like it's secure but is really only "tacked on" (held by a few fasteners). An ex-

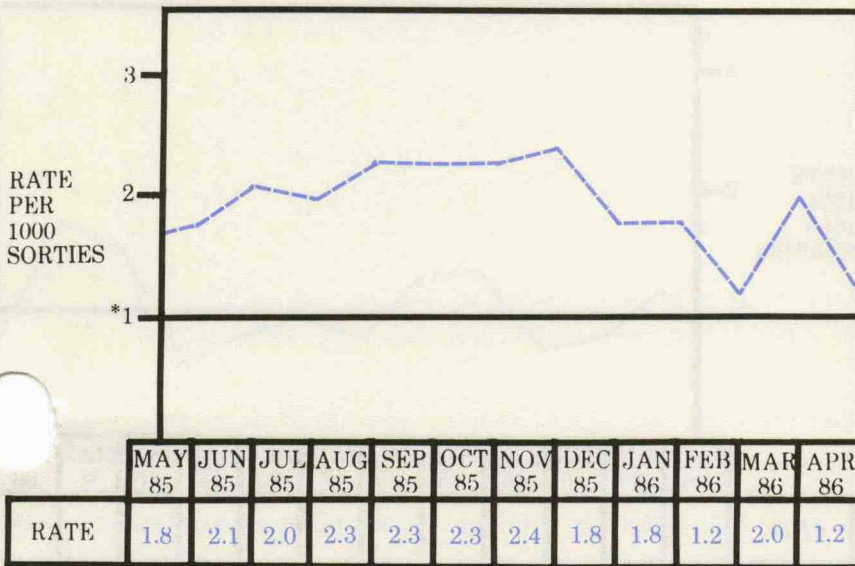
A-10 DROPPED OBJECT TREND



OBJECTS

* TAC goal is no more than 1 dropped object per 1000 sorties (1.0).

F-4 DROPPED OBJECT TREND

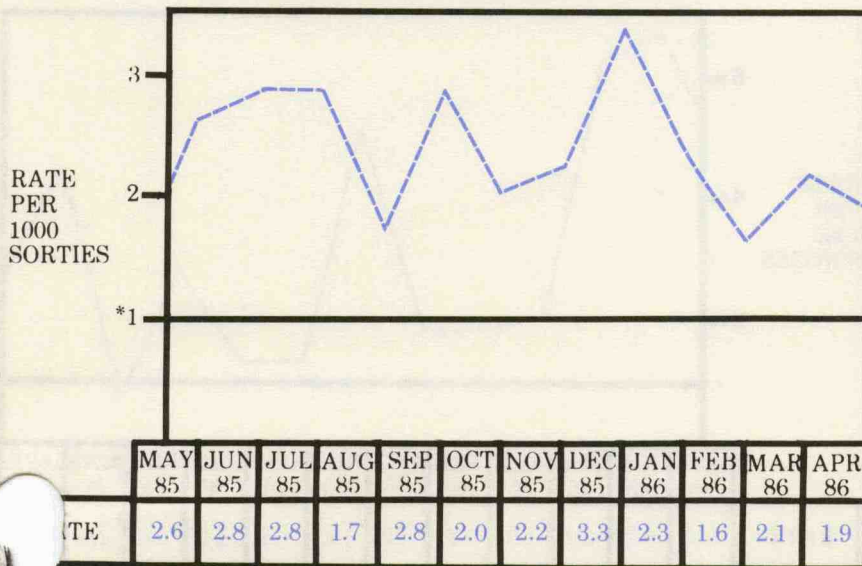


ample occurred at one of our southern F-4 bases. The weather had been miserable all week with thunderstorms and rain from a hurricane in the Gulf of Mexico. A sergeant was *almost* finished replacing panel 36 after a hydraulic repair when the expeditor rolled up and told him that the F-4s were being launched out for a hurricane evacuation as soon as possible and he needed help. Being FOD conscious, the sergeant took all remaining fasteners with him. No time for an entry in the forms. What's the end result of this scenario? Maybe they were lucky or . . .

Worn or broken fasteners are a leading cause for our most recent dropped objects. Effective maintenance programs must stress prevention as well as repair. One of the advantages of the dedicated crew chief program is having someone who knows the aircraft and its recent maintenance history to fix these "preventable" problems. But beware of the trap of thinking "it's a crew chief problem"—it's everyone's responsibility, from the wing commander to the airman basic, to prevent dropped objects.

On one occasion, an aircraft was one minute from takeoff when the pilot heard a loud noise from the left side of the aircraft. The life raft door and accessory container had departed the aircraft and punctured a hole in the

F-15 DROPPED OBJECT TREND





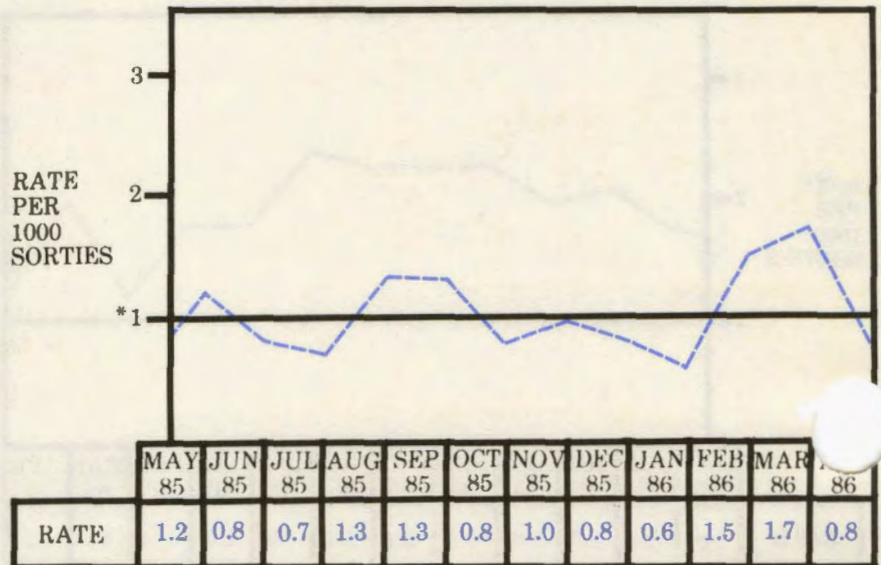
DROPPED OBJECTS

surface of the left wing. Earlier, the life raft door release actuator had been removed to replace the squib. When reinstalled, the release cable cleavis had not been properly reinstalled. Cost of this incident? \$9,321.15.

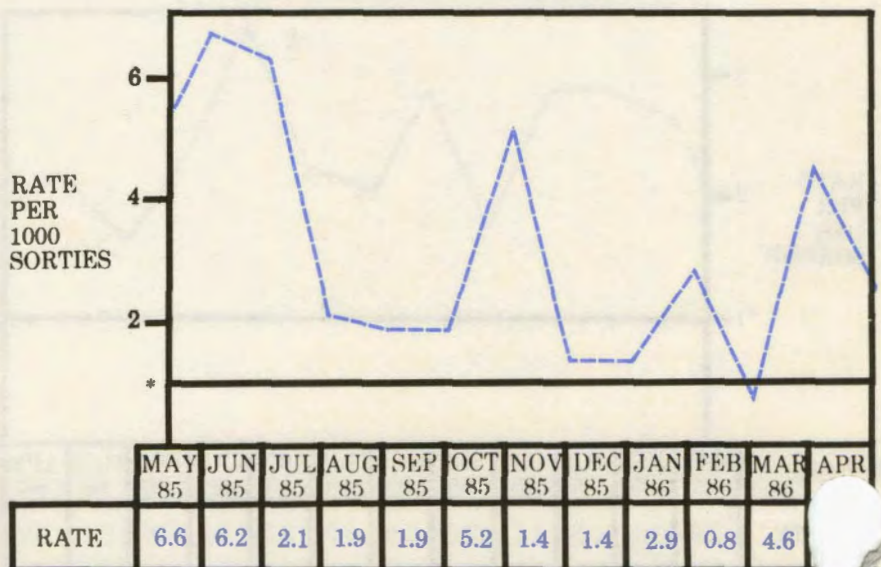
Even with the best prevention program, some objects may still be lost in flight. Good investigation and materiel deficiency reporting have been the key to the design and installation of new UHF antennas, stronger attaching brackets, better receptacles for panel fasteners and improved lights lens holders which were causing dropped objects. One F-16 unit investigated the loss of a BDU-33 fin and found that the spot welds appeared to be faulty. They alerted the Air Logistics Center with a materiel deficiency report and two lots of BDUs were suspended. Although the cost of the part was "only" \$18.00, the potential damage that could have been done is considerably more. Thorough investigations have also identified deficiencies in training and non-compliance with tech data which have paid big benefits in eliminating dropped objects.

The real bottom line is attention to detail. Your close attention during aircraft launch and end-of-runway checks as well as conscientious maintenance in phases and back shops is what it takes to whip the dropped object problem. Our success depends on you!

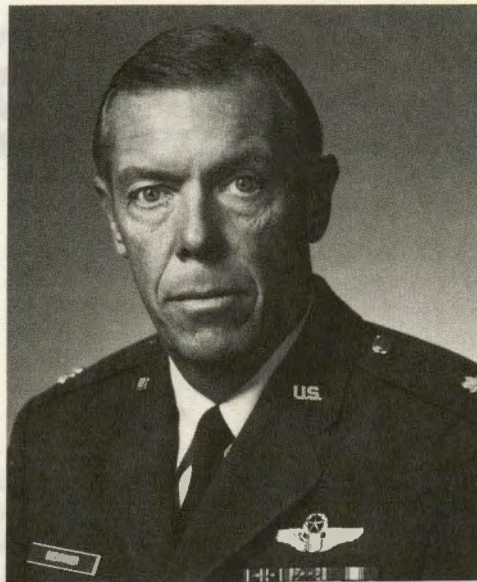
F-16 DROPPED OBJECT TREND



F-111 DROPPED OBJECT TREND



AIRCREW OF DISTINCTION

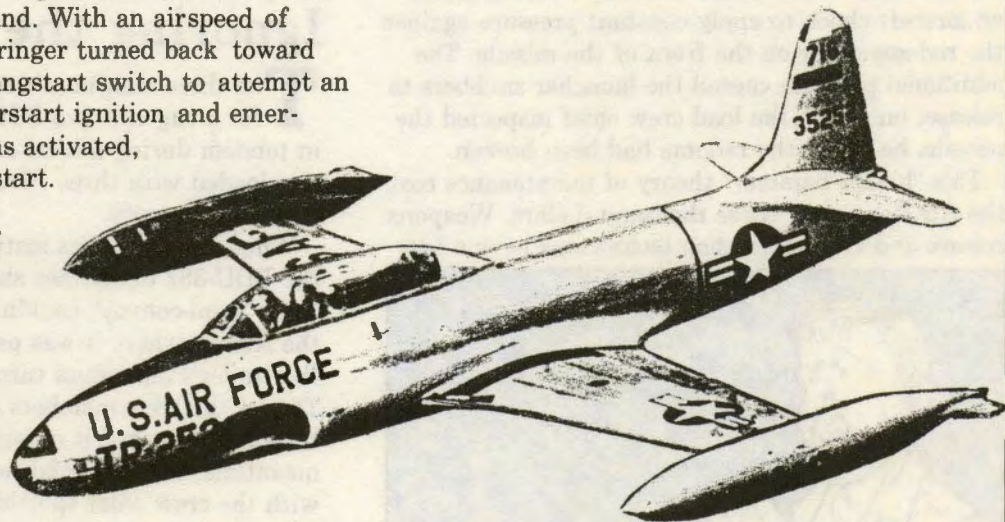


Lt Col Robert H. Boehringer
144 FIW
Fresno ANGB, California

Lieutenant Colonel Robert H. Boehringer, 144th Fighter Interceptor Wing, Fresno ANGB, was departing Edwards AFB in a T-33 on a typical hot summer afternoon when the engine flamed out at about 1500 feet above the ground. With an airspeed of 250 knots, Colonel Boehringer turned back toward the field as he hit the gangstart switch to attempt an airstart. Although the airstart ignition and emergency fuel control systems activated, the engine would not restart.

With little time for additional airstarts because of his low altitude, he set up for a forced landing.

Gliding in at 180 knots, once he was sure of making the runway, he lowered the gear using the normal system. During gear extension, the aileron boost cut in and out. Just prior to the flare, the flaps were lowered and a successful flameout landing was completed. The quick thinking and superior piloting demonstrated by Colonel Boehringer resulted in the safe recovery of his aircraft.



WEAPONS WORDS

If it's stuck

The load crew was dispatched to download a captive AIM-9P missile from an F-16 aircraft. After the missile was prepared for removal, the crew encountered difficulty in getting it to slide aft. They noticed that the launcher release snubbers were not releasing properly. The load crew chief determined that additional pressure was necessary to inch the missile towards the rear of the launcher. The number two man decided to use an aircraft chock to apply constant pressure against the radome cover on the front of the missile. The additional pressure caused the launcher snubbers to release; but when the load crew chief inspected the missile, he found the radome had been broken.

This "bigger hammer" theory of maintenance cost the Air Force over three thousand dollars. Weapons release and armament shop technicians have a bet-

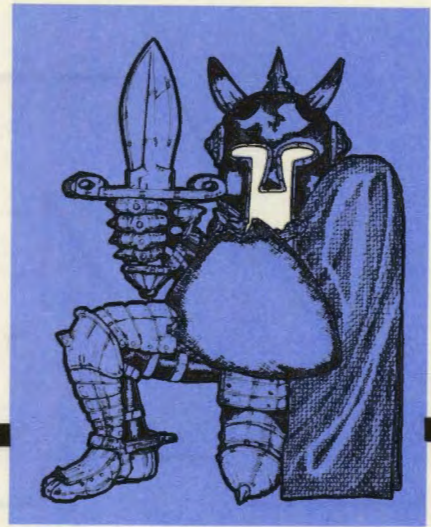


ter way to get jammed missiles off launchers. It may require some disassembly and take a little longer, but it won't cost us three grand. Next time you encounter a stubborn missile, ask the specialists to apply some "friendly persuasion" and leave the chocks under the aircraft.

Ignoring the obvious

The three-man munitions crew was responsible for a tug and two MHU-12M trailers fastened in tandem during a local exercise. The first trailer was loaded with three BDU-38s while the second trailer was empty.

When the team was instructed to deliver one of the BDU-38s to another shelter, they realized that their "mini-convoy" couldn't be turned around in the shelter where it was parked without exceeding the trailer's maximum turning angle of 45 degrees. Two of the crew members disconnected the empty trailer and pushed it outside of the shelter. In the meantime, the driver backed the tow vehicle up, with the crew chief spotting, to a point where the vehicle jackknifed well exceeding the 45-degree angle. The crew chief checked the drawbar assembly and pintle hook for possible damage but found none. The driver then pulled the trailer out of the shelter and the second one was reconnected. As they proceeded toward their destination, the crew chief heard a loud bang and noticed that the trailers had



broken loose from the tow vehicle. Fortunately, the breakaway cable functioned as designed and engaged the trailer brakes, bringing the trailers to a stop.

The jackknifing of the trailer had cracked the drawbar assembly donut which finally broke when stress was applied during towing.

Perhaps this incident occurred because the crew was decked out in full chemical gear for the exercise and didn't take the extra effort to make sure they were communicating during the trailer movement. Don't let that be your excuse. We can work safely and efficiently under full chemical operating conditions if we take the time to communicate and make sure that everyone knows what their part of the job is.

Know the turning limitations of your equipment whether it's AGE or an aircraft. You need to know what the turning capabilities are so you are aware of how much room you have to maneuver in safely and so you don't overstress your equipment. As this incident illustrates, exceeding prescribed turning angles can result in damaged connections and welds that may not be immediately obvious but will become painfully apparent at the most critical times.

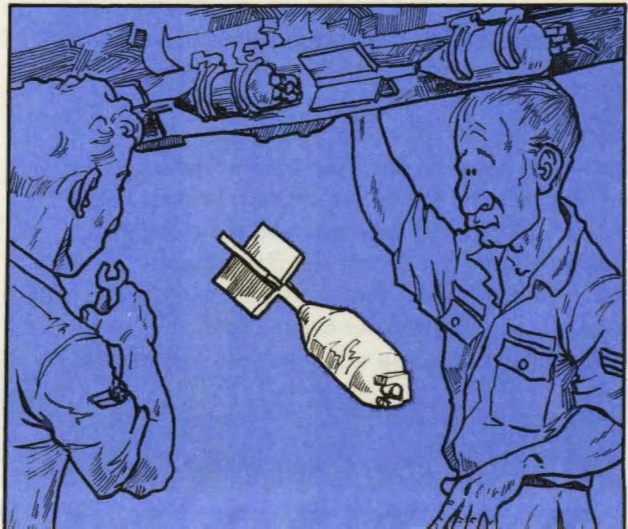
Watch this

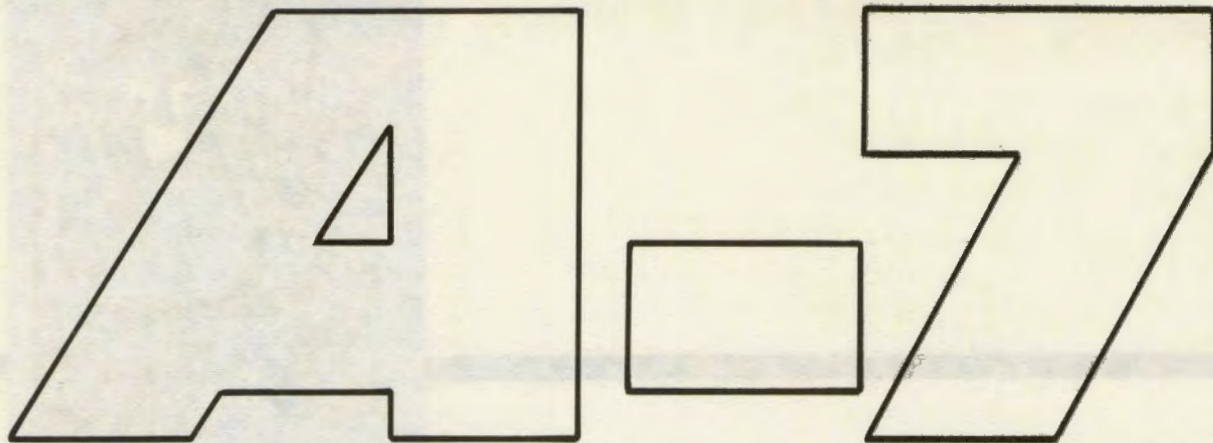
The flight of A-10 Warthogs taxied to the end of the runway for quick-check and arming prior to takeoff. After one of the jets was cleared

for arm up, the ground crew started removing the safing pins from the triple ejector racks. When the team chief removed the pin from station 2 of the TER, the practice bomb fell to the ground; the spotting charge didn't go off.

The culprit turned out to be a mechanical malfunction in the TER, but that's not the reason for this story. The importance of this item is that "the spotting charge didn't go off." Why not? Because the arming crew was following approved technical procedures. These procedures require the TER rack safety pins to be pulled *before* removing the BDU-33 safety blocks. Why? To prevent some of the horror stories usually reported here about second- and third-degree burns from practice bomb spotting charges functioning.

This story had a happy ending because the arming procedure was done "by the book." Following the script provided *does* prevent mishaps. Makes for a nice story.





EMERGENCY SITUATION TRAINING

Maj Jim Quick
TAC Flight Safety

SITUATION: Tower clears you to land. You fly a flawless on-speed final, right on glide slope and hit a wind shear or jet wash just before touchdown. Directional control is questionable, so you make the timely decision to go around and try it again. Tower clears you for a closed full stop landing, but requests you expedite your climb to downwind and make a short approach. You suck up the gear, but leave the flaps down to help the climb and high AOA maneuvering that will be necessary to hack the turns. You may even retract the flaps, go into ISO Utility/AMF on, utilizing maneuvering flaps to do the job. Off the perch, nice and tight, RSU was asleep, tower too far away, unseen WHEELS/FLAPS light without three green. Final, you pass through the AGL altitude normally associated with a standard controlled A-7 crash landing, get a real sinking sensation and land **gear up**. Ailerons and rudder as necessary to maintain directional control, and shut down the engine when it's safe to do so.

DISCUSSION: Obviously nobody sets out to land gear up. But in the A-7, and lots of other fighters, it happens with too much regularity. Recent A-7 gear up incidents indicate broken habit patterns. When you take off, you raise the gear when safely airborne, and the flaps shortly thereafter. When you perform a descent check, you ready the SLUF for the landing event. Then, it's gear down, flaps down. You make a radio call to that ef-

fect ("Base, gear down"), confirm PC-2 is good with three green. There are occasions when the sequence gets out of order by design. A no-flap approach requires a straight-in with only the gear out, while looking at a WHEELS-FLAPS light all the way down. Another occasion where the order of events can be more seriously jeopardized is during an actual (or simulated) precautionary landing pattern. Lots of pilots practice the PLP with flaps and speed brake, utilizing varying degrees of speed brake to modulate descent and airspeed. The other approach would be to drop the gear and partial flaps (normal habit pattern), modulating trailing edge flaps to control altitude and airspeed. Under the duress of a real seat pinching engine problem, what you don't need is an abnormal sequence of events. Dropping the gear on real short final only to find out that (1) the speed brake won't retract, (2) you've got an unsafe gear indication with no time to check it out, or (3) you forgot the gear, because the airplane feels OK, and land with it up and locked ain't the desired objective.

SOLUTION: Take a look at local procedures. Are there situations where your normal habit sequence can be disrupted? You can certainly normalize it. Check out how you really want to fly a PLP. Not a checkride PLP but a real one. Don't let outside pressures (tower, etc.) force you to deviate from the norm. Fly the closed the way it should be done. If the situation gets confusing—do a Dash One *Before Landing Checklist* routine; saves having to ask for a crane to taxi back.



TAC TALLY

TAC		
MAY	THRU	MAY
	1986	1985
2	13	9
1	6	6
1	11	7
1	11	6

ANG		
MAY	THRU	MAY
	1986	1985
1	3	5
0	0	2
0	4	5
0	4	5

AFR		
MAY	THRU	MAY
	1986	1985
0	0	0
0	0	0
0	0	0
0	0	0

CLASS A MISHAPS
AIRCREW FATALITIES
TOTAL EJECTIONS
SUCCESSFUL EJECTIONS

TAC'S TOP 5 thru MAY 1986

1st AF	
class A mishap-free months	
174	84 FITS
110	48 FIS
69	318 FIS
2	49 FIS
	USAFADWC

9th AF	
class A mishap-free months	
39	33 TFW
21	507 TAIRCW
18	4 TFW
15	354 TFW
11	23 TFW

12th AF	
class A mishap-free months	
51	602 TAIRCW
37	366 TFW
36	49 TFW
21	355 TTW
19	27 TFW & 479 TTW

ANG	
class A mishap-free months	
202	182 TASG
186	110 TASG
161	138 TFG
143	177 FIG
138	114 TFG

AFR	
class A mishap-free months	
99	926 TFG
69	482 TFW
68	301 TFW
59	924 TFG
57	419 TFG

DRU's	
class A mishap-free months	
182	USAFTAWC
116	28 AD
61	24 COMPW
3	USAFTFWC

CLASS A MISHAP COMPARISON RATE

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

TAC	1986	4.8	6.8	5.4	4.4	4.1						
	1985	3.2	3.4	2.7	2.4	2.9						
ANG	1986	4.3	2.4	3.1	2.3	2.7						
	1985	4.8	4.8	3.0	4.3	4.3						
AFR	1986	0.0	0.0	0.0	0.0	0.0						
	1985	0.0	0.0	0.0	0.0	0.0						

JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC

FLEAGLE

