

# *TAC ATTACK*

NOVEMBER 1985





# ANGLE OF ATTACK



## The routine often isn't

One of the more interesting challenges in tactical aviation is to improve our ability to anticipate rather than react. Experience has been defined in those terms -- those who are categorized as "experienced" have allegedly been afforded the opportunity to see/hear enough to be able to anticipate problems before they become disabling. I think we do this well when we try. The more difficult tasks are, in themselves, reminders to "try harder to do it right." Our performance at Red Flag is an example of doing the difficult very well. Occasionally, however, the seemingly routine sneaks up . . .

The "routine" BFM engagement has cost us 75 percent of our air-to-air losses this year. This is not a new trend. TACR 55-79 defines BFM as training designed to apply aircraft handling skills to gain proficiency in recognizing and solving range, closure, aspect, and angle off and turning room problems in relation to another aircraft to either **attain a position from which weapons may be employed, deny the adversary a position from which weapons may be launched or defeat weapons employed by an adversary.** The first of these objectives is clearly offensive and the last is obviously defensive. The second objective deserves more thought. It applies to all potential threats. We should train with that second objective always in mind, even during the "routine" BFM engagement. Remember too

that BFM implies **maneuver**, not muscle. Maneuver gets us to a shooting position while preserving the ability to react to a threat. Muscle alone gets us in trouble.

The temptation to forget all other potential threats and go max muscle, one versus one, has cost us lives and aircraft in training as it would, and has, in combat. Based on the last two years of air-to-air mishaps, neutral BFM seems to provide the greatest temptation to simply go for it with reckless abandon. Neutral describes the set-up geometry, not the expected result if "both of us do good." Roles should be established to provide the best possible training, offensive or defensive, for **one** of the two players. The other aircraft serves a designated role (training aid), again offensive or defensive, to facilitate the briefed objectives.

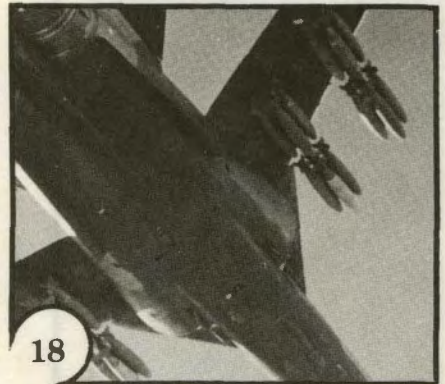
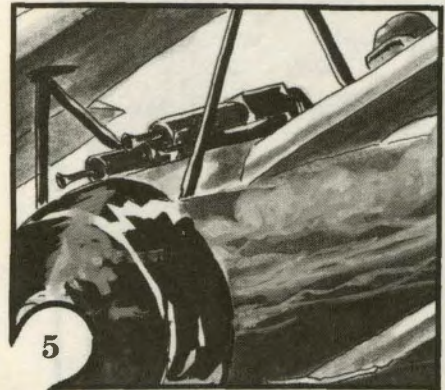
With highly proficient players, the "training aid difficulty factor" can be high, but always with the briefed objectives in mind. On the other hand, if a level 4-G turn seems to be amazingly effective . . . well, we all have to start somewhere.

HAROLD E. WATSON, Colonel, USAF  
Chief of Safety



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#### TACRP 127-1

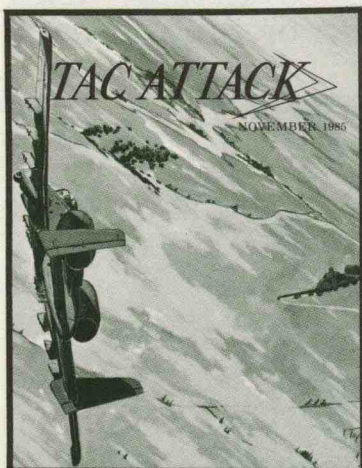
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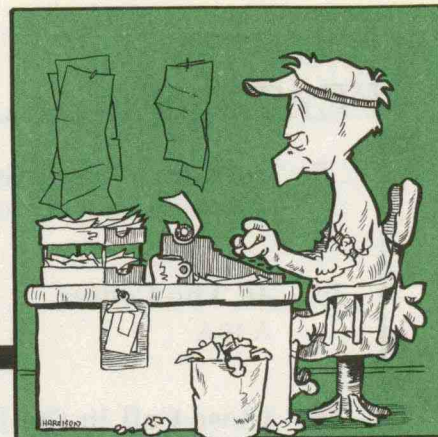
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## LETTERS



Dear Sirs

I am writing to you concerning a picture in your *TAC Attack* August 1985. On page 14, the upper left picture shows an individual about to strike a punch with a hammer. There is one thing wrong with this picture. He is not wearing eye protection. In AFOSH Standard 127-31, page 3, it describes the use of goggles and when to use them.

DEAN P. ADAMS, SSgt, USAF  
 57 FIS  
 Keflavik, Iceland

*Ed: Good catch. Our goggles must have been fogged up when we put that one in.*

provide an important message to the drivers. Every past and present fighter pilot has heard the buzz words *attitude* and *discipline* since day one, but the key point of it all is exactly what the Colonel said—you have to do it every day. I never could understand how some guys could make sloppy check-ins, not pay attention to taxi spacing, get so far out of formation they'd disappear, etc., etc., but it all boils down to ATTITUDE and DISCIPLINE. I always flew my jet like I was getting an eval from the CINC SEFE and I believe that's the only way. Colonel DeVille hit the nail right on the head. I'd go one better and say we (the Air Force, the taxpayer and this great country) can't afford anything less. Any Ops Oh or CC who permits ho-hummer attitudes needs to take a look at his own. Maybe more supervisory "supplemental evaluations" would help, too. Keep up the good work and the great mag.

T. Paasch  
 Former Fighter Pilot  
 419 CAMS (AFRES)  
 Hill AFB, Utah

Dear Editor

The article on attitude in your July issue was super. Your "Cadillac Colonel" (is that his real name or the handle on his flight suit name tag?) did a right fine job putting a few good words in the right sequence to



**CORPORATE  
KNOWLEDGE-**  
keep it high



**Maj Dave McGraw**  
**TAC/SEF**

**L**ieutenant Will May was trying to separate from the merge as his element lead watched from across the circle. Bright red Fokker triplane ve chase and, countering May's

every maneuver, began to fire approximately 100 feet behind the Sopwith Camel. Captain Roy Brown turned to help his wingman. Brown had all the advantages: his tail was clean, he was behind and high on the Fokker and he was undetected. Rittmeister Freiherr von Richthofen fell in battle as many of his victims had. He was surprised, and he was dead before he could recover from it.

Germany's Erich Hartmann extended his skills in World War II through experience. He

avoided dogfights in favor of the lethal efficiency of hit and run. He developed "My Personal Twist Regulations" (tactics reserved for last-ditch situations), and taught them to his young wingmen to help keep them alive. His "See-Decide-Attack-Break" sequence was never to be broken. He demanded that ground crews change his aircraft's (Karaya One) camouflage to meet seasonal and atmospheric changes. As a 22-year-old group commander, "Bubi" Hartmann insisted that younger fighter pilots be nurtured in the ways of aerial combat. "Let them experience from our mistakes."

So what about fighter jocks today? Take a look around your





# CORPORATE KNOWLEDGE

squadron and see how many combat veterans you have access to. Most of the silver oak leaves, eagles and stars have "been there." A few of the majors have, too. But the numbers are dwindling. When was the last time you bought one of them a drink and asked for a war story?

Why would you want to? Well, try visualizing tracers stationary on the canopy the next time you roll in at the range. Or real bandits with live missiles two miles at six. We can avoid the surprise of such combat realities by learning from those who've been there.

What it boils down to is the retention of corporate knowledge. It starts the minute we sign in at UPT/UNT and never really stops. We learn from those who fought before us, and those around us with more experience, talent and creativity. When you think about it, all that the syllabi, course outlines and phase manuals are designed to do are help you become an old head.

Perhaps my two years on the TAC staff have made me anxious to return to the cockpit and age with the fraternity. I'm sure a major portion of the concern stems from our 1985 track record. Admittedly, "the rate's" down. But take a moment to look at how we're killing alumni and bending jets:

- A low-altitude rolling maneuver around lead into the dirt.
- Padlocking on a bandit during a low-altitude conversion turn and hitting the ground.
- Pulling the wings off a heavyweight fighter during a high-speed flyby.
- Colliding with lead during a crossturn.
- Losing control while low and slow at the bottom of the airspace.

In none of these (or any other recent) mishaps have we really invented a new lesson learned. The knowledge of the consequences of these lapses in judgment existed in the corporate





knowledge. Maybe what was missing was a timely refresher, a quick discussion when the opportunity existed. Our system contributes to some degree. We PCS aircrews in and out of units an average of every two and a half years. The turnover may result in commanders, operations officers, flight commanders and flight leads who arrive with a low awareness of the amount of corporate knowledge present in the unit. They all possess different leadership styles and techniques. It becomes an adjustment process for everyone. But opportunities to hangar fly are endless and they aren't intimidated by the FNG syndrome. A supervisor or squadronmate may be new, but chances are he's got a few valuable experiences stored away in the functional brain cells that remain. Hangar flying. Seems like we hear that term less and less, but it's needed more and more. We don't enjoy the luxury that Captain Chuck Yeager enjoyed at Tonopah: 5-6 training sorties a day, 100 hours a month. That's a great way to retain corporate knowledge vis-a-vis experience and proficiency. Our flying times are up, but not as high as Yeager's. So what's one of the options available? A renewed emphasis on hangar flying when you have a few moments to spare. Some suggestions:

- Pick the brains of combat veterans in the squadron.

Any pilot who doesn't enjoy a good combat story doesn't belong in fighters. Compare your training sorties with their combat experiences. Ensure CT sorties are focused on the real objective—going to war.

- Talk. In the snackbar, halls, briefing rooms and, naturally, at the duty desk. Ask why lead briefed the tactic you flew yesterday. What were his considerations?
- Why was it successful or a goat rope? What techniques, lessons or methods warrant stowing in your personal bag of tricks? What can *you* offer in return?
- Use squadron flying safety meetings to focus on specific events. It might strike an aircrew's nerve better if the unit spent 5 or 6 minutes discussing how Joe Bag of Donuts hit a ridgeline, rather than just reading the list of mishaps which occurred over the last 6-8 weeks. The latter may be interesting but not informative.
- Know the squadron standards (or publish some if they are nonexistent). If some of them don't make sense, ask questions. A whole mess of experience went into their development. As an old head, make sure you help newbees

learn the standards—and if they get lazy performing them—hammer 'em.

- Tailor simulators to incorporate lessons learned from past mishaps. If we remain aware of mistakes which caused past mishaps, we can prevent duplication. The awareness has to be kept high.
- Finally, don't rely solely on past experiences. For example, there's a lot to be learned from World War II air battles, but they were guns only. Keep searching for new ways to employ what technology has supplied us. If it's good, if it works, mold it into the corporate memory. Weed out the bad, hold onto the good and bring on the new.

In the fighter business, the longer one flies jets the more seasoned, mature and capable he should become. Just because we've done that maneuver a hundred times and we *know* the aircraft always responds in such-and-such a manner, doesn't mean everyone else does. Pass it on when you can. Critique and update techniques and tactics. Or when you lieutenants (or crusty ol' staff pukers with 40 hours in your new jet) hit the squadron, look for a mentor to update and increase your corporate knowledge. It ends up being a team effort. Spotlight performances often end up as smokin' holes. Good hunting!



# TAC

## tips

INTERESTING ITEMS

### False assumptions

**Y**ou're ready to start out on the third leg of your five-hop cross-country after a good night's rest. When you arrive at your trusty jet, the transient maintenance folks are busy launching some other aircraft. To expedite matters, you start pulling downlocks and storing your equipment in the travel pod so you can be on your way as soon as possible.

When you try to fasten the travel pod with the wrong thing, your pocket knife, you can only get two fasteners secured. So what's your next step? An F-4 crew in a similar situation assumed that the transient crew probably had the necessary Phillips screwdriver to finish the job so they left the pod only partially fastened and proceeded to strap themselves in.



When the transient crew arrived, the aircraft commander said, "Check the travel pod," but wasn't sure that they heard or understood his request. Some time later during their low-level, the pod door came off in flight and resulted in several dropped objects: a gear downlock/pin bag, a flight suit, personal clothing and a shaving kit, not to mention the pod door itself.

As the aircrew, your aircraft and what you do with it are *your* responsibility. Don't assume that anyone else is going to secure panels, pods, munitions and other items that should be fastened properly before you hop in the jet. If you don't, the results can be much more serious than the embarrassment of having your clothes strewn all over the countryside.

### Tell the whole story

**H**ey, aircrews! You don't want to be MND'd tomorrow, do you? Then be thorough when you describe your sick jet. Providing a complete description of aircraft problems to debrief is vital to insure that our jets are always ready to go. It's even more important when FOD or serious undetected aircraft damage could be the problem.

On one occasion, a pilot noticed that his left engine's fan speed was slightly lower than normal during takeoff. He proceeded with the mission and didn't have further problems until just before re-



## AS, MISHAPS WITH MORALS, FOR THE TAC AIRCREWMAN

covery at home station. He was advised by his wingman that there were sparks coming out of the engine but the pilot noted that all of his engine instruments appeared normal.

After landing, the pilot wrote up the low fan speed on takeoff but didn't mention the sparks coming from the engine. During subsequent engine checks, technicians found a fan blade nick which was blended and the maintenance work continued. After that, the engine wouldn't start. Before they could try again, the maintenance folks were told about the sparks coming out of the engine. A bore-scope was done and considerable damage was noticed on several stages of the engine compressor.

There's an important lesson here for maintenance folks: ensure that a thorough FOD inspection is completed prior to blending damaged fan blades. For aircrews, make sure you give all the details you can on inflight problems. From the cockpit, you may not see or realize the interconnection between symptoms that could all boil down to one serious problem. Leave those observations to maintenance but give them all the clues available.

ment readings? How about the possibility of engine damage due to icing conditions? On one occasion, an F-16 encountered rime icing conditions and subsequent FOD damage to several fan blades. The damage occurred even though the anti-ice system was on and working.



First priority is to reduce your exposure to inflight icing by avoiding known or forecast areas of icing whenever possible. Then, if you encounter icing, climb or descend as soon as possible to minimize the potential for engine damage caused by airframe or inlet ice buildup. Our all-weather aircraft have effective anti-icing devices but they're not capable of preventing or eliminating all ice that might build up during flight in sustained icing conditions. The key is—don't let it get on you in the first place.

## Ice foddies

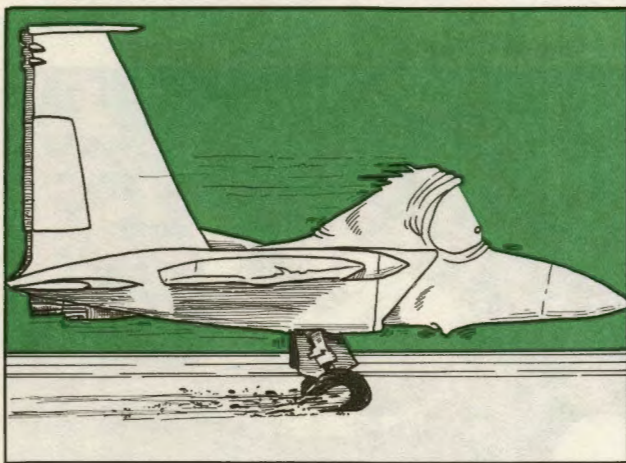
**W**hat comes to mind when your weather briefing includes the possibility of icing conditions during your flight? Fouled pitot tubes and static pressure ports that give bogus instru-



## Alarm bells

A transient pilot, flying the first inbound aircraft early one morning, received the following report from the final controller: *temperature 39 degrees, wind calm, runway wet with patchy ice*. With a mental picture of what to expect, the pilot landed . . . and nearly ran off the departure end of the runway. There were a few details missing from the report.

The base ops truck that was enroute to check the RCR (runway condition reading) didn't make it to the runway in time to conduct the reading prior to the aircraft arriving on short final. Since the RCR hadn't been checked; the runway condition was assumed because of the lack of snow, precipitation, or calls from the weather shop.



One important detail omitted from the report to the incoming pilot was the fact that the temperature at that base had remained below freezing for the last four days. Apparently the ground was still frozen even though the ambient air temperature had recently climbed above 32 degrees.

This pilot was lucky; the only aircraft damage was main gear tires that were gouged and cut when they slid into some threshold lights.

Temperature history for the last four days isn't one of the blocks on the DD Form 175-1 that the weather man fills out for you before your cross-country flight. So if there were any alarm bells that should have sounded, they should have been in the head of someone on the ground.

When you're getting ready to go cross-country this winter, watch the weather trends at your enroute and destination bases for a few days in advance or ask the weather folks when you get ready to do your own mission planning.

If you're airborne and get diverted into a field you didn't plan on, use your radio for info from ATIS, Metro, SOF, Base Ops or the tower to get a clear picture of the runway condition and the status of arresting gear.

## It's your awfice

Have you ever been in a squadron where guys had to fight over desks to work at because there just weren't enough to go around? No problem. Who needs a desk anyway when your business is flying and fighting? But, we all have an office to manage when we climb into the cockpit and strap the jet on for another mission. The way we handle our inflight paperwork, pubs and other tools says a lot about our airmanship and professionalism.

When your sortie involves a lot of yanking and banking, pulling Gs and unloading, keeping track of everything you brought with you can become a little more difficult. It's just as important for us to account for everything that we've been using as it is for crew chiefs or specialists to insure that all of their tools are thoroughly accounted for.

Aircrews have had all sorts of things fly around in the cockpit during a mission and become lodged in strange (and sometimes hard to reach) places. Unfortunately, when you pop the canopy at the mission's end, that loose stuff seems drawn to the engine intakes just like metal to a magnet. Good office management includes securing everything that you don't need throughout the flight and then insuring that it's all present and accounted for when you're ready to call it quits. The sortie's not finished until you've got all of your goods with you and leave the "office" clean for the next guy.



# TAC ANNUAL GROUND SAFETY PROFESSIONAL AWARDS



## DISTINGUISHED GROUND SAFETY NEWCOMER

AWARD for the new ground safety professional who demonstrated above-average performance.



**GS-5 Patricia Musick**  
27 TFW  
Cannon AFB, NM

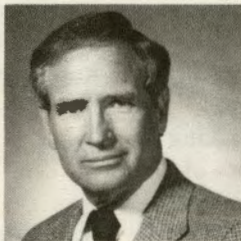


**SSgt Thomas R. Jayne**  
TTW  
MacDill AFB, FL

**DISTINGUISHED GROUND  
SAFETY ACHIEVEMENT  
AWARD** for outstanding contribution to an established unit, intermediate headquarters, TAC or Air Force safety program.



**MSgt Roger L. Britt**  
4 TFW  
Seymour Johnson AFB, NC

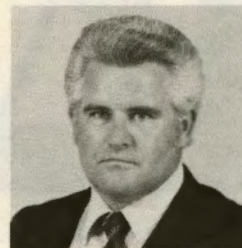


**GS-11 Daniel D. Way**  
836 AD  
Davis-Monthan AFB, AZ



**SSgt Stephen J. Schultz**  
366 TFW  
Mountain Home AFB, ID

**EXCEPTIONAL  
PERFORMANCE IN GROUND  
SAFETY AWARD** for constant professional contribution to a unit's mishap prevention program.



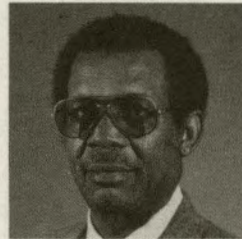
**GS-11 William E. Roberts**  
56 TTW  
MacDill AFB, FL



**SMSgt Billie W. Hester**  
67 TRW  
Bergstrom AFB, TX



**SSgt Patrick L. Britton**  
27 TFW  
Cannon AFB, NM



**GS-11 Arthur L. Roaf**  
27 TFW  
Cannon AFB, NM



# CHOCK TALK

chock talk

Incidents and

## INCIDENTS AND

### Get your nose out of the air

**A**n Eagle was undergoing some modifications which required equipment to be removed from the nose area. The reduction of weight was significant enough that it allowed the nose gear strut to extend. Unfortunately, no entry was made in the aircraft forms to indicate that the work had been done.

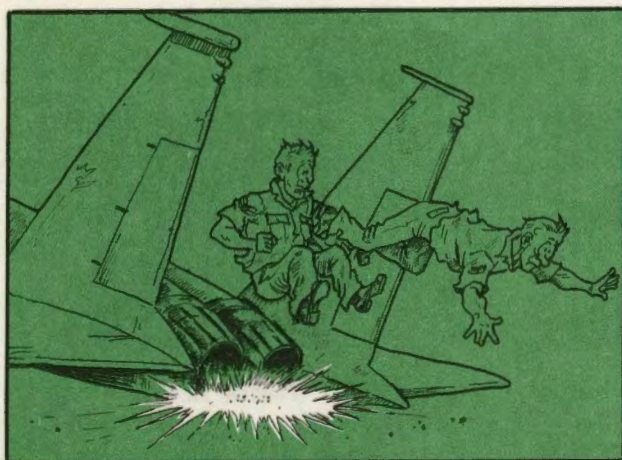
After the modification work, the jet was towed to another area for defueling. The tow went fine but no one noticed the abnormal nose gear extension. The defueling moved the aircraft CG (center of gravity) further aft into an out of limits condition. The aircraft wasn't moved again after the defuel before two workers were dispatched to do some work on the jet. As one of the workers was walking on top of the fuselage toward the rear, the nose of the aircraft rose and the tail section of the aircraft struck the ground, damaging both tail cones. Both

of the workers were able to jump to the ground and escape injury.

One of the main causes of this mishap was the failure to follow tech data both by the folks that did the modification work and those that towed the jet. A second was the failure to document major work done on the airframe which significantly altered the CG of the plane. Finally, no one involved took a "big picture" look at the entire jet. Sometimes that can be enough to give you a feeling that "something just isn't right." Pilots call that situational awareness. All of us can benefit from improved SA.

### Murphy strikes again

**A**fter takeoff, the Eagle driver raised the gear handle as usual to clean the jet up. The left main and nose gear retracted but the right main stayed down with the green gear light on in the cockpit. A chase aircraft confirmed the aircraft configuration: right gear down, gear doors open. When the pilot put the gear handle down, guess what happened: the nose and left main gear came down normally and the right main gear retracted. Then, thirty seconds later, the right main gear extended to a down and locked position without the pilot moving the gear handle. Shortly after that, the doors closed on the right side and the right





## INCIDENTALS WITH A MAINTENANCE SLANT

main gear indicator greened up. From there, the pilot dumped fuel and made a normal landing.

A bewildering series of events, but the problem was pinned on the right main landing gear WOW (weight on wheels) relay that was found installed upside down. You'd think such a part would be made so it couldn't be installed improperly. It was—with guide pins that *should* prevent a technician from putting it in backwards. Unfortunately, excessive wear marks on the guide pins allowed the part to be put in wrong without much difficulty.

Murphy's Law is not an unchangeable law of nature that always comes true. It's funny to joke about things going unbelievably wrong but the real reason for such occurrences as this are not mysterious. They are such common day reasons as lack of training, inattention, improper motivation, fatigue, failure to use tech data, haste and so forth. You and I really do have control of Murphy's Law.

### A poor example

Three guys (a master sergeant, a staff sergeant and a senior airman) were involved in the 300-hour periodic inspection of an F-5B when they got to the checks on the canopy system. As the airman inspected the cables and wire bundles behind the instrument panel, he found that about three inches of the canopy jettison T-handle cable

were chafed and worn. He asked the other two fellows for some assistance; and, after noting the problem, the master sergeant left to request assistance from the base egress shop.

While their supervisor was gone, the staff sergeant decided to check the extent of the cable chafing, so he removed the canopy jettison ground safety pin and pulled on the canopy jettison T-handle approximately three-sixteenths of an inch. He pushed the handle back in and reinserted the safety pin. The senior airman watched the other fellow do this, so he decided to try the same thing. He climbed back into the cockpit, removed the safety pin and tugged on the T-handle with no problem. Apparently not satisfied, the airman tried it one more time; but, on this attempt, the forward canopy jettison initiator was fired.





# CHOCK TALK

All of these obviously shaky checks were, as you might have guessed, unauthorized. These men were not trained to work on the aircraft egress system and knew they weren't supposed to perform any unauthorized troubleshooting on it. The NCO probably thought he was getting away with something; but the young airman, who saw his incorrect actions and decided to try the same thing, got caught in the act.

Make sure you operate with the proper tech data, particularly if you're doing periodic inspections and maintenance. Most of all, set a good example for those around you. You may think you're pulling a slick one but your poor example might come back to haunt you. And last of all, don't pull on handles that are connected to explosives or that you don't know what they are connected to.

## Anteater tension

**A**n 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.

## Wrong fluid

**B**efore 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.



# TAC Individual Safety Award



The result of the 23 CRS 1984 annual ground safety inspection was rated satisfactory. The last annual self-inspection under previous management failed to meet the required suspense date. Safety reporting, with an on-time rate of 61 percent, was below acceptable standards. And of 54 Class D reports submitted, 21 failed to meet the required time limit.

MSGT THOMAS R. SULLIVAN changed the program dramatically when he became the unit safety NCO in January 1985. He initiated a monthly inspection of high-interest areas (fuels, egress and propulsion branches) and bi-monthly inspections in other areas. During the period leading up to the most recent annual wing safety inspection, all five Class C mishaps investigated were thorough and met established suspenses. Of 13 Class D reports produced, 12 were on time for a rate of 92 percent.

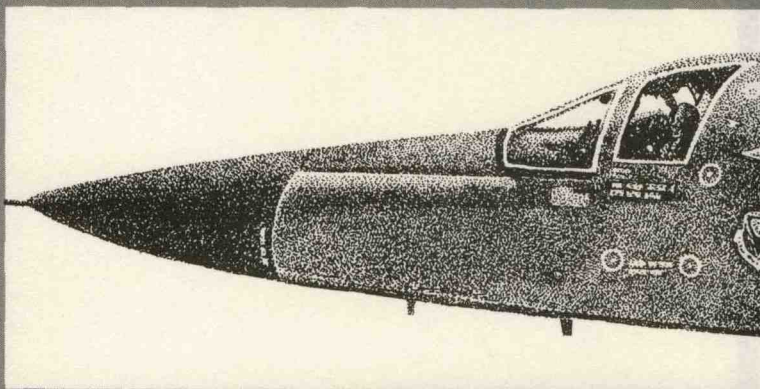
His first wing-directed inspection for this year reflects his total involvement: The overall rating of the squadron was outstanding.



MSgt Thomas R. Sullivan  
23 CRS, 23 TFW  
England AFB, Louisiana

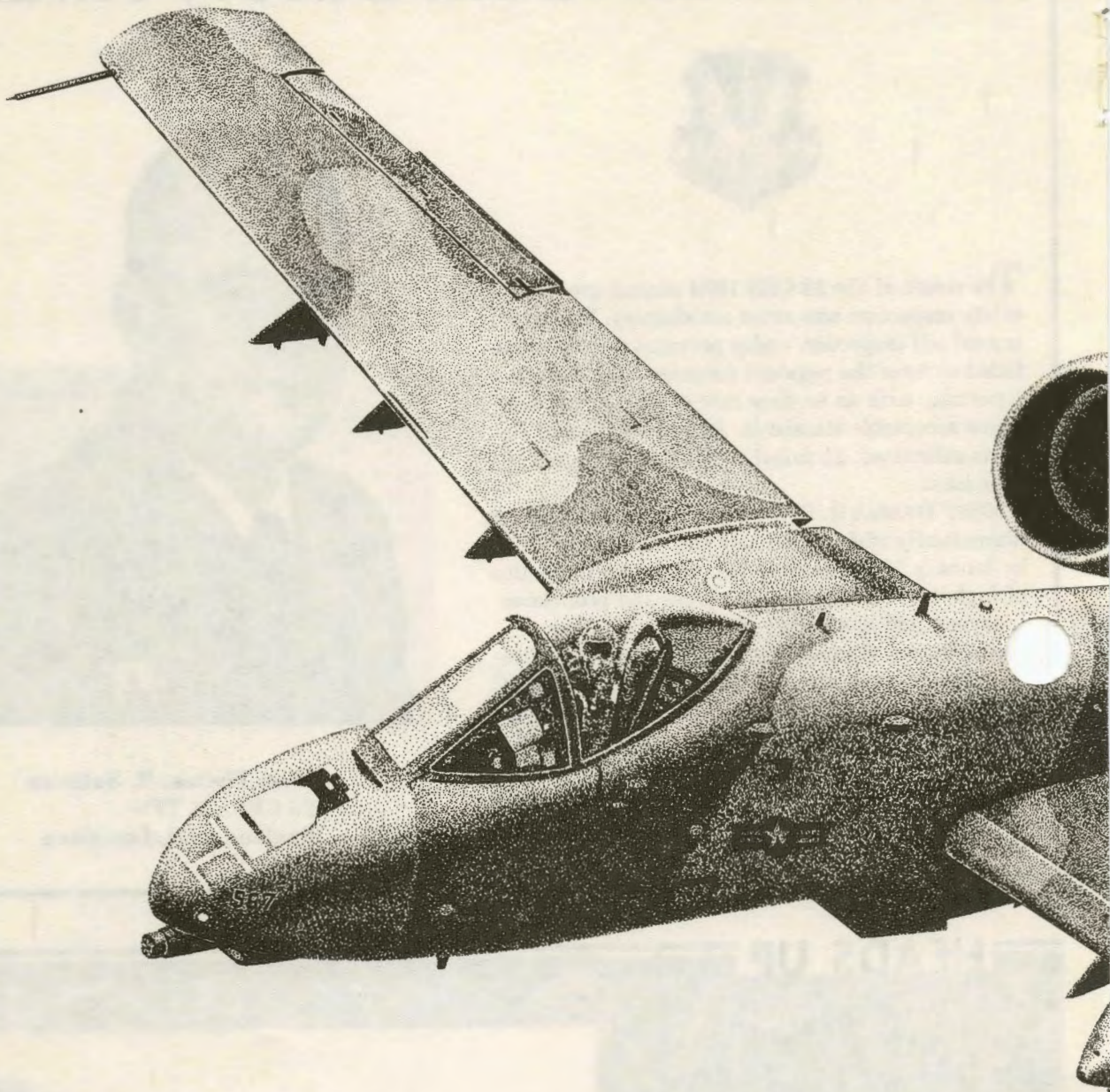
## HEADS UP

Next month, in the  
**DECEMBER**  
issue of *TAC Attack*,  
you can look forward  
to seeing SrA Kelvin  
Taylor's stipple  
rendition of the F-111A  
IN THE CENTER.





# A-10A WARTHOG

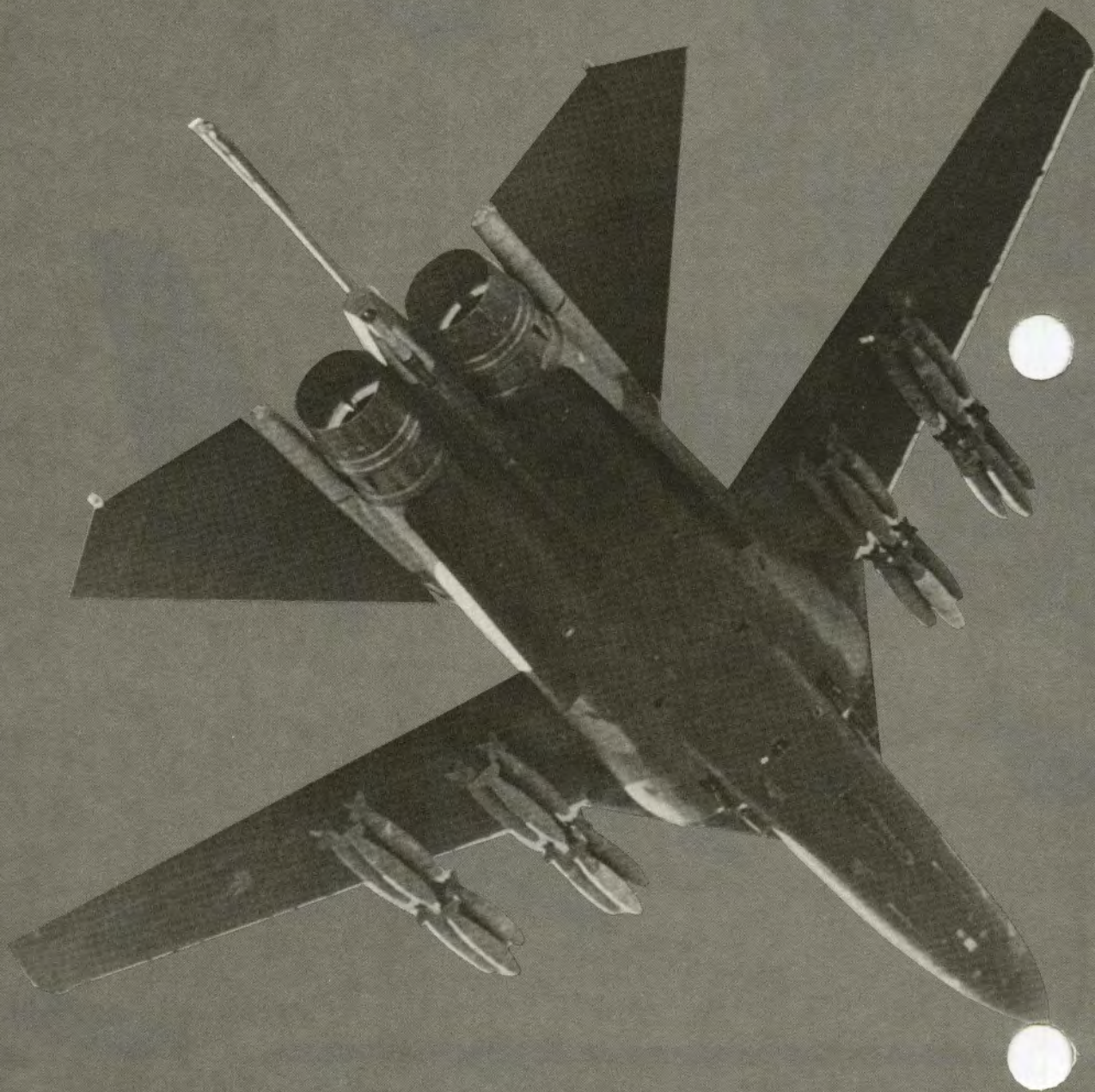








# CLOSE CALL IN THE DARK





Capt Mike King  
389 TFTS  
Mountain Home AFB, Idaho

There I was—flying with another class of young UPT/UNT graduates during their initial night, low-level training. The missions are straightforward, consisting of an hour at 1,000 feet AGL on routes we are very familiar with and level deliveries on the range. The young studs usually come to mission planning well prepared and ready to experience firsthand the “bread and butter” of the F-111 mission—auto TFR (terrain following radar). They’ve heard all the war stories, sat through hours of academics, learned the system, and now, they’re actually going to do it.

This May evening was like many others in Idaho—warm, clear skies and a visibility of 70 miles plus. I was scheduled to fly with a lieutenant left seater for his third night ride. I would be instructing night procedures from the right seat, navigating along a very familiar IR route to our local range, dropping two RLDs and then coming home to collect my money for the best bombs. As an Aardvark IP, I’ve done it many times before and, like I said, *the route was a familiar one that I thought I knew like the back of my hand.*

My stud’s grade book revealed that he was performing above standards, so I didn’t anticipate any major problems there. I could use the radar to help navigate a route that I had flown numerous times, knowing exactly where I would update

the INS to stay inside the route corridor. Mission planning went well, the briefing was standard and the weather was CAVU. What more could I ask for?

After the briefing, I spent a few minutes with my student covering contingencies, emergencies, going over the route and reviewing night procedures. A well-made route book, stereo flight plan, canned mission log, all tried and tested many times, made for relatively painless mission preparation.

Desk brief, preflight and we were airborne, just as briefed. We had a good jet that night as both TFR channels checked out perfectly, and we descended into the black desert night for our low level. There was no moon, but clear weather brought into view millions of stars and the occasional surface lights that dot the deserts of southern Idaho and northern Nevada.

As we settled in at 1,000 feet auto TFR, everything checked good with only a slight drift in the INS. Nearing my first radar update point, I identified it, made a correction and we continued along on what seemed just another sortie. Some twenty minutes later, as we came up on my next update, I glanced into the radar and noticed my INS was about a mile off. To insure a good system prior to range entry, I “wired” the little knoll under my cursor and knew that all was well as we pressed on.

“What the hell?!” rang through

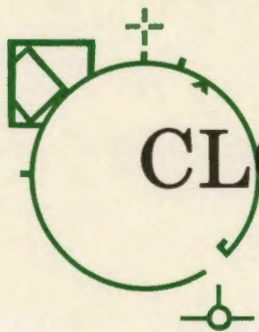
my headset as my stud suddenly came alive. Just as I completed my update, I looked up and saw our upper rotating beacon flash off the side of another aircraft. The aircraft, crossing right to left, disappeared to our 7 o’clock position just as fast as it had appeared.

Who in the world was flying at 1,000 feet in the desert and mountains at 2200 hours local on IR-304? That was the immediate question that sprang into my mind. The beacon flash on the aft section of the fuselage was my first indicator that we weren’t alone. “How far did we miss him?” the stud asked. My only response was, “Not too far.” Somewhere between 1 inch and 200 feet was a pretty good guess. Following a split second of terror, the rest of the sortie was uneventful and as briefed.

I started asking myself some nagging questions. Who else would be flying down there with us? Were they legal? Why didn’t I know they might be there? Did ATC know about them since I was on an IFR clearance? If they were legal, what about my IR route deconfliction? Was I lost? I pondered some of these questions over and over until the next morning when I began to find some answers.

WHO WAS FLYING DOWN THERE WITH ME? After several phone calls early the next morning, I discovered that the other aircraft was a B-52 flying IR-300 into Wilder RBS. After a





# CLOSE CALL IN THE DARK

review of both mine and the B-52's radar film, we determined that we were both at the same point at the same time at 1,000 feet AGL. (I already knew that.) It started to make sense—a B-52 full of students lost in the night over southern Idaho.

**WERE THEY LEGAL OR LOST?** After more review of their film, low-level entry time and Wilder RBS time, we found that they were within seconds of their planned time and within 1 mile of their planned course, well within the IR-300 route corridor. My film showed that I was on the "black line," well within the IR-304 corridor and right on time as well. We were both legal and neither of us was lost.

**WHY DIDN'T I KNOW THEY WERE THERE?** Now the answers got a little more complicated. My route book was annotated with IR-300 crossing IR-304 at the point of the incident, but IR-304 has fifteen route crossings throughout the entire low-level portion. Having flown the route countless times, I have occasionally seen other low-level traffic in the day, but never at night. So why pay a lot of attention to other route crossings?

**I'M ON AN IFR CLEARANCE ON AN IR ROUTE. WHAT ABOUT DECONFLICTION?** Aircraft are deconflicted by entry time along the route on which they're flying. On crossing routes? There is no deconfliction

provided below the top of the block for crossing routes, IR or VR routes.

"Wait a minute," I said. "I could have been in IMC down there." A letter of agreement filed deep in my squadron's radar strike office stated that any aircraft on IR-300 in IMC or suspecting IMC at the IR-303 and IR-304 crossing points will climb to the Top of the Block. Well, if I don't feel comfortable at 1,000 feet AGL or have a TFR malfunction, I'm going to the Top of the Block also. Now, am I deconflicted? Yes, the route crossings of IR routes are deconflicted by altitude for aircraft flying at the Top of the Block. Now, the picture was becoming clearer.

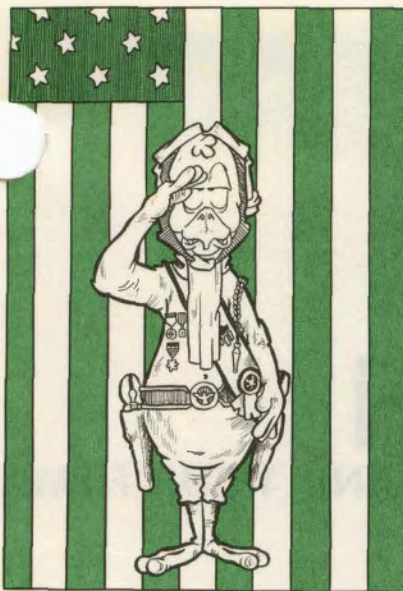
**WHAT ABOUT HELP FROM ATC RADAR?** Air Traffic Control can, and often does, provide traffic information for low-level aircraft on IR training routes. They have no requirements to do this and terrain often prevents them from getting a transponder readout of one or both aircraft that may have a confliction problem on crossing low levels. In my case, this was the problem. They had no readout or skin paint of either aircraft just prior to or at the time of the incident. Not too surprising due to our altitudes and the terrain we were flying in. ATC assured me that had they seen the convergence of my Aardvark and the B-52, they would have transmitted on

Guard a possible conflict at our route crossing.

**WHAT ABOUT THE VR ROUTES?** Yes, they are also used by fighter aircraft flying at 1,000 feet AGL at night. Although they are only flown in VMC, there are some eleven VR route crossings on my familiar IR-304. A nearby Air Guard RF-4C unit routinely flies these VR routes at night, 1,000 feet AGL, crossing my IR route several times.

**WHAT DOES IT ALL MEAN?** Quite simply, it means **SEE AND AVOID**. Even at night, low level auto TFR, when you get the feeling you are down there all alone, you may be dead wrong. Procedures exist to separate aircraft, provide warning and deconflict as much as possible, but in VMC conditions it is the aircrew that must be constantly vigilant for other traffic. The night, low-level mission is highly demanding and with student training it becomes even more demanding. Add auto TFR procedures and even the most experienced pilots can find themselves nearly task saturated. These factors do not relieve any crew member from his responsibility to "see and avoid" other aircraft at all times. Don't let your rotating beacon flashing off the side of a B-52—or an Atoll up your tailpipe—be the first indication that another aircraft may be in your airspace—or that you may be in his. ➤





**Capt Stanley J. James, 21 TASS, 507 TAIRCW, Shaw AFB, South Carolina,** had completed an FCF profile of his 0-2A and was returning to base when he experienced gear problems. The nose gear extended normally, but both main gear remained locked in the up position. After an extensive effort to lower the main gear without success, Captain James set up for a forced landing high key approach so that he could minimize aircraft damage. Having raised the nose gear and shut down the front engine, Captain James flew a perfect approach and shut down the second engine about 20 seconds prior to landing. His expert aircraft handling resulted in only minor damage to the skids, one blade of the rear propeller and three antennas.

**Capt Lance D. Smith, 1st Lt Glenn R. Schumacher and MSgt Dexter L. Love** of the 4460th Helicopter Squadron, Indian Springs Air Force Auxiliary Field, Nevada, had completed a day of VIP mission support for the Department of Energy. Shortly after sunset,

they departed North Las Vegas and climbed to 800 feet AGL for their return to Indian Springs. Approximately ten minutes after takeoff, the crew heard a muffled bang followed by sounds of engine surging. Captain Smith noticed signs of engine malfunction and took appropriate actions. At the same time, Sergeant Love discovered fuel streaming into the cabin from the number one engine. The crew quickly selected an area for an emergency landing and accomplished a night desert landing, engine shutdown and emergency egress. By their timely reactions, skillful flying and outstanding crew coordination, Captain Smith, Lieutenant Schumacher, and Sergeant Love saved a valuable aircraft.

**Capt Scott A. Reynolds, 353 TFS, 354 TFW, Myrtle Beach AFB, South Carolina,** was on final approach at George AFB, CA, following a nonstop A-10 deployment from Myrtle Beach when he realized that his landing gear handle would not stay in the down position and the landing gear was also retracting. Captain Reynolds took his aircraft around for another approach while he analyzed the situation. He re-attempted lowering his gear, but the handle still would not remain down and in the locked position. Coordination was made with the SOF and Fairchild technical reps, but the only apparent options available to Captain Reynolds were either landing while holding the gear handle down with one hand or landing gear up. Choosing to do

neither, he found a unique solution. Taking his mechanical pencil apart, he was able to wedge the upper half of it into the landing gear handle panel and obtained three gear down and locked indications. Following confirmation of his actual gear configuration, Captain Reynolds was cleared to land and proceeded to bring his aircraft back without further incident. Captain Reynolds' analysis of the problem, superior airmanship and insight prevented serious damage to a valuable TAC asset.

**2d Lt Lee Lewis, 358 TFTS, 355 TTW, Davis-Monthan AFB, Arizona,** was flying on his first A-10 SAT (Surface Attack Tactical) mission. While rolling in for a 15-degree low angle bomb pass at approximately 2000 feet AGL, he heard a tremendous explosion and his aircraft yawed to the right. At the same instant, his IP saw flames extending from both the front and rear of the engine. As Lieutenant Lewis started a wings level climb, he noticed that the RPM on his #2 engine was zero and the ITT was pegged, so he shut the right engine down. Approximately 40 seconds after the explosion, the right engine fire light came on. The Boldface procedure for fire was carried out, but the Fire light remained on even though there was no other indication of fire present. Lieutenant Lewis headed for Gila Bend Aux Airfield where he completed a flawless single-engine approach and landing. Lieutenant Lewis's demonstrated airmanship and flying skill were outstanding.



# DOWN TO EARTH

ITEMS THAT CAN AFFECT YOU AND YOUR FAMILY

## Cold weather survival

Col Rich Pilmer  
HQ ARRS/SG  
Scott AFB, Illinois

**N**ot many aircrews would select *Titanic* as a name for their aircraft. When this name was chosen for a huge oceanic liner, few realized that a drifting iceberg could prove to be even more "titanic" than the ship.

A great part of that tragedy at sea was due to its remoteness from rescue of some 1,500 people suddenly splashing in life jackets to stay afloat without freezing in the water that was close to 0°C. After about two hours, the vessel *Carpathia* reached the scene only to find that most of the retrievable people were dead—not from drowning, but rather due to hypothermia from cold water exposure.

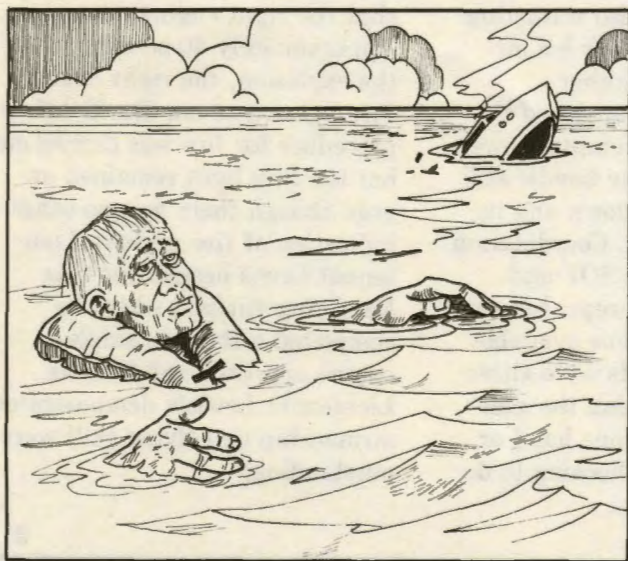
Subsequent research has taught us that a lightly clothed person of average size will endure only 20 to 30 minutes in water at 50°C. This survival time can be increased with appropriate clothing. There

are other factors to be considered. For example, people with more body fat may survive much longer; especially if they fight the cold by exercising. Environmental physiologist Edgar Folk (University of Iowa) reported a clothed man who survived after nine hours in water at -1°C. Needless to mention, he lost a few pounds in the process.

Without flotation devices, in warm water, a person attempting to swim to a survival vantage point should shed clothing. But in cold water, increased clothing can save life. Equipment, preparation, physical condition, knowledge and determination are big factors in surviving a cold water ditching.

Often crews manage to avoid perilous cold water immersion but end up in a survival environment that is likely to present a problem of cold-dry dehydration. So-called "insensible" evaporation of body water occurs from the skin and respiratory system in cool or cold environments even when the sweat glands are shut down. The loss of body water is at first rather insidious. But the rate of insensible water loss from the lungs and skin of a person not exerting vigorous activity is about 30 grams an hour. It varies with the amount of activity, rate of ventilation, skin temperature and water vapor content of the inspired air. Losing body water in a cold-dry situation is the flip side of the more familiar situation in which it is difficult to keep cool in a hot and humid atmosphere. In the cold-dry survival setting, water loss adds up soon, and must be replaced to prevent dehydration.

Whether flight gear is wet or dry, downed crewmembers should always seek some kind of shelter





## HERE ON THE GROUND



where they can build a fire as quickly as possible. Removal of wet clothing early is essential to preventing hypothermia. There are many incidents in which recreational fishermen have fallen into cold mountain streams and mistakenly taken off on a run to distant vehicles. It is better to stop and maintain a sharp survival mentality. Also, with a fire there is the ability to melt and boil ice or snow for later food preparation and body water replacement. Panic is avoided and the individual can set up camp to realistically and safely await rescue.

Neither the Air Force nor nature can present you with the will to survive. But the more you are prepared, the easier it will be to cash in on your determination. Keep dry, avoid snow blindness, check for frostbite, stay near the aircraft. Especially, don't try to walk any distance after water immersion. Build a fire, take shelter and get wet clothes off. Also remember that overexertion can cause dehydration due to perspiration under clothing or insensitive water loss through the lungs.

- Snow blindness can occur even on cloudy days. If you don't have glasses, cut eye slits in wrap-around material.
- The first sensation of frostbite is numbness rather than pain. If possible, warm as soon as possible in warm-to-the-touch water.
- Prevent hypothermia. When body temperature begins to fall below the normal 98.6°F, the most common first sign is shivering. This is followed by decreased blood flow to the brain. Judgment and will may become impaired and there is difficulty in thinking and walking. Below 86°F, shivering stops and the muscles become rigid.

- Melt snow or ice (better) for drinking water. Cook all food sources. It adds to body heat, warms your spirits and decreases the chance of viral or bacterial intrusion.
- Build a shelter in the first daylight. Insure adequate ventilation for small fires. In crew situations,



rotate one person near the entrance to listen for aircraft sounds (snow is a great insulator).

- Keep aircraft surfaces swept off to provide contrast for airborne rescuers. Tramp out snow signals. Cut vegetation to maximize contrast between the snow and the aircraft. Have "birdnest" signal fires set in position ready to light.
- Keep your feet warm and dry. Exercise toes and feet. Loosen footgear periodically. Elevate feet and legs during rest intervals. Keep a log of your activities, and hang in there.



# FEATHERED

Capt Russell P. DeFusco  
Bird-Aircraft Strike Hazard  
(BASH) Team  
Tyndall AFB, Florida

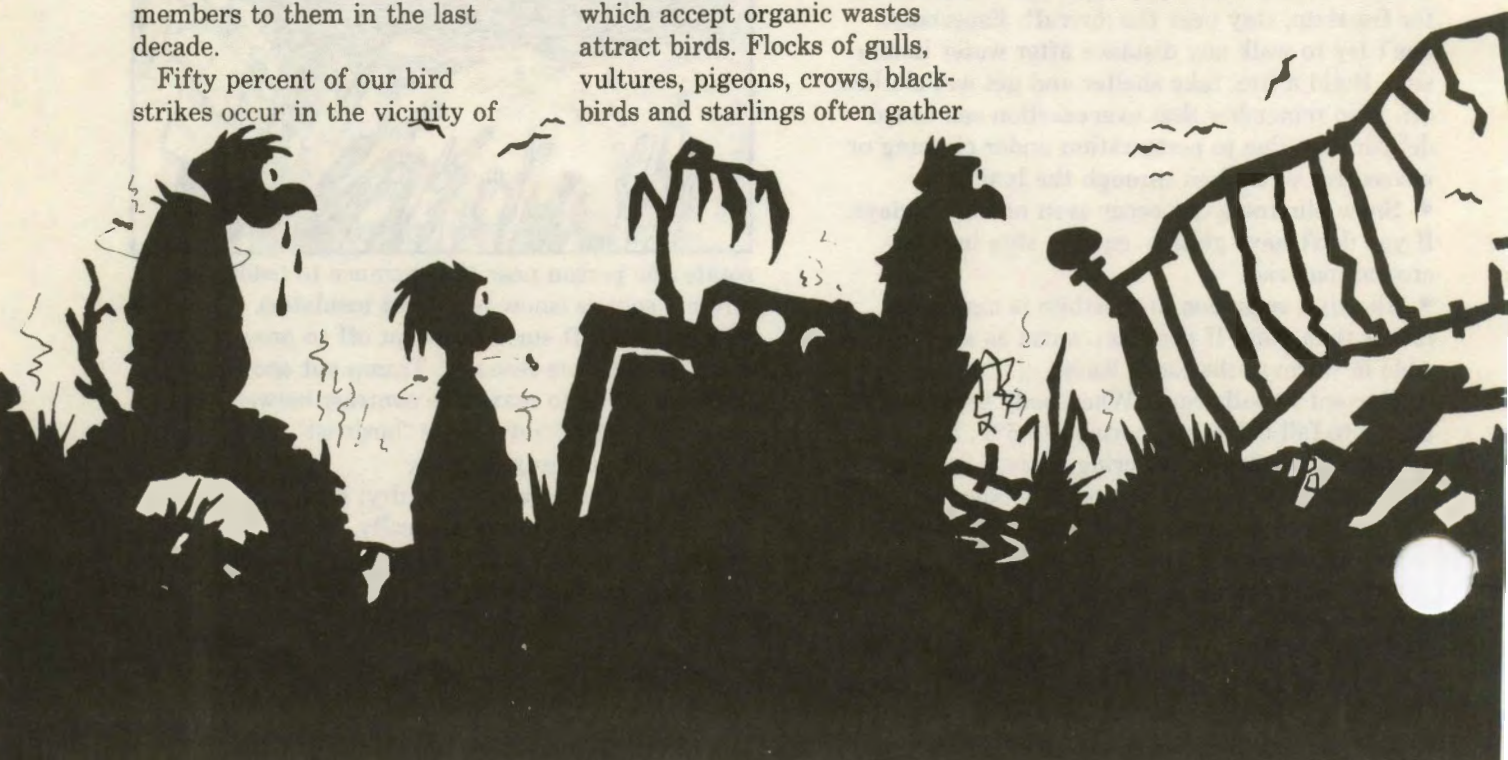
**N**ext time you return to your home base for a routine pattern and landing, take a good look around. That bulldozer working in the vicinity of final approach or around the base perimeter fence may be covering something other than your turn to final—it may be indicating the presence of a landfill. Now keep looking: Are birds sharing your airspace? Is there anything which makes your home field attractive to birds? The Air Force suffers millions of dollars worth of damage each year from our feathered adversaries and we have lost 11 crewmembers to them in the last decade.

Fifty percent of our bird strikes occur in the vicinity of

the airfield, partly because every flight must pass through the air-drome environment, but mostly due to land use practices in the vicinity of the airfield. Would you build your new home near the end of a runway? Of course not. So, what's done with this empty space? Cornfields, feedlots, and landfills are operated on it and they attract birds.

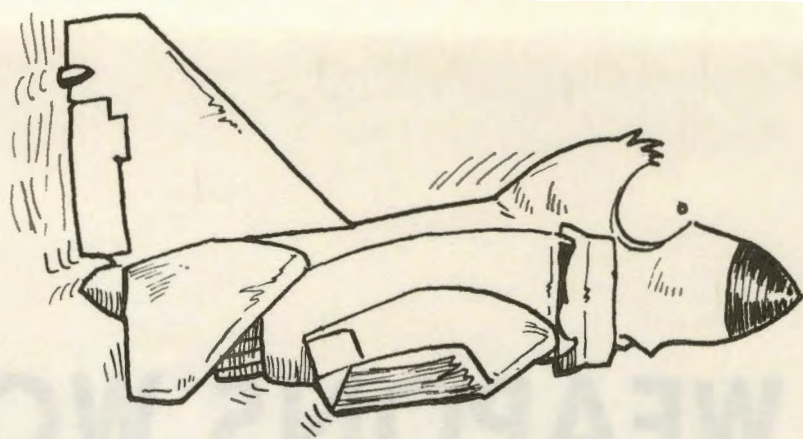
Sanitary landfills (a.k.a. garbage dumps) are perhaps the most hazardous land usage to safe flying, and yet they are frequently located in the vicinity of airfields. While some are better than others, *all* landfills which accept organic wastes attract birds. Flocks of gulls, vultures, pigeons, crows, blackbirds and starlings often gather

as a result of the readily available food which is replenished on a daily basis. Additionally, rodent populations often explode, attracting hawks and owls to the site. Most fliers pass over landfills at one time or another during VFR flights but never really notice them. This kind of indifference can be costly. As with lakes and sewage lagoons, which are also observable from the air, sanitary landfills offer (in addition to food) a good site for birds to soar. So if you're RTB and fly over the local dump at 1,000 feet AGL, you may encounter a sudden "tap"





# FOES



(or something more serious) on your windscreen by a bird on his way up the thermal elevator.

"Fine," you say, "but what can I do?" Believe it or not, you can do a lot. You, as pilots, have the best vantage point for identifying and locating such potential hazards. Report your observations to your Flight Safety Officer (FSO). He'll take action.

For example, at a northeastern base, crews reported seeing an increased number of gulls over a landfill 10,000 feet off the end

of their runway. More jets were taking hits around this point. The base contacted the landfill operator and asked him to operate more efficiently by compacting the garbage and covering the site with dirt daily, as required. The county was asked to monitor his compliance with state regulations. As a result, the number of bird strikes experienced by the base was reduced by two-thirds.

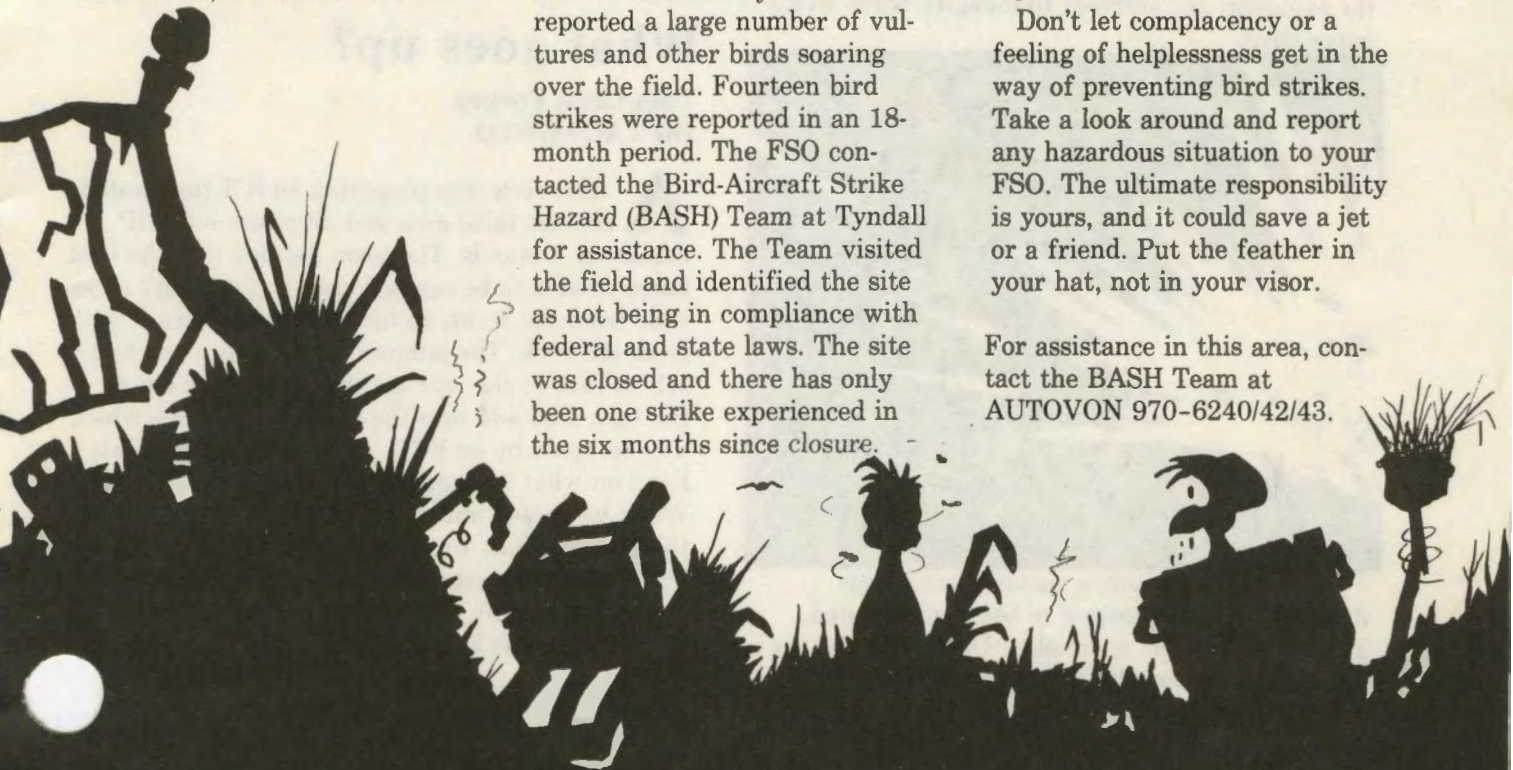
At a western base, an illegal landfill was being operated adjacent to an auxiliary field. Pilots reported a large number of vultures and other birds soaring over the field. Fourteen bird strikes were reported in an 18-month period. The FSO contacted the Bird-Aircraft Strike Hazard (BASH) Team at Tyndall for assistance. The Team visited the field and identified the site as not being in compliance with federal and state laws. The site was closed and there has only been one strike experienced in the six months since closure.

Many other examples can be cited, but the key is that *pilots* need to report hazardous situations to others who can in turn make the area safer for flying.

Landfills, while one of the most serious problems, are not the only things to keep on the lookout for: wildlife refuges, sewage ponds, drainage ditches, food processing plants, and so forth, can all attract birds on your low-level routes as well. If you see a problem on your route, report it.

Don't let complacency or a feeling of helplessness get in the way of preventing bird strikes. Take a look around and report any hazardous situation to your FSO. The ultimate responsibility is yours, and it could save a jet or a friend. Put the feather in your hat, not in your visor.

For assistance in this area, contact the BASH Team at AUTOVON 970-6240/42/43.





# WEAPONS WORDS

## Getting a kick out of it

**G**round burst simulators (GBSs), smoke grenades and other munitions add needed realism to exercises but they're not simulated explosives. All of them present either explosive or fire danger whenever they're not used properly.

During a security police air base ground defense exercise, an assault was made by aggressor forces and a ground burst simulator was thrown into one of the occupied defensive bunkers. The security policeman inside was thrown out of the bunker by the explosion and suffered first-degree burns to his upper chest.



On another occasion, a smoke grenade was dropped from a helicopter to begin a simulated attack by airmobile aggressors. Unfortunately, the grenade was dropped into some high grass which was very dry due to the lack of rain for several

weeks. When the grenade exploded, it created a real-world fire that had to be fought before the exercise could continue and which broke the pace of the exercise scenario.

There are guidelines in print for proper, safe use of simulator-type explosives. Make sure you're familiar with them so that the best training can be obtained without interrupting your exercise for real injuries and damage.

## What goes up?

TSgt Chris Forkey  
HQ TAC/LGWLO

**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





## Too much friction

**A** load crew had just finished downloading a captive AIM-9 and placed it on the missile trailer. While the load crew chief and another member of the crew prepared a second missile to be loaded, a third fellow began to secure the first missile. He noticed that it needed to be repositioned so the lugs would be in the upward position. As he tried to move the missile by himself, the friction between it and the rubber of the forward rest allowed the front portion of the AIM-9 to move out of the rest and fall to the ground, shattering the IR dome.



Take the necessary time on any job and make sure you're not allowing "haste to make waste." If you need another person's help to do the job right, give a shout and then wait for them to provide a helping 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 a wounded Falcon and an extremely bruised 50 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.

## Torqued off

**W**hen you're fastening something down, you want to make sure it's nice and tight. A lot of times "as tight as you can get it" is not the proper way to fasten a part. A prime example of that occurred when an A-7 Corsair II came back to land with some unexpended ordnance on board. As the aircraft landed, two BDU-33 practice bombs fell off of the TER and the bomb charges ignited as they hit the runway and skidded off to the side.

When the bomb rack was inspected, it checked out OK so over-torque of the bombs was suspected. A check of the other loaded aircraft on the ramp produced several other bombs that had also been over-tightened.

Tech data is necessary not only for *how* to perform a job but also for *how much* to tighten something. Make sure you tighten to specs so weapons don't fall off from being too loose or too tight.





# Funny Fotos

Funny Fotos

I'M SURE IT WAS THE SECOND  
GULL FROM THE RIGHT.



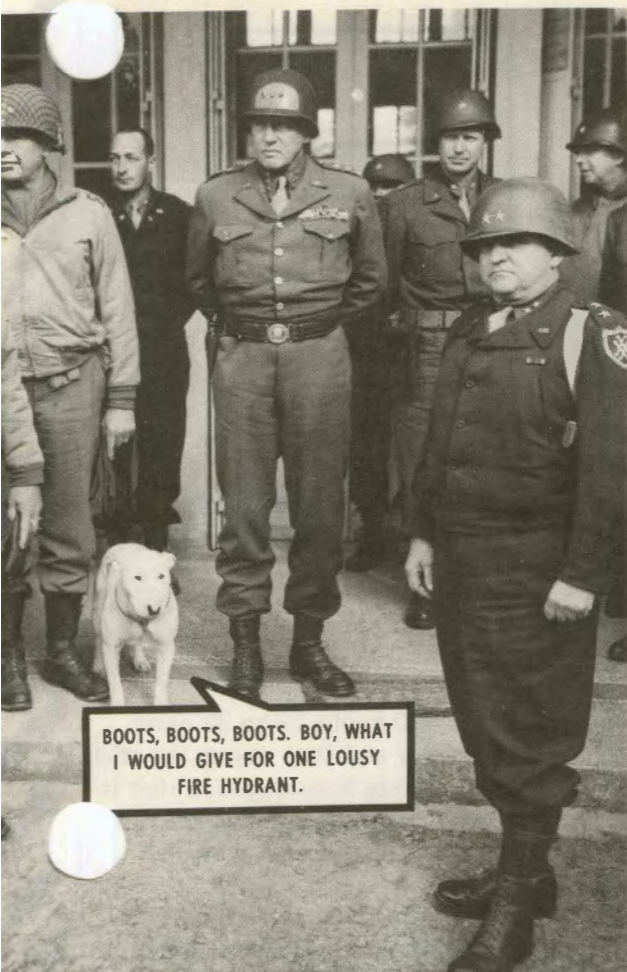
WHY DOES TH' OLD MAN  
INSIST ON BACKING ABOARD  
EACH TIME?



TAKE IT IN A LITTLE HERE AND LET IT  
OUT THERE. I WANT TO WEAR IT IN  
THE DANCE RECITAL TONIGHT.







BOOTS, BOOTS, BOOTS. BOY, WHAT  
I WOULD GIVE FOR ONE LOUSY  
FIRE HYDRANT.

HOW WAS I TO KNOW SOMEONE  
PUT STARCH IN MY HAIR TONIC.



WHY ARE WE  
LAUGHING ?

WHY ARE WE  
LAUGHING, MA'AM ?

WHY ARE WE  
LAUGHING, SIR.

WHY ARE WE LAUGHING,  
SERGEANT ?

WE'RE GONNA BE IN  
TAC ATTACK, SIR.



# F-15

## EMERGENCY SITUATION TRAINING

Maj Roger Nash  
HQ TAC/DOV

**SITUATION:** Your student sets up on the pre-briefed perch position for another BFM engagement. You call "Fight's on," and give him your best 7-G, nose low, defensive turn to the right, hoping he'll reposition but expecting him to overshoot.

When it becomes apparent that he's committed to the overshoot and it's time for you to demonstrate a nose-high reversal, you begin a loaded roll to the left. The jet seems to have a mind of its own, however, and departs controlled flight to the right. You find it difficult to take advantage of the overshoot because the yaw rate warning tone keeps distracting you. Your student says it appears you are in some sort of spin. What'cha gonna do now, Ace?

**OPTIONS: A.** You have simple adverse yaw which can be countered by aileron away from the roll.

**B.** You are in the "classic" autoroll. Neutralize controls and counter the roll with rudder (positive G).

**C.** You probably have a hefty fuel imbalance that caused you to depart and spin. Follow Dash One out-of-control recovery procedures.

**D.** Do a radar bit, valsava, roll inverted and eject.

**DISCUSSION:** Option A is seriously flawed. You will be introducing pro-spin controls which will accelerate yaw and rapidly develop into a flat spin if you are not already in one. If you ever *do* apply the correct controls, recovery will be delayed due to increased yaw rate.

Option B sounds OK, but typical autoroll entry

conditions are 200 to 300 knots, 20 to 30 units AOA, rolling with rudder and then easing the stick forward. An autoroll differs from a spin in that it is primarily a rolling maneuver with a small yaw rate and AOA of 20 to 25 units. Doesn't sound like your situation.

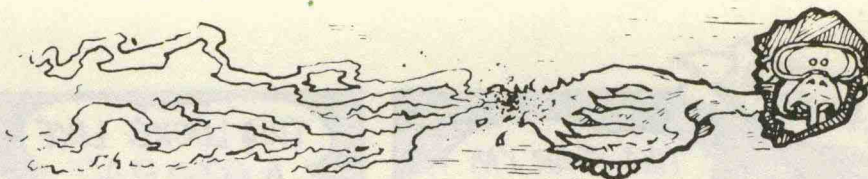
Option C is probably the most correct answer. Historically, a fuel imbalance is the most likely cause for an unexpected out-of-control situation. Timely fuel checks are your only means of avoiding the situation since imbalances can develop rapidly if a transfer pump fails. You are definitely out of control, so follow the Dash One procedures. With large asymmetry, an abrupt entry into high AOA regions will result in a departure and loss of control without warning. The most significant effect on recovery capability is the amount of time between departure and neutralized controls, so do it ASAP. Large lateral asymmetry can cause the aircraft to quickly enter a spin if not promptly recovered from a departure. Patience may be required from the pilot as spins with large asymmetric loads will take significantly longer to recover due to the higher yaw rates involved.

Option D, in fact, has some validity. Disregarding the radar bit, valsava and inverted roll, eject is the right answer if recovery is not apparent by 10,000 feet AGL.

The moral is to really *check* the internal wings prior to every encounter—don't just *call* "balance."



# TAC TALLY



CLASS A MISHAPS
AIRCREW FATALITIES
TOTAL EJECTIONS
SUCCESSFUL EJECTIONS

TAC		
SEP	THRU	SEP
	1985	1984
1	14	17
1	9	14
2	11	12
1	8	9

ANG		
SEP	THRU	SEP
	1985	1984
1	11	5
1	7	2
0	7	4
0	7	4

AFR		
SEP	THRU	SEP
	1985	1984
1	0	1
1	0	0
0	0	2
0	0	2

## TAC'S TOP 5 thru SEP 85

TAC FTR/RECCE		
class A mishap-free months		
38	405 TTW	(F-15,F-5) Luke AFB, AZ
31	33 TFW	(F-15) Eglin AFB, FL
29	366 TFW	(EF/F-111) Mtn.Home AFB, ID
28	49 TFW	(F-15) Holloman AFB,NM
25	67 TRW	(RF-4) Bergstrom AFB,TX

TAC AIR DEFENSE		
class A mishap-free months		
152	57 FIS	(F-4) Keflavik, Iceland
105	5 FIS	(F-15) Minot AFB, ND
102	48 FIS	(F-15) Langley AFB, VA
61	318 FIS	(F-15) McChord AFB, WA
52	87 FIS	(F-106) KI Sawyer AFB, MI



TAC-GAINED FTR/RECCE		
class A mishap-free months		
153	138 TFG	ANG(A-7) Tulsa, OK
130	114 TFG	ANG(A-7) Sioux Falls, SD
119	183 TFG	ANG(F-4) Springfield, IL
116	180 TFG	ANG(A-7) Toledo, OH
108	124 TRG	ANG(RF-4) Boise, ID

TAC-GAINED AIR DEFENSE		
class A mishap-free months		
135	177 FIG	ANG(F-106) Atlantic City, NJ
101	125 FIG	ANG(F-106) Jacksonville, FL
84	119 FIG	ANG(F-4) Fargo, ND
68	107 FIG	ANG(F-4) Niagara Falls, NY
60	147 FIG	ANG(F-4) Ellington AFB, TX

TAC-GAINED Other Units		
class A mishap-free months		
194	182 TASG	ANG(OA-37) Peoria, IL
178	110 TASG	ANG(OA-37) Battle Creek, MI
174	USAFTAWC	(many fighters) Eglin AFB, FL
166	84 FITS	(T-33) Castle AFB, CA
108	552 AWACW	(E-3,EC-130) Tinker AFB,OK

## CLASS A MISHAP COMPARISON RATE

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

TAC	1985	3.2	3.4	2.7	2.4	2.9	2.7	2.5	2.6	2.5			
	1984	3.4	4.3	3.3	2.5	2.9	3.8	3.3	3.2	3.1			
ANG	1985	4.8	4.8	3.0	4.5	4.2	4.9	5.4	5.2	5.1			
	1984	0.0	2.3	1.5	2.2	2.6	2.1	1.8	2.1	2.3			
AFR	1985	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6			
	1984	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	2.7			

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



FLEAGLE



THIS YEAR I'M GONNA CELEBRATE THANKSGIVING JUS' LIKE MY AFORE FATHERS DID. FIRST I'M GONNA HUNT ME DOWN A BIG FAT GOBBLER.

HARDISON



THIS LOOKS LIKE A GOOD PLACE.

GOBBLE GOBBLE

GOBBLE GOBBLE



OH DRAT! NOT HIM AGAIN.



NOW WHAT CAN I DO TO'EM THIS YEAR?



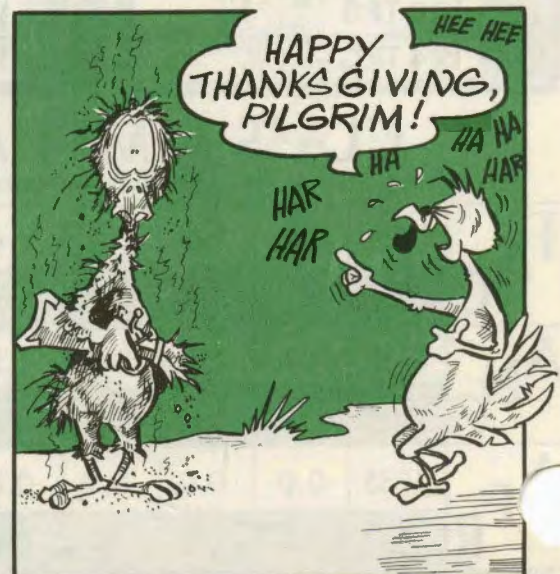
PLUNK



BOO!



HEE HEE HEE



HAPPY THANKSGIVING, PILGRIM!

HEE HEE

HA HA HA

HAR HAR

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