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# TAC ATTACK

TAC Attack

October 1975

Your big chance page 4

OCTOBER 1975



YOUR BIG CHANCE...Pg. 4

LET US KNOW!  
SEE READER'S SURVEY...Pg. 27



FOR EFFICIENT TACTICAL AIR POWER



## TACTICAL AIR COMMAND

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### TACRP 127-1

Articles, accident briefs, and associated material in this magazine are non-directive in nature. All suggestions and recommendations are intended to remain within the scope of existing directives. Information used to brief accidents and incidents does not identify the persons, places, or units involved and may not be construed as incriminating under Article 31 of the Uniform Code of Military Justice. Names, dates, and places used in conjunction with accident stories are fictitious. Air Force units are encouraged to republish the material contained herein; however, contents are not for public release. Written permission must be obtained from HQ TAC before material may be republished by other than Department of Defense organizations.

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Distribution FX, Controlled by SEPP.



# Angle of ATTACK

# Know !

COL J.D. MOORE  
Chief of Safety

Several recent aircraft accidents indicate that we may have some shortcomings in our supervisory management of aircrews. This epistle is primarily intended for those in direct supervisory positions at squadron level, but everyone should be vitally interested.

The theme is -- KNOW! The object, goal, purpose, responsibility and challenge is to KNOW your people. To properly supervise performance, monitor training and schedule intelligently, you have to be intimately knowledgeable with all your people. You must KNOW their strengths, capabilities, experience, proficiency levels, currency, personal characteristics, physical and mental condition, and especially weaknesses -- as a start. Leadership, in some respects, is a study, a science, and the art of managing people. You must KNOW your people to lead them effectively and professionally.

When you do KNOW them, you can lead them -- then you will start becoming a professional manager.

There was a time in TAC when flights did everything together, but most of all they flew together. The flight commander was lead, the assistant flight commander was element lead and sometimes lead. Other flight members flew two four and, on occasion, the best one might be the lead. Flight commanders really knew their

people. From one mission to the next, they could track the progression of their subordinate flight members. They knew that Lt X flew lousy left wing; that Capt Y had family problems; and that Lt Z was weak on instruments. The flight commander was boss, confidant, counselor, instructor, and frequently, savior.

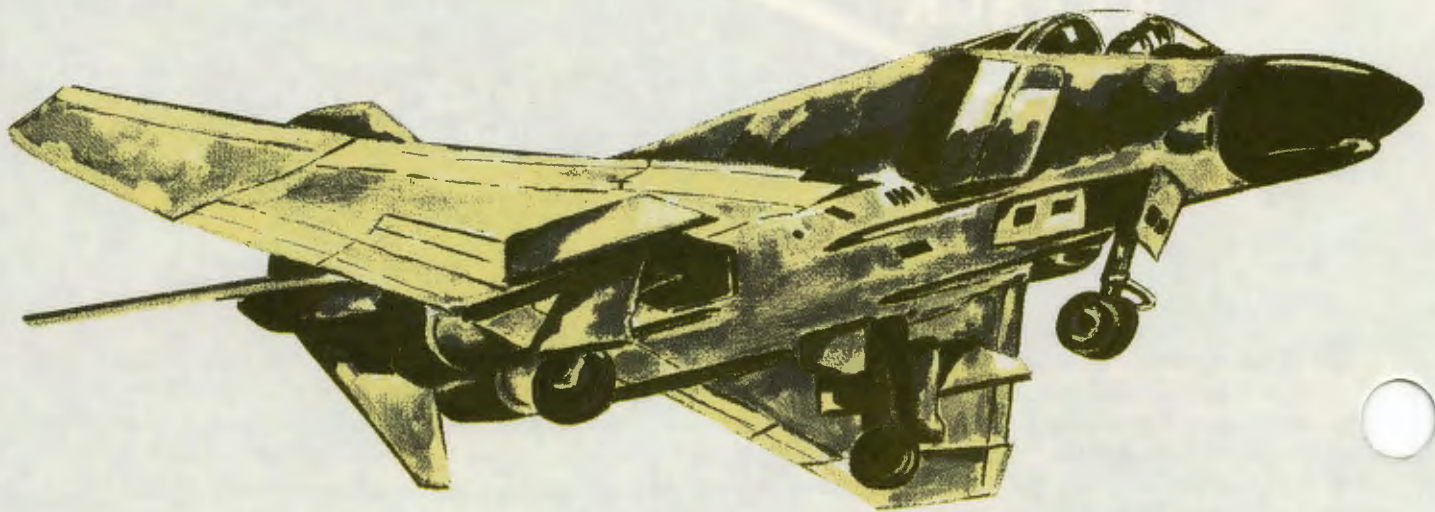
Not many, if any, squadrons use flights that way any more, but that is no reason why flight commanders, ops officers and squadron commanders cannot KNOW their people as well or even better. Without maintenance and supply responsibilities, squadron leadership can devote virtually all their time to the aircrews. They cannot afford NOT to KNOW.

When you do KNOW, it will be abundantly clear who is ready for what mission, who needs closer supervision and more training, and who carries the strength.

Dig in, gang. Review personnel indicators and note people that are low in each area. It only takes a little imagination and initiative and you will be surprised at what such a review will tell you. If we can be of help in organizing such a review for you, just call. In the meantime, accept the personal and professional responsibilities of a topnotch leader and manager -- KNOW.

Have a good one!

# YOUR BIG CHANCE TO LOG A RIDE



**By Captain Ronald W. Fletcher  
426th TFTS  
Luke AFB Ariz**

**L**anding a Phantom with an engine out and utility hydraulic failure has become a hot subject around TAC lately. This interest is appropriate since we have received a lot of new Phantom jocks since the last time this particular emergency had a flight check (successful or unsuccessful). Also, it's been so long since us

"old heads" have seen an accident or incident report on one that we don't devote enough time to thinking about what we would do if it happened to us. Of all the emergency situations that can happen to our Phantom, this is one of the worst in which we still have the option of attempting a landing. As the Dash One and a recent TAC message say: "If the combination of weather, landing facilities, and aircrew experience is less than ideal, consideration should be given to a controlled ejection." Needless to say, the SOF would probably appreciate a call before you attempt to land one of these beauties on his runway.

Problems associated with this emergency were not a common topic of discussion around st



# IN A MARTIN-BAKER SEAT

## -- without prejudice

bars until a Lieutenant at MacDill made an unsuccessful attempt to land one several years ago. Shortly thereafter, the guys in the field received a lot of guidance on the subject. A few successful landings were made, but success rate was way below 100 percent. A transient recce crew at a base where I was stationed nearly made it. They really had their act together and recovered the bird ninety degrees to GCA final approach course after running out of lateral control authority on short final. In fact, they never made it down due to other problems (a real one: fire with the warning lights wired backwards), but aircrew experience and super crew coordination saved them on that approach. After a Martin-Baker letdown and a couple of days of crew rest, they gave us an informal briefing on the flight. That's when I decided that this emergency was worth a little "what if that one ever happens to me" thought on a regular basis. By all means, put it into your flight briefings when you get to the hydraulic failure landings on the "Emergency of the Day" board.

Now to the specifics of why this is about the hairiest thing your Phantom can do to you without creating a mandatory ejection situation. The big problems you will face are decreased lateral control authority, coupled with yaw/roll due to asymmetrical thrust. Procedures in the Dash One are a result of these two factors and the way they are going to fight each other as you smoke down final.

Let's consider degradation of lateral controls first. As a bare minimum, you will be flying with a manual rudder. You may or may not lose the PC system on the dead engine, depending on windmill RPM and load you are putting on that PC system with the flight controls. Just because you have good PC pressure at 250 knots in level flight and level flight on the way back to the

base doesn't mean you'll have good PC on final with a lower airspeed and loads on the system. We all know that we keep good PC-2 pressure to less than 10% RPM taxiing back after shutting off the right throttle, but a few gentle cycles of the stick will probably make it drop a lot faster. The Dash One says to fly the approach the same way with or without single PC failure -- and for good reasons.

The second fact of life is asymmetrical thrust. The throttle that works is the one opposite your dead, or potentially dead, wing. Cobbing the power will roll you into the dead wing due to yaw from asymmetrical thrust. Now you've really got problems because you won't have the lateral control response you're used to having. This is where aircrew experience can play a big part -- it certainly helps to have a gorilla for a GIB so he can help you hold all that rudder. I'll bet that you will be wishing you had given him a little more stick and rudder time before that day.

With that bit of background, let's look at how the Dash One tells us to land. First, maintain a minimum of 250 knots prior to configuring to land. Next, jettison all external stores and reduce gross weight as much as practical. If you skip ahead to the minimum touchdown speed chart, you'll see why this is a smart thing to do. An F-4C with minimum fuel (1,500 pounds), no flaps and no external stores has a minimum touchdown speed of 181 knots. Once this is done, start to set yourself up for a straight-in, no-flap approach avoiding any hard maneuvering and using turns away from the dead engine.

Prior to commencing final approach, and above 5,000 feet AGL if possible, blow the gear down. The Dash One says to maintain 230 knots from this point until the landing is assured. Be sure to turn off the anti-skid and watch for the four warnings the Dash One lists during this



# YOUR BIG CHANCE TO LOG A RIDE IN A MARTIN-BAKER SEAT

## --without prejudice



phase of the approach. Warning number one says to expect a shortage of lateral control authority if you select afterburner on final. Second, a go-around is probably not possible if you let your airspeed get below 230 knots, and be very careful anytime you add power below 230 knots. Third, use minimum power on final since minimum control airspeed is a direct function of power setting. Warning number four says that if you run out of lateral control authority, you will probably have to reduce power and lower the nose to accelerate if you ever expect to roll out.

All of this stuff about minimum control speeds, asymmetrical thrust, and lack of lateral control authority sounds pretty foreign to us

fighter jocks, but they are real and we probably facing them for the first time in our flying careers when we try to bring one of these down final. Next time you're stuck with talking to a many-motor driver at the bar, bring up the subject and you'll probably learn a lot about flying from him. The Dash One recommends that we fly a steep, low-power final when we try it out in our Phantom.

The next phase of the approach is the transition to minimum touchdown speed. "When landing is assured" means different things to different folks, but minimum touchdown speed means minimum. Personally speaking, you'll see me favoring 230 knots rather than taking any chance of going below the minimum. I would probably reduce power slowly passing the runway threshold and approaching ground effect. The object of the approach is to land in the first third of the runway and avoid augering in on short final due to getting too slow with the power too high. The flight manual doesn't recommend an approach-end barrier engagement because touching down in the right spot is likely to require power adjustments resulting in lateral control problems. In event, the next step in the checklist is call "Land or Eject." You might want your GIB to rotate the command selector valve to help you with option two.

Once you've got the beast on the ground, you've still got some work to do before you can turn the bird over to maintenance. Put the hook down and keep it on the runway until the mid-field or departure end barrier. Manual rudder and differential emergency braking is all you have available for directional control. Be very, very careful using the brakes at high speeds. As you slow down, the drag chute might not be much of a friend if there's a significant crosswind.

If you think the above discussion sounds pretty hairy -- you're right. That's why you are given the legitimate option of ejecting if conditions aren't favorable. I don't think you would catch me attempting it on a wet runway with a crosswind unless there were a midfield barrier, and it would take a mighty smooth talking SOF to get me to try it from the back seat on my no-segunner's TR-4. What you do is your choice, but by all means give it some thought occasionally so you can make an intelligent decision if it happens to you.



## TACTICAL AIR COMMAND

# AIRCREWMAN of DISTINCTION



**Major Errol G. Stump**  
**107th TFS(ANG)**  
**127th TFW**  
**Selfridge ANGB, Mich**



**M**ajor Errol G. Stump, leading an F-100 formation, failed to get a nose gear up indication after takeoff. His wingman noticed the nose gear on Major Stump's F-100F had only partially retracted and hydraulic fluid was coming from the wheel well. Major Stump attempted to lower the gear several times with the emergency gear extension handle without success.

While he burned down fuel, the runway was foamed 2,500 feet from the approach end to the 3,000 feet remaining marker. Major Stump set up a long straight-in approach and touched down 1,200 feet beyond the approach end. While the nose was still in the air, the drag chute was deployed. The copilot called out airspeeds, and at 100 Kts, Major Stump smoothly lowered the nose to the foamed runway. The engine was then shut

down with the fuel shutoff switch. Using differential braking, Major Stump brought the aircraft to a stop in the center of the runway, 4,000 feet from the end. With the assistance of crash rescue, both pilots egressed the aircraft uninjured. The F-100F sustained very minor damage with a bent pitot boom and buckle at the boom attach point.

Investigation revealed the attaching lugs for the cylinder assembly were broken on the beam assembly allowing no control of the nose gear.

Major Stump maintained perfect control of the aircraft throughout the approach, touchdown, and roll out. His sound professional judgement and outstanding skill qualify Major Stump for this month's Tactical Air Command Aircrewman of Distinction Award. ➤



# TAC TIPS

Man is a slave to his intelligence--there are many things he can't do because he knows better.

## VOODOO BOO BOO

The RF-101 was number two in a flight of four on a cross country flight. After approximately an hour and ten minutes of flight, the anti-skid inoperative light illuminated. The pilot recycled the anti-skid system, then turned it off when the light remained on.

A normal descent and GCA were accomplished, but when the aircraft touched down the nose began to drop abruptly from the normal aerodynamic braking attitude. Back pressure was applied and the nose gear was stopped one to two feet above the runway. The aircraft then started pulling to the left. The pilot lowered the nose wheel to maintain aircraft control and cleared the runway at the high speed taxiway. Both main gear tires were flat, both main wheels and skid detectors were damaged and the left strut door was damaged beyond repair.

What happened? Investigation revealed that the aircraft had taxied a long distance, 2.5 miles, in a fairly high temperature, 87 degrees, at near-maximum gross weight prior to takeoff. Braking was used during taxi and some braking may have been used during the early part of the takeoff roll to maintain formation position. It is suspected that sufficient heat built up in the brakes to melt the thermal plugs allowing the tires to go flat. During heat buildup, the insulation on the anti-skid wiring melted causing a short which illuminated the anti-skid inoperative

...interest items,  
mishaps with morals,  
for the  
TAC aircrewman

warning light, giving the pilot an indication of a malfunction. The strut door and aircraft wheels were damaged during the landing roll.

When taxiing a heavyweight jet, caution should be used to prevent brakes from becoming overheated. Specific emphasis should be placed on briefing proper procedures and techniques for executing formation takeoffs. Using brakes to maintain position can give you more problems than just hot brakes. A blown tire when making a formation takeoff can ruin your whole day. It's a lot less embarrassing to explain why you took the lead on takeoff than why you blew a tire and ran off the runway.

## WAKE TURBULENCE GETS AARDVARK

The number two Aardvark pitched out five seconds after lead for a touch-and-go landing. Everything was normal until short final. Over the over-run, at an altitude of 30 to 50 feet, the F-111 encountered wake turbulence.

The PWSO, who was flying at the time, applied back stick which resulted in an excessive nose high attitude and an increase in descent rate. The IP took control, advanced the power to max, lowered the nose and completed the landing, but was unable to prevent a firm touchdown. Realizing the firmness of the landing, the IP decided to make it a full stop.

Damage to the aircraft was minor. We were lucky this time. Wake turbulence can ruin your whole day. It has cost the Air Force millions of dollars due to destroyed and damaged aircraft and claimed many lives. Just because you are flying a heavy, fast jet does not mean you are immune to wake turbulence. Take a few minutes and check out the August 74 issue of TAC ATTACK, it's got a good blurb about the phenomena and how to avoid it—it could save your life.



## NEAR MIDAIR COLLISIONS

TAC had two recent near midair incidents. One involved a flight of four Phantoms doing tactical formation in a Restricted Area designated for their training. After rolling out of a delayed 90, the number-two man spotted a bogey at 12 o'clock to the flight and about a mile ahead. Lead spotted the twin Cessna and began a left descending turn. Fortunately, the Phantom came no closer than 500 feet to the civil aircraft.

The other incident happened to a T-Bird on GCA final. Approximately 3.5 NM on final, the GCA controller told the pilot he had traffic at 2 o'clock, 1 mile, moving right to left and that the traffic appeared to be level. The pilot spotted a single engine, light aircraft crossing his flight path and leveled the T-33 off. The aircraft passed within 100 feet vertical distance of each other. The civil aircraft was not being controlled by, or in communication with, any agency and was within both a Municipal and an Air Force Airport Traffic Area.



The lesson to learn from these two incidents is wherever you are flying, keep the head out and the eyeballs uncaged. Don't let the fact that you are on an IFR clearance or that you are in a Restricted Area lull you into a false sense of security. Use aggressive search/clearing procedures -- keep those eyes open. It will pay big dividends.

## SOAP TEAM ALMOST SAVES SLUF

We at TAC sometimes get caught up in pointing fingers and slapping hands when human errors result in accidents and incidents. Once in awhile, however, we get reports on outstanding work from guys in the field that bear repeating. Here's just one:

CMSgt Thomas Neal, Propulsion Branch Chief, and Mr. Jack Robinette, SOAP Technician from the 23d FMS, England AFB, LA, noticed increasing iron traces for eight straight flights in an A-7D engine oil sample. In addition, traces of aluminum and chromium appeared in the aircraft's oil after its last few flights. Suspecting that the aluminum traces came directly from aluminum oil cans while they were being opened, the two initiated a controlled experiment. Testing oil taken directly from freshly opened cans, they found no aluminum traces. Although none of the A-7D's SOAP samples resulted in a trend that required aircraft grounding, the engine was immediately flagged for monitoring.

While these two conscientious folks were doing their part in trying to find a problem, the same engine was giving pilots fits with its rumbling and vibration. On three successive flights, pilots called for Red Ball to check out the engine. Each one got a thumbs-up and pressed on. No writeups were made. No one and no system provided for correlation of the Red Ball calls, pilots' concern or SOAP results.

The engine quit due to #6 bearing failure on the fourth flight. Indications were there, and CMSgt Neal and Mr. Robinette certainly did their part to find the trouble. Had there been a system for coordinating SOAP, engine shop and Red Ball data, this SLUF might have gotten a new heart in time.

As a result of this accident, and a few others, every possible effort is being expended to fix all the TF-41 problems and put you guys back in the machine. It will take time. Despite all this, CMSgt Neal and Mr. Robinette are congratulated for their dedicated performance. They prove that TAC has people who CARE!



# FIRE PREVENTION WEEK



**Paul Durham**  
**HQ TAC/DEMF**

Each year the President of the United States proclaims a week in October as Fire Prevention Week. For those who have never heard how Fire Prevention Week was started, we would like to take you on a little trip back to Chicago on a warm Sunday evening -- 9 October 1871. A thoughtless, careless act sparked a fire at a modest city home. It seemed small and easy to control, but it wasn't. Thirty hours later, 2,100 acres of Chicago were a blackened, smoldering waste. More than 200 of its citizens had

perished, 100,000 were homeless, almost 17,500 buildings were in ruins. Direct losses in this needless conflagration were \$168,000,000 and that was back when a dollar was worth a buck. The indirect loss was incalculable. To mark this tragic disaster, Fire Prevention Week is observed annually during the week containing October 9th, its anniversary date. This observation should remind us that fires are not unavoidable accidents. They are usually the result of some thoughtless act or neglect.





Mr. David A. Lucht, Deputy Administrator of the Commerce Department's National Fire Prevention and Control Administration, has set a goal of reducing fire losses by one-half. We in TAC should accept this challenging goal. It is within our grasp, but cooperation of all concerned is essential if it is to be reached. Each person must educate fellow workers, children and families in sound fire prevention measures. Our efforts must be thorough. We in the fire service must improve our training, education and increase our emphasis on fire prevention and safety if this goal is to be reached. Since the majority of lives claimed by fire are those of young children and older citizens, all of us must insure our homes are kept as free of hazards as possible. All members of the family should know how to safely get outside if fire were to occur in the home in the middle of the night. We can feel reasonably sure that this can be accomplished if we do some pre-planning before a fire happens. If in doubt, call your base fire department. They will be happy to assist you in working out a safe plan.

Each year in the U.S. fires claim an average of 12,000 lives and \$11 billion in property loss. A few additional facts on fire statistics in the United States may help us put forth that extra effort that will "turn us on" during Fire Prevention Week and carry us through the entire year to help us achieve our goal of reducing our fire loss/incident rate.

1. Careless smoking and the disposal of smoking materials are the leading causes of fires.

2. Electrical hazard is the second largest cause of fires.

3. Fire is the third largest cause of accidental death, and deaths from fire increased again this year.

In TAC :

1. Careless smoking and improper disposal of smoking material were the cause of 19 incidents

2. Kitchen fires contributed another 11 incidents.

3. There were nine incidents of fires that were suspected of being deliberately set.

These 3 causes accounted for 39 of 68 fire mishaps that occurred in TAC last year -- well over 50 percent of the incidents. One 12-year old girl died and two adults were injured in these mishaps. As a result of this needless waste, let us insure that we take prompt and vigorous action to reverse this trend.

Don't gamble that you can escape the financial headaches or family heartbreaks that fire always brings. Make fire prevention your concern. Not just this week, but every day of every week of every year . . . please!



# PHYZ-BIZ



## CIRCADIAN RHYTHMS (PART II)

By Lt Col Harold Andersen  
HQ TAC Physiological Training Coordinator

The "social period" of 24 hours is only one of many cyclic periods which influence human behavior, performance, "feelings," capabilities, etc. Yet, our society expects each individual to have the same capabilities at all hours of the day, and to be like all other individuals at a given hour. Indeed, despite the important role of biological rhythms in our lives, most of us are not aware of the extent of their influence, at least as long as we do nothing to disrupt them.

Human responses to long flights which alter normal circadian rhythms have been known to disrupt the normal, integrated functioning of the body's physiological/psychological mechanisms. One group of observers noted differences in recovery times between easterly and westerly flights. Travelers got farther "off schedule" on the easterly flights (requiring 6 to 8 days to recover) than on the westerly flights

(requiring around 4 days to recover). Much the problem evolves from the "desynchronization" of certain physiological functions. For example, heart rate circadian rhythm and the body temperature rhythm become temporarily dissociated during long flights and do not get back into phase at the same rate. There is a discrepancy in the rates at which they return to normal, which may amount to 2 - 4 days.

Since rapid travel by jet aircraft has become commonplace for people such as businessmen and aircrews, acceleration of the resynchronization process has become an urgent matter. This resynchronization is also known as "jet fatigue" or "jet lag." The exhaustion of traveling executives has caused concern for companies with international interests. Several companies, including Continental Oil and Phillips Petroleum, recognized the problem some years ago, and now require their long distance jet travelers to have a 24-hour rest period at their destination. British Airlines has extended rest periods for its aircrews.

The Russians have tried yet another approach -- they maintain their aircrews on a stable work-rest cycle, and it has been reported that Soviet pilots who fly to Cuba are billeted in a special Havana Hotel which is run on Moscow time.

One other approach is under study by a pharmaceutical house -- they are working on a research project which they hope will result in a drug (or hormonal substance) that would shift the body's hormones and physiological functions back to normal rhythms. One author states, "Hormone therapy for travelers may not be a distant prospect. . . ." So much for the future. What can be done now to alleviate "body clock" fatigue? A recent USAF TIG Brief article sums it up this way:

"Commanders, flying supervisors, flight schedulers, and flight surgeons must remain aware of the risks involved where schedules may force aircrews into disrupted sleep patterns and operate out-of-cycle with their normal 'body clock.' Where practical and feasible, the sleep period during crew rest should overlap as much as possible the time period during which the aircrew member usually sleeps." It is important to note that resistance to "jet lag" varies from one person to the next. With this in mind, here is a quote from AFR 60-1, para 7-8c, "Aircraft commanders will terminate a flight when safety may be compromised by fatigue fact regardless of flight duty periods authorized."



# HAZARDS OF

# EXPLOSIVES

People do strange things that provide food for thought -- after the fact -- like unnecessarily exposing themselves to the destructive nature of explosives. Take two recent TAC accidents as examples.

An airman, in his apartment, drilled a hole in a live round of 20MM ammunition to remove the powder. Reason not clear. The heat of the drill bit ignited the powder and the case ruptured. Result: a badly mangled hand and some lost fingers. Surgery has already been performed three times.

Two airmen manufactured a homemade cannon out of pipe for a back yard experiment. Again, reason not clear. One end of the cannon was capped and a hole filed in the pipe for an ignition port. Next, they loaded the pipe with the powder and BB shot from commercial 12 guage shotgun shells. One airman held the device while his buddy provided the match. The "holder" suffered severe shrapnel wounds to his left arm.

Both of these accidents are scary -- considering the injuries could easily have been fatal. One wonders why either occurred. In the first accident, the individual obviously did not realize the hazards involved. Aside from the fact he should not have possessed the ammuni-

tion, he ignored the dangers involved in mixing heat and powder. The second accident follows the same theme, except

that commercial items were used. A bit of tomfoolery and thrills added to the excitement of the occasion. Only thing missing was common sense.

Talk to the people injured in these two accidents and you probably would hear comments of bad luck. But, luck was not a factor. Attitude toward personal safety is the key. These individuals did not have much going for them in terms of using plain old common sense.

Personal safety begins with the individual. You can talk and write about safety all day without results -- unless the individual is properly motivated and concerned with self preservation.

Thought and common sense prior to action are still the best accident prevention devices going for us. A good rule of thumb is: Don't do anything dumb! ➤





# CHOCK TALK

*..incidents and incidentals  
with a  
maintenance slant.*

## AIRCRAFT FIRES

By TSgt Whiting, TAC/SEG

Two Super Sierra Hotel avionics specialists were dispatched to perform avionics maintenance on a B-57E. After checking the aircraft forms and contacting the crew chief, they applied external electrical power with an MD-3A. One specialist entered the forward cockpit and turned the inverter switch on. Shortly thereafter the other person, who was standing on the ground, noticed smoke coming from the inverter/battery compartment. The inverter switch was immediately shut off, the MD-3A shut down and removed from the aircraft. One specialist unsuccessfully attempted to extinguish the fire with his shirt, then his co-worker put out the fire with a CB fire extinguisher. Fire damage was limited to burned wiring insulation in the vicinity of the inverters -- cost was \$705. Cause factor was internal failure of the battery controller relay, resulting in plastic insulation and related wiring overheating and catching fire. A Category I materiel deficiency report was submitted on the relay.

Although these specialists did save an irreplaceable aircraft, the attempt to extinguish a class "C" fire by smothering it with a shirt could have been disastrous. Maintenance supervisors must insure all of their workers are aware of the unpredictable fire hazard potential of the many different flight line and shop functions. There are specific "do's and don'ts" for extinguishing different classes of fires, and all personnel should be aware of basic fire fighting techniques for

each. These guys were lucky. How would you have reacted? If you don't know basics for fire fighting, talk to your supervisor. Request a briefing from the fire department. It could save valuable Air Force equipment -- or even your life.

## EAGLE DROPPINGS

During postflight of the F-15, panel 66 (located under the speed brake) was found missing.

On the day prior to the incident, the aircraft had ground aborted for faulty fuel readings. Instrument specialists had requested that panels 66 and 69 be removed to facilitate their troubleshooting. A crew chief removed panel 69 and had started on panel 66 when a thunderstorm stopped the work. The aircraft was towed to a hangar for further maintenance without appropriate Form 781 entries being made for panel removal. No more work was done by this crew. A crew chief from the second shift arrived at the hangar and noticed panel 69 had been removed. He made an appropriate 781 entry. Panel 66 was covered by the speed brake and not noticed by the crew chief. The faulty fuel probe was found under panel 69, fixed, panel secured, and the 781 entry cleared. Since no maintenance was required under panel 66, its loosened bolts went undetected. Maintenance and aircrew preflight did not include panel 66 as the speed brake was closed. During speed brake actuation in flight, panel 66 was torn loose.

This incident could have been prevented.



per 781 documentation and good maintenance practices. The following rules can go a long way in reducing UDOs (Unidentified Dropped Objects):

Completely remove or open panels/doors; completely install or close them.

Replace all worn or broken fasteners when they are discovered -- don't wait.

Make appropriate entries in Form 781 and make sure they are properly cleared. Insure that tech order procedures and local directives/checklists are adequate. If they are not, speak up.

We've been lucky so far -- none of these dropped objects have hurt anyone. Our luck may not continue, however-- it's up to each and every one of us to increase our odds. If we don't, we'll all be losers.

## ***RUBBED THE WRONG WAY***

**By James M. Fredregill**  
**Chief of Safety, 132d TFW, Iowa ANG**

It is unlikely an aircraft will ever be built which doesn't have fluid-carrying lines located close to other components and subject to surges, flexing and vibrations. Result? Chafing. One solution to the problem is use of chafing pads that serve as buffers between the chafe and the chafee. Unfortunately, improper (or improperly installed) pads can aggravate an already serious problem. If the cure kills the patient instead of the disease, it's time we went back into the books. Unlike a doctor, the maintenance worker can't bury his mistakes -- not for long, anyway.

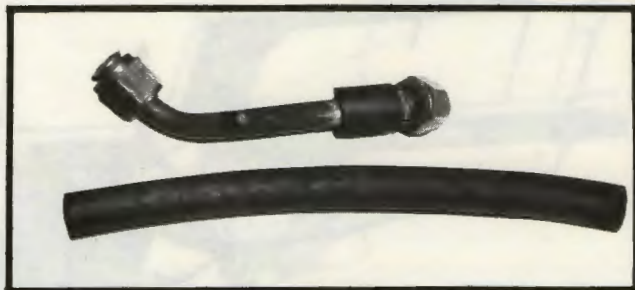
Take a look at the photos. A "jury-fix" pad (Photo #1) was installed on a utility hydraulic line. Safety wire was used for securing the

leather pad to the line. Vibrations resulted in a progressively chafed line at the point where the safety wire contacted the tubing. The tiny pin-hole depicted in Photo 2 resulted in a complete utility hydraulic system failure.



**PHOTO 2**

Unless otherwise specified in Tech Orders, rubber hose makes an excellent chafing pad (see Photo #3). Since tubing sizes are usually based on the outside dimension of the lines and hose sizes are given for the inside diameter, locating the proper sized hose is simple. The natural tension of a tight fit secures the pad nicely, and the part number of the hose is clearly printed for proper selection. Another advantage is that this type of chafe pad is easily



**PHOTO 3**

installed in tight places -- just slide it into position. This procedure eliminates the need to completely remove the line, but remember to reposition the line so that the chafe points are separated. It is also important to remember that if you find a need for a chafe pad that is not covered by the TO, you should submit an AFTO Form 22 and help everyone out.

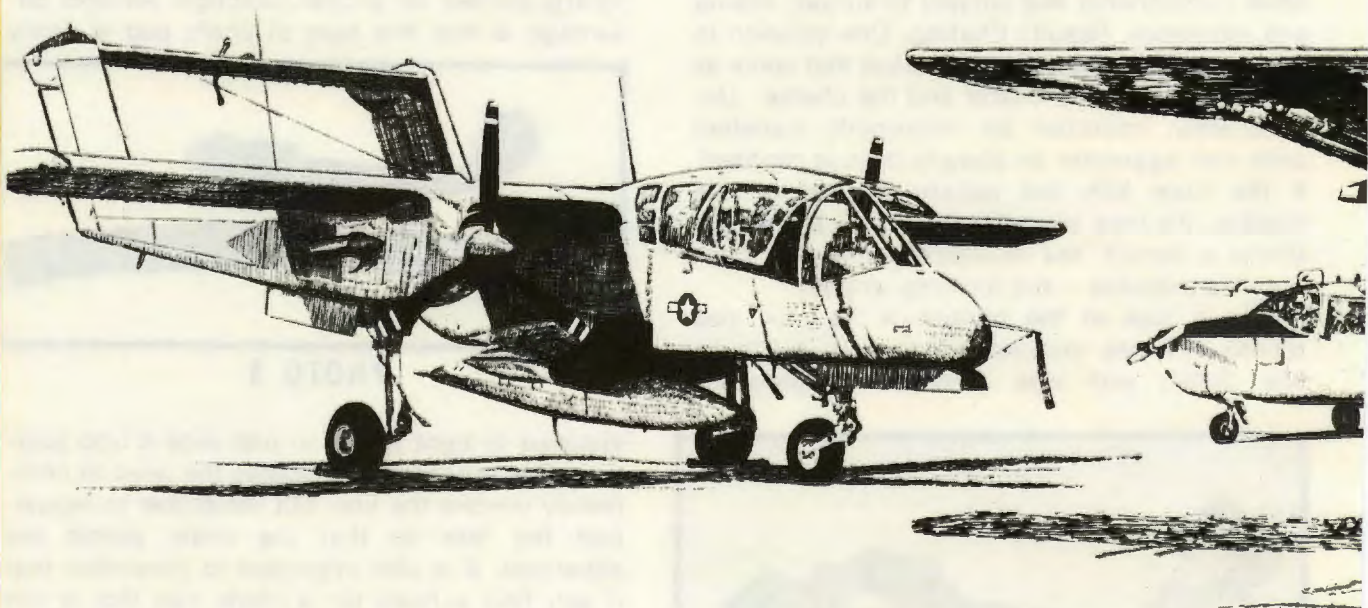
Chafing is an old problem that still gives us headaches -- and engine fires, hydraulic failures, fuel leaks, ad infinitum. Use the Tech Order and insure your cure doesn't kill the patient.



**PHOTO 1**

# THE EAC

**Capt Mike Byers**  
**HQ TAC/DOXBL**



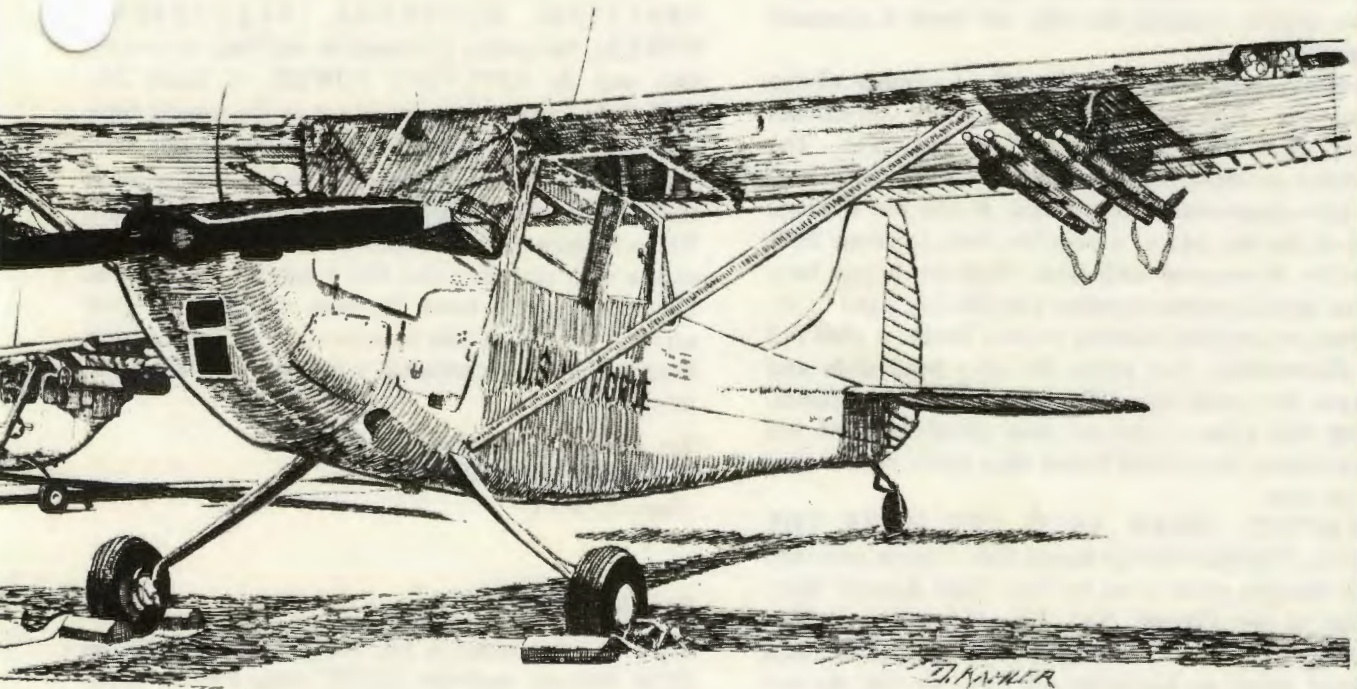
drawings contributed by:

**DENNIS KAHLER**  
3307 S. Terrace Rd  
Tempe AZ 85282



Small airplanes...slow and unprotected...powered less by engines than the fighting spirit of their crews. They found the enemy in shadowed jungle green, on roads and trails, in caves. They took the war to him and taught him that defeat can come with smoke as well as napalm, bombs and guns. Remembered patterns in bamboo and leaves...muddy tracks along a stream...a thread of smoke from cooking fires...some small change from yesterday that marked the subtle enemy who thought himself unseen.

They fought where ground fire was heard as well as seen--Their only armor was their skill, and pride in battles joined and won despite the odds. A scarf...a cartridge belt...a call sign respected in the air and on the ground. From lonely mountain runways, treacherous with shifting winds, muddy jungle strips in monsoon rains...Ahn Khe...Lima 98...Tiger Town...Dak To...the names mean less with passing time, but like a ghostly sound of wings that is heard in twilight on an empty ramp, the memory of their bravery remains.



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# FLEAGLEGRAM

## RESPONSES FROM THE FRONT

Dear Fleagle

Edith, the Hottest Thing in Town

An acronym, she is wildly sweeping the companies and the countryside. She is a staunch follower of what she stands for.

### EXIT DRILLS IN THE HOME

Sit down with your family and plan fire and disaster escape routes. Show them how to shut doors during a fire to gain those extra minutes while the fire is shut out. Instruct them how to feel a door to see if a fire is on the other side, and if it is, seek an alternate route out.

Have a common assembly point once outside, and do not leave this point until released. Many people die each year reentering fires when their loved ones have already escaped but did not have a common assembly point.

Have everyone memorize the phone number of the local fire department. Most telephone directories have them listed in the front of the book. The number on most Air Force bases is 117. Know how to give directions to your home. If you live in some out of the way place, if possible, have someone meet the fire department and direct them in. If you have some special problem where you live i.e., aged or infirmed or crippled persons in your home, a shed full of flammables, live where the dirt road ends and across the creek etc, inform your fire department. They will make a note of these problems, and will know where they stand before they arrive at the scene of the fire.

PRACTICE EDITH AS IF SHE WERE THE REAL THING !!!!! We would like to leave you with this thought given to us by Fire Chief Robert "Bob" Kidd of the Caycee, S.C. Fire Department: "You would not think of sending your children to attend a school where no fire drills are held, so why do you allow them to live in a home where there are none?"

SMSgt Herbert Williams  
TSgt John R. Breeden  
363 AMS  
Shaw AFB SC

Dear Firefighters

*Good point. Despite our advanced technology, fire can still be one of man's worst enemies. See page 10, this issue, for more of the same. -- Fleag*

• • •

Dear Fleagle

IAW TO 1F-4(R)C-2-36, page 3-20, para 3-71, DISARM SWITCH SAFETY PIN 53E230092-1 is to be installed on RF-4C type aircraft (after 63-7750) before applying ground power to the aircraft "for approximately 1 minute with the pin installed before removing the ejection seats, or damage to equipment and injury to personnel may result."

This pin breaks the electrical circuit to ECM destruct systems. Also IAW TO 1F-4(R)C-2-36CL-1, page 2-8, fig 2-1, GROUND CHECKLIST (PRIOR TO APPLYING EXTERNAL ELECTRICAL POWER), this safety pin must be installed to comply with step A, APPLYING POWER, of figure 2-1, page 2-3. This safety pin is not at the present time installed on any assigned RF-4C aircraft at this base. Supposedly, the ECM destruct system that requires this pin is not installed on the assigned aircraft. There is, however, no entry in the aircraft forms to assure with certainty that this supposition is correct. No one seems to know for sure whether the newly arriving aircraft at this base have the destruct system installed. I have contacted concerned agencies with no results.

Sgt John E. Strickland  
363d AMS/COMM  
Shaw AFB SC

Dear Sgt Strickland

*To ease your mind a bit, no TAC F-4s carry an ECM destruct package. LGMF folks here at headquarters advise me that Ogden ALC is now in the process of deleting references to the disarm switch safety pin in Tech Orders. On the LES E models, however, this pin (with a different name) will continue to be referenced in its tech data, since this pin also serves to lock the leading edge slats. Hop this has helped you out -- Fleag*





# TAC

## SAFETY AWARDS

### Maintenance Safety Award

Technical Sergeant Bryan W. Hart, Jr., 35th Organizational Maintenance Squadron, 35th Tactical Fighter Wing, George Air Force Base, California, has been selected to receive the Tactical Air Command Maintenance Safety Award for this month. Sergeant Hart will receive a certificate and letter of appreciation from the Vice Commander, Tactical Air Command.



TSGT HART

### Crew Chief Safety Award

Staff Sergeant Gary R. Corbello, 56th Organizational Maintenance Squadron, 56th Tactical Fighter Wing, MacDill Air Force Base, Florida, has been selected to receive the Tactical Air Command Crew Chief Safety Award for this month. Sergeant Corbello will receive a certificate and letter of appreciation from the Vice Commander, Tactical Air Command.



SSGT CORBELLO



# TEAMWORK AND ACCIDENT PREVENTION

**By MSgt Edward E. Whalen  
4th AMS  
Seymour Johnson AFB NC**

**A**fter their ground attack mission, Capt Sharp and his WSO, Capt Sparks, felt pretty good on the way back to home plate. It was a perfect flight so far. They had taken all the money on the range and were even given a few "Atta.Boys" by the Range Officer. Now they were looking forward to a relaxing weekend of fishing for "Blues" off the coast.

GCA picked them up about 25 miles out and now the flight was going to be all downhill. Ten miles out, Capt Sharp called for the landing checklist. It was just about time to land -- time to get visions of bluefish out of their minds, for the moment at least. Capt Sharp reached for the gear handle and put it down . . . that started the

sequence of events. It was obvious that this flight would not be a milk run -- the red light remained on in the gear handle and there were no down and locked indications.

Early the same morning, TSgt Edwards, who worked in the base Accounting and Finance office, discovered that his breakfast coffee didn't quite taste as good without his customary after-breakfast cigarette. "The wife should have realized that we needed another carton when she went to the Commissary yesterday. She gets paid for keeping track of those details. Not only that, but old Fido couldn't wait another five minutes before he was let out for his morning run. I can see this is going to be a great day. No cigarettes, the dog messin' up the rug -- all I need now is for the Chief to chew my butt for something and my day will be complete."

SSgt Phillips, an Electronic Warfare Technician, felt pretty good today. "Friday! Pay-day and only two more work orders to complete before heading out for the weekend. Just one problem. Why was my paycheck \$70 short today? I thought they straightened that out last month. At least I can probably make it to finance before I get those two birds launched."

Hustling over to Finance, Phillips decided to get some rank working on his financial problem. "The man to see is TSgt Edwards. He's the senior man at the inquiry counter and should be able to help me out."

"Hey, Sarge. I've got a problem which I thought I got fixed with your people last month. I'm \$70 short. How about checking my records and finding out how they screwed up this time!"

"Find out how they screwed up?" questioned Edwards. "Wait a minute and I'll check your records. Hey, look at this. You were supposed to bring in your BAS statement from your orderly room last month and you still haven't done it. Before you start pointing fingers at other people, you should make sure you are clean. The next time you come in here accusing us of not doing our job there might be a note sent to your squadron about your derogatory remarks and your grubby appearance. Don't you maintenance troops believe in ironing your uniforms or shining your shoes? Most of you guys come in here looking like you just climbed out of a steam bath. Pass the word around your outfit that you are going to start refusing service to people who



...n't conform to 35-10. And the next time you come in here, make sure you have the BAS statement."

SSgt Phillips left the Finance office feeling dejected and depressed.

Meanwhile, Capt Sharp's problems were compounding themselves. Not only would the landing gear not lower, but smoke started to fill the cockpit.

"Geez, what next?" he thought.

A few seconds later he was answered -- the circuit breakers on the main control panel started popping out. The aircraft was developing problems faster than manure draws flies. Fire broke out inside the circuit breaker panel and the aircraft began to develop flight control problems as the stab aug system began to fail. Capt Sharp realized that they would not be able to make the runway... they had to eject.

"OK, Sparks, get ready to step over the side. I don't think I can control this beast much longer" ...See you on the ground Sparky."

FINAL REPORT OF MAJOR AIRCRAFT ACCIDENT  
F-4D, SN 96-0815

### **HISTORY OF FLIGHT:**

F-4D, SN 96-0815, was on routine ground attack mission. On GCA final, the landing gear would not extend. The cockpit filled with smoke and an intense electrical fire ensued. The aircrew ejected and the aircraft impacted in an open field. There was no damage to civilian property or personnel. The pilot sustained minor injuries during the ejection. The WSO was not injured.

### **INVESTIGATION AND ANALYSIS:**

The investigation revealed that a small 1/16 x 3 inch allen wrench became lodged against the contacts of the landing gear control relay. When the landing gear handle was placed in the down position, the relay shorted, overheating the components and burning into adjacent wiring bundles. An intense electrical fire developed in the circuit breaker panel on the left side of the forward cockpit.

The investigation centered around where the allen wrench came from. The wrench was traced to an Electronic Warfare Technician, SSgt Phillips, who had performed minor maintenance in the area where the allen wrench was discovered. SSgt Phillips stated that he was emotionally upset due to a financial problem while

he was working on the aircraft. It was also learned that SSgt Phillips did not comply with his FOD and tool accountability procedures and that his supervisor did not insure these were complied with.

### **FINDINGS:**

1. An Electronic Warfare Technician inadvertently left an allen wrench in the cockpit of the aircraft after completing required maintenance.

2. At some time during the flight, the wrench became lodged against the controls of the landing gear lowering relay.

3. The landing gear lowering relay shorted, disabling the landing gear and producing an intense electrical fire. (CAUSE)

4. The aircrew successfully ejected.

5. The aircraft impacted in an open field and was destroyed.

### **RECOMMENDATIONS:**

1. That the FOD/tool accountability checks be closely monitored and that they become a special interest item on all inspections. (ACTION: ALL TAC UNITS)

2. That supervisors be continually aware of the emotional states of their personnel. (ACTION: ALL TAC UNITS.)

3. That a determined effort be made to educate all personnel to the fact that they are involved in the Air Force mission whether they are a pilot, clerk-typist, mechanic, or navigator. (ACTION: ALL TAC UNITS)

4. That all personnel make a continuous effort to perform our duties in such a way that we create an atmosphere of "We care." (ACTION: ALL TAC PERSONNEL)

5. That all remember that each of us is riding in the pilot's seat and that our attitudes and relations with other members of the Air Force "Team" often determine the degree of success or failure of the mission. (ACTION: ALL TAC PERSONNEL)

Think about it. Do you reflect a positive attitude in your daily job? Could your attitude toward your Air Force co-workers ever cause someone to become depressed or affect his or her performance? In the final analysis, we are all critical to the success of the Air Force mission. Each and every one of us is also sitting in the cockpit. Let's do our best to keep 'em flying -- get the mission accomplished -- and then get the aircraft safely back on the ground. ➔



# SHACK INSURANCE

By Richard W. Fowler, 1LT  
88th FTS  
Sheppard AFB, Texas



Once upon a range period...

That is how I really wanted to start this article, but I didn't want it to sound like a fairy tale. Dropping bombs is a serious matter and TAC ATTACK continually emphasizes that by publishing methods of edging a fighter jock's CEA toward that magic bullseye. You might say that this is one of those articles but with a slightly different viewpoint. Mine!

I should confess that I tried to read all kinds of articles and studies in TAC ATTACK about bombing techniques. In fact I used to lurk near the squadron

mailbox each month and hungrily snatch the new issue out of our mailman's hand. Lieutenants will do just about anything to get their CEAs into the solid black, so you can imagine my desperation whenever the editors didn't come up with a collection of those nifty graphs, tables and bombing equations.

But when they did. WOW! I'd go bananas. I used to spend hours trying to figure out what they were talking about. I couldn't eat or sleep for days and couldn't ask anyone for help for fear they'd d.



er I really didn't understand bombing. Only there was there a glint of understanding when I accidentally read one of the articles upside down. My CEA dropped 10 feet. But it was no use. It was ghastly watching myself go from a frustrated hyperglycemic to a savage manic-depressive.

Well, I finally gave up. I knew if I wanted to be an unnerving, fang-tipped, steely-eyed aviator, I'd have to set about resolving the basics on my own. I threw away my manuals, kissed my dash-34 goodbye and bugged the hell out of my scheduling officer to get me to the range—preferably in an aircraft.

After months of study and data collecting I was able to synthesize a new relationship between range scores and factors that influence them. So revolutionary was the discovery, in fact, that my new method would allow for a shack on every bomb pass. If your pickle-thumb isn't twitching with excitement by now, you are probably a skeptic. So please allow me to explain. For simplicity's sake I found it necessary to divide the factors of bombing into two groups: static and variable. First, I'll deal with the static factors, those things which never change regardless of the situation. They are: (1) the aircraft, (2) gravity, (3) dive angle and (4) disbelief.

I learned early in my range career that the first factors, the aircraft and gravity, are essential in delivering a bomb. Without an aircraft a bomb cannot be hauled up for the drop and without gravity it will not return to earth. Just more evidence for Isaac Newton, I suppose. At any rate, we now have our first relationship: the lift of the aircraft (positive) is equal to the pull of gravity (negative), or  $Ai = -Gp$ .

The fact that dive angle is listed as a constant may surprise some of you but it's really a matter of academics. In a level delivery, the angle is zero and can be discarded. In any sort of dive bomb, the angle is negative and (at the moment of pickle) always seems to end up the same—at a standard point somewhere between 30 and 45 degrees—(often on the same pass) regardless of which event we're doing. At least it always did for me. Dive angle will be designated the Greek letter "tau" and will be negative, or  $-T$ .

The fourth factor is disbelief. Let's face it. WSOs are good guys, but would you trust your bomb scores to them? If you do, you have just scored unbelievable at 6. If not, score a beta (+Bs) next to your aircraft. If you don't have a WSO, put it there anyway or this analysis won't work.

Thus, we've evolved the static equation of bombing:

$$Ai + Bs = -(Gp + T)$$

In order to successfully score with our bomb, we need to manufacture the variable equation and

match it with the one above. Essentially the variable factors are: target size, tracking time, acceleration, rotational movement, WSO precession, switch settings and the size of your wager. Some of these may sound a bit unfamiliar but most are significant.

The size of your target will vary, but simply speaking, the larger the target the easier it is to get a shack. There are two ways of increasing target size: (1) choose a larger target than the frag calls for—bomb a city instead of a village, a passenger ship instead of a san-pan or the Penn Central yard instead of a one-tracker; or (2) press your target. The closer you get the bigger it looks and the better the score. When you press, the target can actually become larger than life. Target size =  $T_s$ .

Next, I've chosen to relate tracking time (Tt) to target size in the following manner: The more time spent tracking, the bigger the target will get (pressing), but the more likely the error since nobody can hold a pipper on target for more than a second. I base this fact on actual experience. This inverse relationship is not direct, it is logarithmic, since additional small amounts of tracking time will result in disproportionately larger errors. Target size is then multiplied by the inverse logarithmic factorial of tracking time to produce  $T_s \cdot \frac{L}{T_t}$ .

We also know that the third factor, acceleration (Gs), is important at the moment of pickle so I've grouped it with the first two factors. I've also given G-forces a negative sign because (1) I don't like them and (2) I usually have to bunt anyway. Now we have  $T_s \cdot \frac{L}{T_t} - G_s$ .

Another element I've listed is rotational movement. Some of you call it wind but I prefer to think of it as the rotation of the earth beneath my aircraft, invariably to the 3 or 9 o'clock positions. Rotation depends on the direction and the latitude from which you make your run and is always additive to produce  $(T_s \cdot \frac{L}{T_t} - G_s) + R_m$ .

The next two factors, WSO precession and switch settings, though listed as variables, can actually be eliminated entirely. This is because WSO error has already been compensated for in the static equation, and any oversight in switch settings can generally be written up in the 781 after the mission. Therefore, nothing is added here to our variable factor.

Finally, the size of your wager (bet size, Bs) does have a positive effect on bomb scores since the larger your bet the better your score. You can try this one yourself. Instead of two bits, take a fiver on



## shack insurance

each bomb and see how your score improves. If it doesn't, I would write up the pickle button. By adding bets, the new resultant is:

$$(T_s \cdot \frac{L}{T_t} - G_s) + R_m + B_s$$

Having examined the variable factors we deal with on our daily bomb run, it is conclusive that we can now draw the second and more important equation from the above discussion. That is: Bomb Score (Bs) will equal the logarithmic inversion of target size to tracking time minus acceleration while added to earthly rotational movement and wager size, or:

$$B_s = (T_s \cdot \frac{L}{T_t} - G_s) + R_m + B_s$$

At long last we've arrived at that juncture where suspicion becomes a reality and fact forges truth. For those of you holding at your IPs, don't turn this page. Give your WSO (or your left hand) some stick time, read on and if you like, call up lead and double your bet.

Prior to combining our two equations we need to adjust the static relationship.

$$A_L + B_s = -(G_p + T) \text{ or,}$$

$$0 = -G_p - T - A_L - B_s$$

$$0 = G_p + T + A_L + B_s$$

Next we add it algebraically to the variable equation.

$$0 = G_p + T + A_L + B_s$$

$$+ B_s = (T_s \cdot \frac{L}{T_t} - G_s) + R_m + B_s$$

$$B_s = (T_s \cdot \frac{L}{T_t} - G_s) + R_m + B_s + G_p + T + A_L + B_s$$

$$B_s - 2B_s = (T_s \cdot \frac{L}{T_t} - G_s) + R_m + G_p + A_L + T$$

Dropping the sub-value on the right side we obtain:

$$-B_s = (T \cdot \frac{L}{T} - G) + R + G + A + T$$

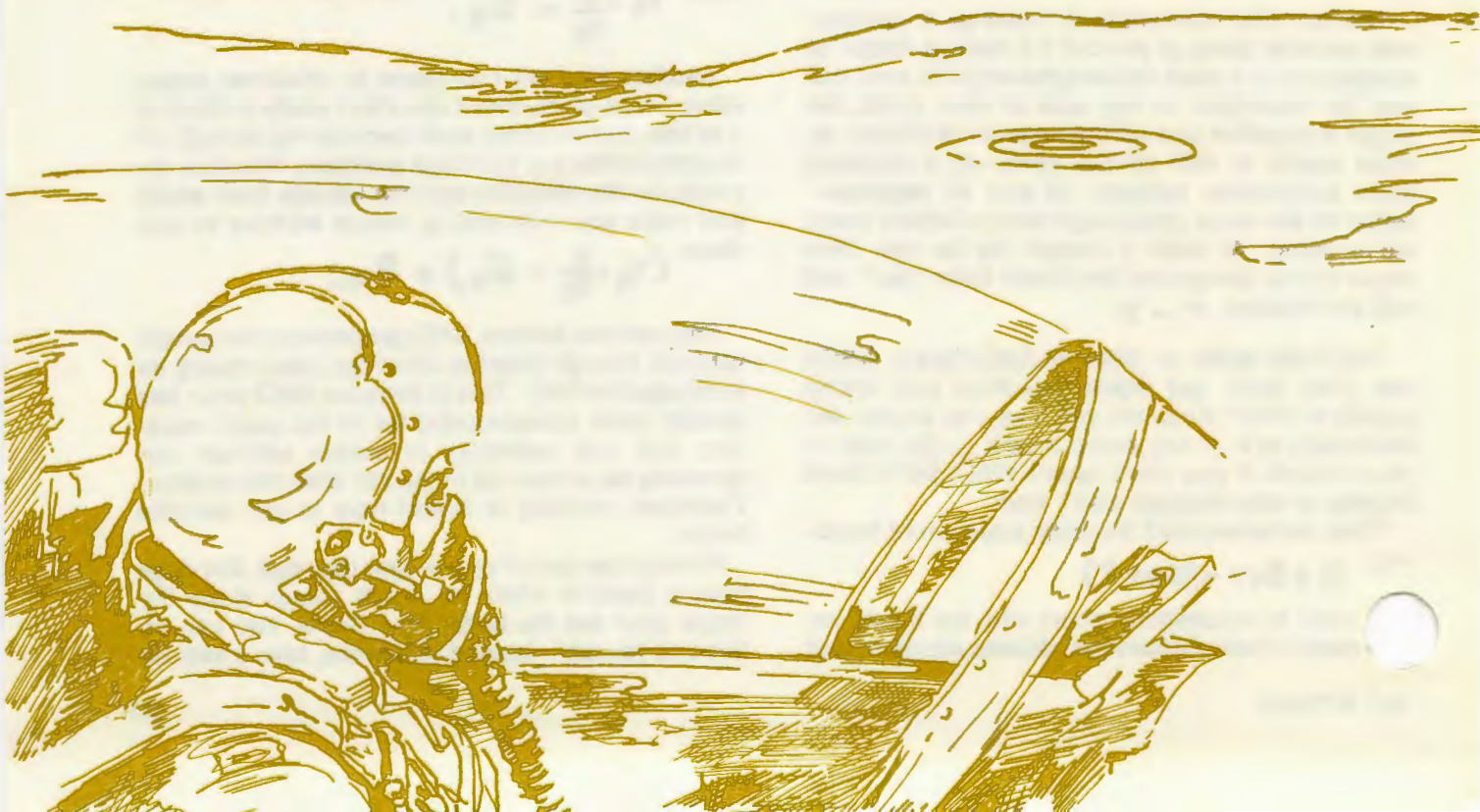
$$-B_s = L - G + R + G + A + T$$

$$-B_s = L + R + A + T$$

Or, in plain English:

$$-B_s = T + L + A + R$$

If *That Looks About Right* to you then pickle and you'll come up with a -Bs on the left side or a negative bomb score which I ascertain to be somewhere less than a shack. The way I see it, there isn't a range officer alive who has ever spotted one less than zero. So he will give you the bull: and you should be used to that.





# DOWN TO EARTH

## GROUND ACCIDENT OF THE MONTH DEPT OR. . . Smoking May Be Hazardous To Your Health

Recently, a man suffered injuries that required hospital attention -- injuries resulting from a bizarre accident, weird enough to satisfy Ripley himself.

It seems the accident resulted from a simple nuisance -- a clogged nozzle on a pressurized can of hair spray. The victim's wife had dumped a substantial amount of the hair spray (containing alcohol) into the toilet in an attempt to free the nozzle orifice with a safety pin. Leaving the commode unflushed, she left the bathroom to her unsuspecting hubby. The husband retired to the bathroom for his morning constitutional, sat down, lit a cigarette, and dropped the match into the bowl. The resulting explosion imbedded pieces of the toilet lid into the bathroom walls . . . and the victim's posterior.

It seems you're not safe anywhere any more. ➤

TAC ATTACK



## PROTECT YOUR CHILDREN

CMSgt Savoie, HQ TAC/SEG

Every year more than 1,000 children under the age of four die in automobile accidents. Thousands more are seriously injured; some crippled for life. Most of these accidents do not occur during long drives on super highways. They occur during routine driving within 30 miles from home and at speeds less than 30 miles per hour.

Would you give an infant or toddler a knife or piece of glass as a toy? Surely not! But have you ever let your child ride unrestrained in the front seat of the car, even for the short trip to the store? If the answer is yes, you risked your child's life needlessly. During a crash or sudden stop, the child could be slammed against the instrument panel or windshield with tremendous force. Holding a child in your lap is not the answer as the child would be pulled out of your arms in a crash situation. If you were not belted either, your weight would also help to crush the child.

The answer to the problem of

protecting your child is use of an acceptable well-fitted child restraint system. There are many on the market today, but find one that fits the child and the car. Infants should be provided an infant carrier. When this is outgrown, switch to a child seat. When a child outgrows that seat, he/she is usually strong enough to use a regular safety belt.

The next time you are driving around town in your car or stopped at a traffic light, look inside the cars next to you. Invariably, there are small children standing on the front seat or up against the instrument panel. Most of these children do not have the lifesaving benefit of any restraint system.

You cannot be responsible for other people's children riding in their parents' cars, but do not take chances on the lives of your own children. Insist that they use a proper restraint system all the time. You will never regret it. ➤



# THE ACCIDENT BOARD AND ACCIDENT PREVENTION

by Capt Marty Steere, TAC/SEPP

Some months ago an A-7 was on a routine training mission when the canopy failed and the pilot was inadvertently ejected from the aircraft. He sustained fatal injuries because of premature deployment of the parachute which then failed from airloads greater than the design limits.

The accident board was convened and an in-depth investigation performed. The report is in, the investigation complete. But the task is not finished. The board's recommendations must be answered and corrective action taken to prevent the same thing from recurring. How is this done? Let's use this accident as an example and review the sequence.

When the accident board completed its work, it compiled the material into the aircraft accident report. This mass of material covering all aspects of the investigation, gives the findings, and causes. Most important, the board offers recommendations on how to prevent a similar accident. The report is then forwarded to the Squadron Commander, Wing Commander, Numbered Air Force Commander, and to the MAJCOM Commander for review and indorsement. Air Force Logistics Command, Air Force Systems Command and associated research and development branches also received the report and reviewed findings, causes and recommendations.

During the investigative process, the accident board submitted Emergency Unsatisfactory Material Reports (EUMRs) on components that may have failed and had a direct bearing on the accident. These are now called Category I Reports and are sent to an Air Logistics Center (ALC). All aircraft in the USAF inventory are divided up among the five ALCs; certain ALCs are prime on specific

aircraft systems. For example, San Antonio ALC is prime for Life Support while Ogden ALC is prime for the F-4 aircraft. A Materiel Improvement Project (MIP) has begun to determine why a certain component failed and to find out how it can be prevented from failing again. The component of a system may be completely redesigned if a design deficiency is found. Many of these projects involve extensive research and testing. Some testing may require a year or more.

In the A-7 accident it was recommended that the design deficiencies which allowed the parachute to open prematurely be corrected. An EUMR was submitted and assigned a MIP number. The parachute was modified to include a longer manual ripcord, a longer automatic arming cable on the parachute actuator and improved riser retention. TCTOs were established and all TAC/ANG aircraft have been modified.

Another recommendation by the accident board was that the time span between Basic Fighter Maneuvers/Dissimilar Combat Maneuvers (BFM/DCM) be reevaluated with a view toward increasing the frequency of BFM/DCM sorties. As a result, a new sortie schedule was published in AFM 57-7 that establishes a standard for frequent participation in mission dedicated sorties.

This particular accident also highlighted the need for aircrews to receive departure training in the SLUF. LTV's Large Amplitude Motion Base Simulator (LAMBS) is now being used to give A-7 aircrews this valuable training. There were many other recommendations which will not be covered here. Some of the recommended corrective actions are complete and in effect; other actions are pending test results.

As you can see, there are many things accomplished after the accident board finishes its work. All recommendations for corrective action are continuously monitored by the MAJCOM Safety Project Officer (SPO) who reports on their status to the Air Force Safety Center at Norton a minimum of every six months. When all the recommended action is completed, the report is finally closed. This may take a year or even longer. The board's efforts usually result in new procedures, new equipment modifications and a safer aircraft. Sometimes recommendations are simply to reeducate aircrews or maintenance personnel on established procedures. It does not always take an accident to start the process of eliminating hazards or deficiencies to give us a better system. There are many current aircraft projects that resulted from incident category reports, hazard reports, and suggestions from people like you. Do *your* part to make our aircraft the safest and most effective in the world. If you are aware of a problem, identify it to your boss or safety officer.



# Reader Response Form

HOW WOULD YOU RATE  
THE FOLLOWING **TAC ATTACK** MATERIAL ?

TYPE OF ARTICLE/FEATURE LOUSY SO-SO GOOD GREAT

REG FEATURES	CHOCK TALK				
	TAC TIPS				
	PHYZ BIZ				
	FLEAGLEGRAMS				
	AWARDS				
SPECIAL FEATURES	FLEAGLE				
	EMERGENCY SITUATION TNG				
	LIFE SCIENCES/SURVIVAL				
	AIRCRAFT OPERATIONS (FIGHTER)				
	WEAPONS SAFETY				
	AIRCRAFT OPERATIONS (OTHER)				
	AIRCRAFT ACCIDENT REVIEWS				
	INSTRUMENT FLYING				
	WEATHER				
	MAINTENANCE				
	GROUND SAFETY				
	HISTORICAL				
	FUNNY PHOTOS				
	CURRENT DEVELOPMENTS (AIRCRAFT)				
	WAR STORIES				
CENTER SPREAD ARTWORK					

GRAPHIC PRESENTATION (ART WORK,PHOTOS,ETC): ☐ IS GOOD ☐ IS SO-SO ☐ CAN BE IMPROVED

IF SO, HOW ? \_\_\_\_\_

THE LENGTH OF ARTICLES IS: ☐ TOO SHORT ☐ TOO LONG ☐ ABOUT RIGHT

YOU CAN IMPROVE **TAC ATTACK** BY : \_\_\_\_\_

PLEASE CONTACT ME FOR AN ARTICLE. NAME \_\_\_\_\_

ADDRESS \_\_\_\_\_ AUTOVON \_\_\_\_\_

HOW WOULD YOU COMPARE <b>TAC ATTACK</b> TO THESE SAFETY MAGAZINES ?	BETTER	WORSE	ABOUT THE SAME	DON'T KNOW
AEROSPACE SAFETY				
MAC FLYER				
USAFE AIRSCOOP				
ADC INTERCEPTOR				

HAVE YOU GAINED ANY MEASURE OF ADDITIONAL  
SAFETY AWARENESS BY READING **TAC ATTACK** ? YES ☐ NO ☐

COMMENT \_\_\_\_\_

MY JOB IS : \_\_\_\_\_

CUT ALONG SOLID LINE

# Reader Response Form

HOW WOULD YOU RATE  
THE FOLLOWING **TAC ATTACK** MATERIAL ?

TYPE OF ARTICLE/FEATURE LOUSY SO-SO GOOD L ?  
.T

REG FEATURES	CHOCK TALK				
	TAC TIPS				
	PHYZ BIZ				
	FLEAGLEGRAMS				
	AWARDS				
SPECIAL FEATURES	FLEAGLE				
	EMERGENCY SITUATION TNG				
	LIFE SCIENCES/SURVIVAL				
	AIRCRAFT OPERATIONS (FIGHTER)				
	WEAPONS SAFETY				
	AIRCRAFT OPERATIONS (OTHER)				
	AIRCRAFT ACCIDENT REVIEWS				
	INSTRUMENT FLYING				
	WEATHER				
	MAINTENANCE				
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	HISTORICAL				
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	WAR STORIES				
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GRAPHIC PRESENTATION (ART WORK,PHOTOS,ETC): ☐ IS GOOD ☐ IS SO-SO ☐ CAN BE IMPROVED

IF SO, HOW ? \_\_\_\_\_

THE LENGTH OF ARTICLES IS: ☐ TOO SHORT ☐ TOO LONG ☐ ABOUT RIGHT

YOU CAN IMPROVE **TAC ATTACK** BY : \_\_\_\_\_

PLEASE CONTACT ME FOR AN ARTICLE. NAME \_\_\_\_\_

ADDRESS \_\_\_\_\_ AUTOVON \_\_\_\_\_

HOW WOULD YOU COMPARE <b>TAC ATTACK</b> TO THESE SAFETY MAGAZINES ?	BETTER	WORSE	ABOUT THE SAME	DON'T KNOW
AEROSPACE SAFETY				
MAC FLYER				
USAFE AIRSCOOP				
ADC INTERCEPTOR				

HAVE YOU GAINED ANY MEASURE OF ADDITIONAL  
SAFETY AWARENESS BY READING **TAC ATTACK** ? YES ☐ NO ☐

COMMENT \_\_\_\_\_

MY JOB IS : \_\_\_\_\_



FOLD ALONG DOTTED LINE  
TAPE AND DROP IN MAILBOX

**TAC/SEPP**  
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**TAC ATTACK**  
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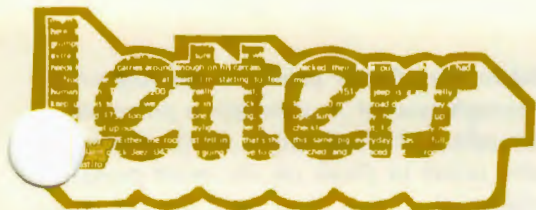
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## THEY'VE TAKEN THE FUN OUT

*The July 1975 issue of TAC ATTACK featured an editorial by the TAC Chief of Safety entitled "Accept the Challenge." The article revolved around a young pilot's remark, "They have taken all the fun out of flying," overheard by Colonel Moore. His position drew several responses. Here are two letters from the field and Colonel Moore's answer - - ED*

Editor

The July 1975 "Angle of Attack" expresses an interesting point of view and I believe this area should be more fully explored. The statement, "They have taken all the fun out of flying," does not necessarily indicate a lack of personal or professional discipline but may be a not especially well-worded expression of a valid problem. It is difficult to deny that the technological, economic, political and sociological changes in the last ten years have made it increasingly difficult to obtain personal satisfaction flying in the military. A large number of pilots (of various grades and experience levels) express these or similar feelings - with good reason.

In many instances, a pilot is subjected to conflicts between official policy, or what he perceives as official policy and his perception of reality. For example, a pilot is told throughout his entire career: "You are, by selection and training, a dedicated professional. Your integrity and ability have been found to meet Air Force standards; otherwise, you would not be a member of this profession." When this same pilot goes to fly, he notes that an operations clerk is required to verify that he has read and initialed the PIF. To this pilot, the implication is clear. He naturally desires to agree with what he has been told about himself and his comrades, but the reality of the situation indicates that the Air Force does not actually believe in his ability or integrity. Another example: The statement, "People are our most important resource" is repeated at all levels of command. Logically then, actions and programs related to or affecting morale should have priority. One does not have to be exceptionally astute to realize the effect of economic considerations on all present-day actions and programs, and you may be ed that a pilot who rides an outdated ejection and lives in the BOQ perceives a conflict between official policy and the reality of his daily life.

These examples exist today, as do many other situations that are similar. The operative fact is that the pilot perceives a reality that conflicts with what he has been told and desires to believe. Since the pilot's perception of the situation is the basis of his actions, the existence of actual conflict is a side issue. To deny the importance of this perception is to deny the importance of human nature; an act with grave consequences. The statement, "One may chafe because a perceived freedom is deleted, but that is not really important" denies the importance of human nature, as does the quote "War is hell." An honest appraisal of our own feelings toward combat flying, however morally distasteful the implications, will surely reveal certain aspects of war that are most enjoyable. The statements, therefore, are seen as being of little or no validity; they are dishonest.

In order to be safe and effective pilots we must be pilots who are enjoying a rewarding, challenging and invigorating career. If we feel that our profession is less than it should be, then we will be less than we can (and must) be.

We must develop the emotional maturity to accept the facts of today's Air Force and the realities of human nature. We must communicate our awareness of these facts and realities to those who are affected by our actions in order to insure that we are not perceived as arbitrary or petty. In short, our actions must suit our words. It is certain that if we think an action is "CYA" it will be seen as such by those affected by the action. To me, this is the challenge to be accepted: Make flying more rewarding.

I know TAC Safety is interested, otherwise I would not have written this letter. I also think it would be great to hear someone say: "They have put the fun back in flying."

**Captain Mike Byers**  
**HQ TAC/DOXBL**

Editor

As a regular reader of the "TAC ATTACK,"  
I must confess I was taken aback  
By an editorial written by Colonel Moore.

In the July issue of this fine pub,  
A young TAC pilot had discovered a rub  
And complained of regulations galore.

No orator he, this young TAC jock  
Expressed his frustration in a careless remark  
For which he was rightly upbraided.

But it seems to me, this careless phrase  
Fails to describe the current malaise  
And should certainly be restated.



One does not need to enjoy his work,  
And we know that obvious dangers lurk  
In lack of supervision.

Airplanes these days just cost too much.  
We can't have loss of life and such.  
We need controlled decision

But what if some young jock should say,  
"I know my work is far from play;  
And I am sick at heart.

I am not numbered with the bold  
I always do as I am told -  
and more than just 'my part.'

A high performer, or so I've read,  
(In OER's) and on whom its said  
One may place reliance.

But it's not leadership they prize  
More - how well you supervise  
and stay in compliance.

Each headquarters generates regulation  
In exponential proliferation.  
It's an irreversible trend.

And over your shoulders the unblinking eye  
of Stan/Eval, Safety and ORI  
To which there is no end.

For the seniors there's motivation by terror  
With the threat of supervisory error  
In every smoking hole.

There is no balance that one can see  
Between authority and responsibility  
and still, heads roll.

And when I'm a Colonel with temples of gray  
And relax in the bar at the end of the day  
The young pilots gather about.

Then I must listen to tales of woe  
And cannot admit - though I secretly know  
"They've taken the fun out."

\*\*\*\*\*

But I wonder as I try to correctly relate,  
This young pilot's failure to communicate.  
"Who is listening?" I shout.

Yes, who will listen when small voices cry  
In the wilderness for those who fly,  
"They've taken the fun out."

**Bill Monahan**

*We are glad to have finally printed something which generated enough interest to stimulate a poem and letter to the editor. Unfortunately, both of you appear to have failed to focus on the main points the AOA editorial:*

- 1. Military flying is not for having "fun."*
- 2. What is important is mission effectiveness. Like most of us, however, you can enjoy yourself and still be a professional -- within the rules.*
- 3. We must eliminate the attitude among a few aircrews that results in accidents from such things as pressing, buzzing, bouncing unsuspecting aircraft and a failure to know or adhere to aircraft limitations. Fun? Like Russian roulette! Stupid? You bet!*

*Both of you obviously feel strongly about your love for flying or you would not have bothered writing. Your responses indicate that you think a lot about it -- so you are not the ones to be worried about. The ones we do worry about are the guys with "... a propensity for incapacity..." Without them, the Safety business would be a lot easier. Have a good one!*

**Colonel J. D. Moore**  
**Chief of Safety**

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Editor:

I am writing concerning the article "The SCUBA Scene" on page 24 of the August 1975 issue of *THE ATTACK*. I am afraid that the person who wrote the article has not had any diving experience. A check of the U.S. Navy Standard Air Decompression Table shows that there is no time limit which a man can stay underwater at 30 feet and have to make decompression stops. In fact, if a man goes down to 35 or 40 feet, he can stay 310 or 200 minutes before any decompression stops are required.

Therefore, the statement, "In these cases where the novice dives to approximately 30 feet, stays for 40 minutes, runs out of air and is forced to make a rapid ascent, he faces a high probability of either drowning, severe decompression sickness, or aeroembolism (maybe all three)" is incorrect. In fact, part of your SCUBA diving certification test involves a free ascent (which is rapid) from 15 feet and 30 feet.

I would appreciate it if you would set the record straight so that potential SCUBA divers are not frightened away due to erroneous information. I am a qualified SCUBA diver having been PADI certified in May 1974.

**Capt Stephen D. Broyles**  
**Myrtle Beach AFB SC**

*You're right -- a typo resulted in the bad poem. The sentence should have read. "In these cases, where the novice dives to approximately 80 feet . . ."*  
ED



# TAC TALLY



TOTAL ACFT. ACCIDENTS	▶
MAJOR ACFT. ACCIDENTS	▶
AIRCREW FATALITIES	▶
TOTAL EJECTIONS	▶
SUCCESSFUL EJECTIONS	▶

TAC		
AUG	Thru	AUG
	1975	1974
5	21	15
5	19	11
2	16	6
1	10	12
1	7	11

ANG		
AUG	Thru	AUG
	1975	1974
0	10	13
0	9	13
0	6	7
0	4	7
0	3	4

AFRES		
AUG	Thru	AUG
	1975	1974
0	0	5
0	0	4
0	0	2
0	0	1
0	0	1



FIGHTER/RECCE WINGS			
ACCIDENT-FREE MONTHS			
75	33 TFW	TAC	
56	4 TFW	TAC	
41	127 TFW	ANG	
39	31 TFW	TAC	
28	116 TFW	ANG	

OTHER UNITS			
ACCIDENT-FREE MONTHS			
152	130 SOG	ANG	
121	136 ARW	ANG	
113	143 SOG	ANG	
101	DET 1, D.C.	ANG	
77	135 TASG	ANG	

**MAJOR ACCIDENT COMPARISON RATE 74-75**  
(BASED ON ACCIDENTS PER 100,000 HOURS FLYING TIME)

TAC	74	4.5	5.4	5.6	4.5	4.0	3.6	3.1	3.2				
	75	7.9	5.4	3.6	2.6	3.1	3.5	5.2	6.4				
ANG	74	7.2	8.6	8.2	5.7	6.0	6.3	7.6	6.6				
	75	5.3	2.8	5.3	3.7	4.7	6.8	5.9	5.1				
AFRES	74	0	16.4	8.9	8.8	6.7	5.3	5.8	5.0				
	75	0	0	0	0	0	0	0	0				

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



FLEAGLE



BUMP!

