

TAC ATTACK

OCTOBER 1990



Bailey '90

ANGLE OF ATTACK

As the only person to ever win the grand slam of the major golf tournaments, Bobby Jones was once asked why he called a penalty on himself, since no one else saw the infraction. Who would ever know? His answer, **"I would!"**

Golf is one of the few sports where the application of the rules is administered by the individual. This closely resembles the discipline and integrity required of the people in Tactical Air Command. The temptation is often strong to bend the rules just a little so the job can be done quicker—especially if you think no one will ever know. Sometimes you can get away with it for a while, but anytime we as a leader or supervisor break a rule or knowingly let others bypass a required step, it becomes greatly magnified to our troops. If we think that we can slide something past them, we are only fooling ourselves. Our review of outfits that have had accidents shows that some units have had a lax attitude towards discipline and rules. You get the feeling from watching their operations that they would go out and do just about anything they wanted to do. They figured no one would do anything to them. After all, if the boss doesn't live by the rules, why should they? Or if the boss pressures them to bend the rules in one area, what could they do to them for bending the rules in another area? As the supervisor or commander, it is imperative that we set the example. If the rule is a poor one, let's get it changed. Otherwise, let's see to it that we make it work for us in effectively accomplishing the mission—even when no one else is watching.



We want to say farewell to Major John M. Bookhardt as he retires from active duty. He has served the Air Force well, and we in TAC Safety have been fortunate to work with him. Best wishes for continued success, pardner.

Congratulations to all of you who have done an outstanding job supporting Desert Shield. You've been putting in long hours, but you've been doing it smart, thorough, and gaining that great by-product—safe mission accomplishment.

Keep at 'em, pardner!

Jack Gawelko
JACK GAWELKO, Colonel, USAF
Chief of Safety

TAC ATTACK

DEPARTMENT OF THE AIR FORCE



8.



4.



24.

FEATURES

4. LIVE SAFETY

Brig. Gen. Bill Ball talks safety

8. THERE I WASN'T:

A camping trip to forget

24. DON'T FALL INTO THE COMPLACENCY TRAP

Complacency doesn't always kill —
sometimes it just hurts a lot

DEPARTMENTS

6. AIRCREW OF DISTINCTION

14. WEAPONS WORDS

18. BEEN THERE, DONE THAT

20. DOWN TO EARTH

22. TAC TIPS

13,26. AWARDS

27. FLEAGLE

28. CHOCK TALK

30. FLEAGLE SALUTES

TAC SP 127-1

TAC Attack is not directive in nature. Recommendations are intended to comply with existing directives. Opinions expressed are those of the authors and not necessarily the positions of TAC or USAF. Mishap information does not identify the persons, places, or units involved and may not be construed as incriminating under Article 31 of the UCMJ. Photos and artwork are representative and not necessarily of the people or equipment involved.

Contributions are encouraged, as are comments and criticism. We reserve the right to edit all manuscripts for readability and good taste. Write the Editor, **TAC Attack**, HQ TAC/SEP, Langley AFB, VA 23665-5563, or call DSN 574-3658.

Distribution F(X) is controlled by TAC/SEP through the PDO, based on a ratio of one copy per 10 persons assigned. Air Force units should contact their base PDO to establish or change requirements. DOD units other than USAF have no fixed ratio; requests will be considered individually.

Subscription for readers outside DOD are available for one year at \$15 domestic and \$18.75 outside U.S. from the Superintendent of Documents, Government Printing Office, Washington, D.C. 20402. All non-DOD correspondence on subscription service should be directed to the Superintendent, not to TAC/SEP.

TAC Attack (ISSN 0494-3880) is published monthly by HQ TAC/SEP, Langley AFB, VA 23665-5563. **Second-class postage** paid at Hampton, Virginia, and additional mailing offices.

POSTMASTER: Send address changes to TAC Attack, TAC/SEP, Langley AFB, VA 23665-5563.



HON. DONALD B. RICE
*SECRETARY OF
THE AIR FORCE*

GEN ROBERT D. RUSS
COMMANDER



COL JACK GAWELKO
CHIEF OF SAFETY

LT COL "HAP" TUCKER
EDITOR

JANET GAINES
EDITORIAL ASSISTANT

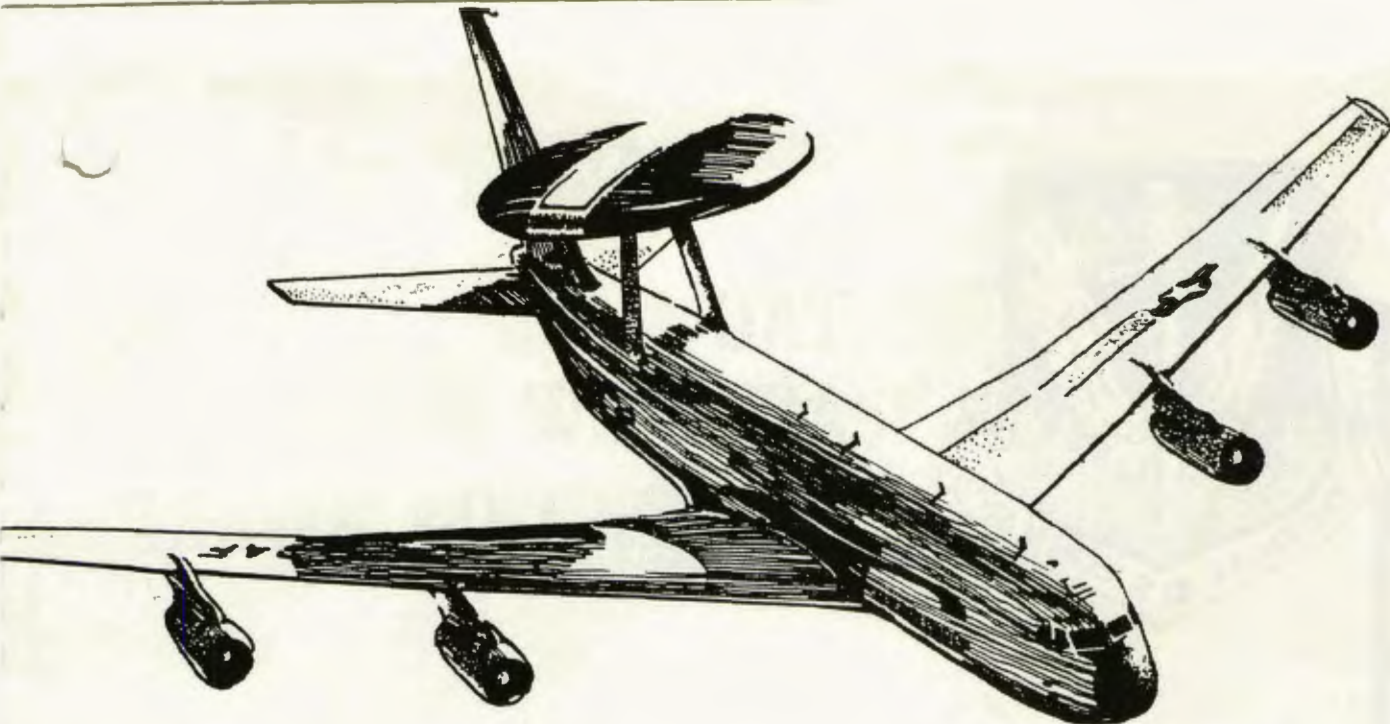
SGT MARK S. BAILEY
*ART DIRECTOR
STAFF ARTIST*

STAN HARDISON
CONTRIBUTING ARTIST

LIVE SAFETY

Brig Gen Bill Ball
28 AD/CC
Tinker AFB OK





Safety! How can you help?
You've just got to live it.
 It's that simple. What do I mean
 when I say that? I mean exactly
 that; you've got to **"Live Safety."**

For years we've been told to
 "Think Safety." In my opinion
 that motto just doesn't go far
 enough. You can "think" all you
 want; but if you don't take some
 action, safety just won't happen.
 Let me explain!

The first part of "Living Safe-
 ty" entails each one of us deciding
 that we can make a difference.
 How often have you heard that?
 Well, it works in safety. In fact,
 it's the absolute hallmark of safe-
 ty. Your commander and safety
 officer can talk safety until they're
 blue in the face; but unless you
 are committed yourself, safety
 will only be a program with a
 motto.

So what's your part? It's simple
 . . . you need only to become your
 own Safety Officer. That's really
 not such a big deal. In reality we
 all do that everyday of our lives.
 It's just something we don't give a
 lot of thought. But do think about

it. If everyone of us would take on
 that simple commitment, the ulti-
 mate impact would be very signif-
 icant. All of the safety guidance
 you ever heard would be projected
 everywhere each of us went. In
 that kind of an environment, each
 one of us would be making a posi-
 tive difference.

The second part of "Living
 Safety" is really pretty simple too.
 Only this part is the one that gets
 to the guts of the safety issue. . .
 taking the action that prevents an
 incident/accident. This is where
 "Think Safety" falls short and
 "Live Safety" sets the standard.
 What do I mean? Once again, a
 short explanation.

Each of us experience a myriad
 of daily situations in which we
 recognize a potential safety haz-
 ard yet do absolutely nothing
 about it. These situations occur
 on and off duty. Two quick exam-
 ples: weed eating a lawn and
 watching our barefoot children
 ride their bicycles. How many of
 us when using that weed eater
 have felt the flying debris hit us
 around the eyes and yet didn't

take the small effort to wear eye
 protection? How many of us have
 smiled watching our children
 enjoy their bicycle antics and yet
 let them continue barefoot when
 we knew that those little toes and
 tender feet were at risk? In these
 two situations, the difference
 between "Thinking" and "Living"
 safety is taking the simple steps
 that would make the positive dif-
 ference, i.e., wearing eye protec-
 tors and getting some shoes on the
 kids.

That's really the difference
 between what we're doing now
 with "Think Safety" and "Live
 Safety." Each of us needs to com-
 mit ourselves to becoming our
 own safety officer and to take that
 final action that makes a positive
 difference. It works. It works at
 home and at work. Why don't you
 try it? Better yet, why don't you
 "live it"? You'll like it!! Not only
 that . . . **YOU, TAC, and our Air
 Force will be better because of
 your efforts. Let's "Live
 Safety!"**



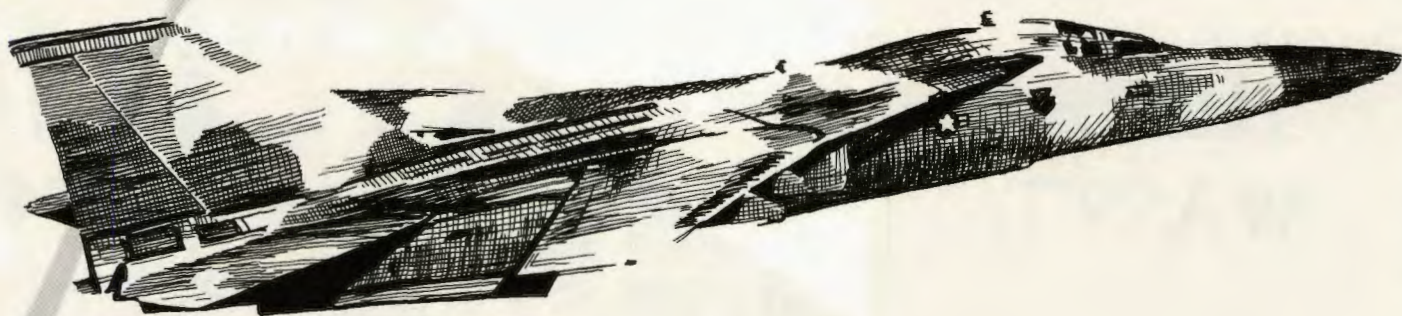
TAC AIRCREW OF DISTINCTION AWARD

Lt Colonel John Hill, Aircraft Commander, and Second Lieutenant William Brinley, Weapon Systems Officer, were lead of a two-ship F-111 surface attack tactics training sortie. The profile consisted of a low level tactical formation and a heavyweight weapons delivery at the bombing range. Both aircraft were configured with 8 MK 82 inerts. The aircrew had just entered the low level route and were descending through approximately 1,500 feet when they encountered a flock of snow geese. Ten to twelve geese struck the aircraft in various locations. The radome was shattered and a combination of bird remains and debris from the radome was ingested into both engines. Bird remains also entered the cockpit through the junction between the forward windscreen and the left hatch. With no pitot static instruments, limited visibility, both engines compressor stalling, and



Lt Col John E. Hill
524 TFTS, 27 TFW
Cannon AFB NM

the aircraft intermittently pitching and rolling, Lt Col Hill started a climb. Lt Brinley placed one hand near the stick to assist in controlling the aircraft, if required, and the other by the ejection handle. Lt Col Hill assured Lt Brinley that he had control of the aircraft, and then turned off all the dampers which alleviated the uncommanded pitch and roll maneuvers. During the climb, Lt Col Hill attempted radio contact while Lt Brinley selected EMER on the IFF. The number 2 aircraft in the formation rejoined and stated fireballs were shooting out of the back of lead's aircraft. Since all engine instruments were fluctuating wildly, the aircrew retarded the number 1 engine to idle and selected minimum afterburner on the number 2 engine. This eliminated a great deal of the vibration. The aircrew now had one engine stabilized in minimum afterburner, one in idle, no air-



speed or altitude information, limited forward visibility, a heavy fuel state, and a load of 8 MK 82 inerts. The number 2 aircraft assisted by giving airspeed, altitude, and heading information as the lead aircraft commenced fuel dumping to reduce gross weight. As the aircrew began a descent into the local area, Lt Col Hill deselected afterburner on the number 2 engine. The engine RPM immediately rolled back to about 65%. Upon advancing the throttle, the engine compressor stalled. On the third attempt, minimum afterburner was selected and the engine stabilized. The decision was then made to leave that engine in minimum afterburner and fly the approach with the other throttle in idle. The aircrew performed a controllability check and found the aircraft to be stable enough to attempt an approach. Max afterburner was selected on the number 2 engine



2Lt William S. Brinley
524 TFTS, 27 TFW
Cannon AFB NM

in an effort to assess go-around capability. The engine compressor stalled. When retarded to minimum afterburner, the compressor stalls stopped. At that point the aircrew realized a faster than normal approach would have to be flown to allow for the possibility of a missed approach. With the chase aircraft providing airspeed, altitude, azimuth, and glide slope information, Lt Col Hill was able to visually acquire the runway and perform a flawless landing in a critically damaged aircraft. The crew stopped the aircraft short of the departure end cable. After Crash Recovery personnel arrived on the scene, they were directed to shut down the engines and ground egress. The professional airmanship and exemplary flying skills demonstrated by Lt Col Hill and Lt Brinley saved a valuable combat resource and earned them the TAC Aircrew of Distinction Award.

THERE I WASN'T:



Capt Vinnie Constantino
44 TFS
APO San Francisco

I probably shouldn't have gone up to Hedo. Chum and Mange were going to drive the 2½ hours to the north coast of Okinawa after we played beach volleyball in the morning, but I couldn't follow them because I had to wait for a phone call. Thinking back now, it **was** odd that nobody seemed to remember **exactly** how to get to that secluded beach. Of the four people who described to me how to reach this place, all gave slightly different directions. But, I guess there was enough in common with all of them, I thought I could find it by myself. Besides, I had seen Yoda's map, and the island is only a few miles wide at the northern tip. How hard could it be to locate?

So I packed the car for the 24-hour adventure, and hit the road about 3:00, shirtless, shoeless, car stereo blasting. Leaving our cul-de-sac, I pass Lefty—the last American I would see for 15 hours!

The drive was fine, with that late afternoon summer sunlight painting everything a purple orange. I was by now looking forward to some snorkeling, maybe playing the guitar around the campfire, and sleeping under the stars. And at this pace, I'd reach the site before sunset (around 7:30). The last half hour of the drive was right along the western shore. I pass Japanese children enjoying a late afternoon swim, fishermen returning from a day at sea, mothers calling for kids and husbands to claim their sashimi dinners; interesting rock, water, cloud, and sun formations. I knew that when I reached "Hedo-misaka," or Hedo mountain, I need only follow Route 58 as it curves east about 4 miles further and would come to the familiar set of cars with "Y" prefixes on the license plates, designating U.S. Forces-owned. I also knew, from one explicit set of directions, if I passed a harbor town or began heading south, I had gone too far. Or so I thought.

Just beyond Hedo mountain, I stopped at Hedo point lookout from which you can see the entire northern shore of Okinawa. Looking east from there, I can easily make out tents and people on a few of the beaches on the north coast. They don't appear to be 4 miles away, but one of these had to be the site. They also don't seem to be right off the road, which was a few hundred feet above the waterline and maybe ¼ mile south of the beach. Oh well, I'd figure it out soon enough. At 5:30, there was still plenty of daylight remaining.

I jump back on the main road and drive the final 4 miles. Wouldn't you know it! I come to the harbor town and begin heading south—two clues which tell me I've gone too far. It didn't make sense though; I hadn't seen any cars parked along the side of the road. I did see plenty of dirt roads though, all of which headed in the general direction of the beach. Any left turn while headed east would have taken me to the



China Sea. One of those farm roads had to be the key.

Just for grins, I continue driving south. After a mile or so, the road begins a pretty steep incline. This has to be wrong now; I'm climbing away from sea level. I turn around. We can probably call this "Mistake #2 (the first—leaving home in the first place)" since, contrary to all my clues and calculations, I found the next day my camper friends were only 2 miles further down the road to the south. It was then 5:45.

I knew that by turning around, I would be forced to try a few of those unappealingly steep, rocky dirt roads which branched off the main road toward the water. I won't bore you with the subsequent two hours of pursuit, but the highlights include: (1) being surrounded in a pasture by dozens of cows whose loud demands I couldn't comprehend, but am pretty sure had something to do with getting the heck off their dinner (or toilet, depending on your viewpoint); (2) reaching one very

promising secluded beach only to find it occupied by 30 or so Japanese men in various stages of undress; bowing to every single one of them; snapping a few photos of the rapidly sinking sun; (3) hearing various parts of the underside of my car scrape rocks on the rugged roads to the beach; (4) driving 7 times past the same Okinawan farmer sitting on his front porch. It only made me feel a little better to discover later that Max and K-Mart visited these same places.

Exactly 2 hours after I began looking, I found myself back where I started — at the Hedo point lookout. It was nightfall; but from that vantage, I could barely make out one more beach which I hadn't yet reached by car. I couldn't tell from there just how I might actually reach it by car, since it was at the foot of a steep drop. But I could see a campfire and a few large tents. That had to be it! I really didn't want to drive all the way back home at this point. I would make one last stab at finding the guys. "Mistake #3."

Back on the main road, I choose the most promising pass toward the water. It is now fully dark, a quarter moon overhead. My chosen path — "road" is too strong a word for this passage — is more overgrown with weeds, but no less promising than any others I had attempted that day. As I round the first corner, high beams cut a swath through the black, the slope steepens, and I have to ride the brakes. No problem! I can hack this if I just take it slowly. Fifty feet later, the ground falls out from under me as the car pitches over at what appears to be a 90 degree angle. I can now say definitively that brakes no longer work when you're headed straight down—I'm along for the ride. Luckily (?), the journey ends in a few seconds as my car comes to a stop in a ditch, dust mushrooming, tree branches flying, and insects (probably) laughing hysterically. No amount of flooring the car in reverse got me out of that trench. At least my engine was smoking, though. Has this



THERE I WASN'T: A CAMPING

thought ever entered your mind, "I can't believe this is happening to me"? I didn't contemplate this too long as I crawled out of the car, hoping the famous nocturnal Habu snakes wouldn't find an American cursing in Italian appetizing. I hoof it to the nearest Japanese village about a mile away and stop at a house with a big truck parked in front. A motherly Okinawan woman answers my knock at the front door and, taking in my appearance, runs back in probably yelling, "There's an American tree-man out there!" I guess I had leaves and branches protruding from my clothes.

A 30-year-old gentleman, who I assume is #1 son, comes out to the porch, guardedly. Knowing there was no way to explain my predicament using my pidgin Japanese, I motion for paper and pen. To tell my story I summon my finest "Pictionary" skills, animating the drawings with arm and leg movements where appropriate. I know I hit pay dirt when I get that very Japanese reaction—the one where they suck air through the sides of their mouths and say "Ahhhh so," nodding knowingly. By now the entire family is out there: daughters giggling, grandmother staring, #2 son fidgeting, mother offering food, most of them smiling, thankfully.



TRIP TO FORGET



The man who appears to be the father grabs some chains, and we jump in their truck to survey the situation. Five family arguments (Japanese conversation is like Italian; it always sounds like a feud), 3 trips back to the house, countless cigarettes, and 2 hours later, my car is back on the main road minus the driver's-side mirror and my pride. The family refuses to accept dollars or Yen for my ruining their evening, but I vow to return someday with a gift and a camera to record the scene. Somehow I think the whole ordeal was entertaining for them. I thank them profusely by randomly spouting off every single Japanese phrase I can think of. At this point, you might think—as I did—that my experience was nearly complete. Negative tower—my clutch is shot. The car will go only 10 miles per hour in first gear, and the other four gears are unusable. No problem! Okuma, a U.S.-run recreation center, is only about 10 miles to the south. I can take my time getting there and stay for the night. It was now 10 p.m.

This plan was terrific until I came to a hill—10 miles an hour with a slipping clutch was not enough to make it over. I even tried going back to the previous summit and getting up as much

speed as possible doing “whifferdills” on each slope, but it just wasn’t enough—I would stall about 3/4 of the way up. So, I’m stuck in a bowl on an abandoned road; it’s dark; I’m in Japan; I’m hungry, tired, and I want to strangle the guys who gave me directions!

I hitchhike for 30 minutes before a young Japanese couple pulls over to help. Having no pen or pencil this time, I use hand signals to get my point across. The couple has obviously played “Charades” before and guesses “Taxi,” “Driving Miss Daisy,” and “Mad Max,” before finally figuring out I’m not playing games. Luckily, they have a rope and offer a tow to Okuma.

The trip took 45 minutes, during which time I was nearly hypnotized by their hazard lights flashing 5 feet from my face. Exhausted from a half day of frustration, I collapse on the beach at midnight and fall asleep immediately. I dream of downhill skiing, Japanese party games, the Gobi desert, and Gulliver’s travels. I wake up at 6:00 the next morning covered by high tide and seaweed. Sunday morning: I borrow some tools in an attempt to tighten my clutch. No luck. I ask an Okinawan maintenance worker to write two phrases in Kanji: “Can you



please fix my clutch today?" and "Could you fix my clutch tomorrow?"

I walk through the campground hoping to find somebody I know. Still no luck. Finally I approach a friendly-looking American couple. I use hand signals and drawings for five minutes before remembering they actually speak English. They agree to follow me to the two gas stations within limping distance of my car.

At both service stations I get the same bewildered stare in response to my pointy-talkie card. (Weeks later when I show it to a Japanese friend, he translates it as: "Hello good morning mister gas-man please can you fix my crutch!") Not "clutch," but "crutch!") I can't win.

Convinced now that there is no way I would get my car back home, I retire to the restaurant for some needed nourishment. For my first lucky break in 24 hours, I run into Yoda (ironically, one of the aforementioned bad direction criminals) and Jeff, who is somewhat of a mechanical wizard. He is able to tighten my clutch enough to get me home. (Collective sigh of relief here.)

Having gone through an experience like this, you'd like to think there'd be some lessons learned. Something that you and I could apply to keep us from having a repeat experience — and there are some. Such as:

1. Good preflight/pretrip planning. Even for a "plain vanilla" cross-country sortie, good planning can make the difference between success or failure.

2. Clarify communications. When the "directions" or "communications" aren't clear, the best opportunity to clarify them is before launching off. Planning on "winging" it later proved to be a poor option for me.

3. Be prepared to communicate. In this case, a pocket language dictionary or even just a list of common words/phrases for car troubles would have been a big help.

4. Take a map. Maps or written directions are almost always more accurate than our best recollections of the verbal directions. Do you remember the gossip game, where a verbal message is passed from person to person? Five minutes and ten people later the message has been drastically changed from its original meaning. And in this case when the verbal message was wrong to begin with, it only compounded my situation.

5. Go no Go point. Having a planned route or mission abort point can help us avoid the mental trap of "if I just try a little longer I'll get it done." I've read about too many aircrew members who have run out of gas or who landed with so little fuel remaining that they really scared themselves. They knew their flight was taking longer and/or more fuel than planned, but for some reason they were unwilling to call it quits and land at other than the originally planned destination. If I hadn't wound up in the ditch, how much longer would I have continued to look for my friends? It's much easier to set a realistic "Knock-it-Off" point during the preplanning, rather than later when all my attention is focused on "completing the task"—even if it kills me!

I'm going on another camping trip soon, but this time I'll do a much better job on the pretrip planning. If you see any other lessons from my last trip, just send them along to the editor, and he'll forward them to me.

TAC OUTSTANDING ACHIEVEMENT IN SAFETY AWARD



TSgt Brian C. Chambers
27 EMS, 27 TFW
Cannon AFB NM

Recently during a local exercise, Technical Sergeant Brian C. Chambers of the Aerospace Ground Equipment Branch, 27th Equipment Maintenance Squadron, 27 TFW, Cannon AFB NM, passed the portable aircraft component repair shelter. He noticed the containment dike around a five hundred gallon fuel

tank full of fuel. He checked more closely and found fuel leaking from the dike within a few feet of four large generator sets which were powering the repair shelter. Sgt Chambers quickly went into action, calling for assistance from both the AGE shop and the fire department. He hosed down the entire generator area with water and stood fire guard until the fire department arrived. Sgt Chambers then reseated the portable fuel tank's quick disconnect which he discovered was leaking. After the fuel situation was handled, he continued checking the

area and noticed the complex grounding assembly used by the component test and repair shelter was not connected correctly. Again he took the appropriate actions, both notifying the affected personnel and correcting the problem. Sgt Chambers' conscientious approach to daily situations, knowledge of emergency procedures, and safe operations prevented a potential disaster. Sgt Chambers' alertness to safety problems in all areas earned him the Tactical Air Command Outstanding Achievement in Safety Award.





IS THAT MUNITION LIVE?

Jimmy Campbell
1 AF/SEW

Most maintainers and operators quickly recognize that the "blue tip" 20MM ammo carried in our fighter aircraft is for target practice. The operators know from experience that the projectiles from those rounds won't explode when they hit the target. But, how many maintainers and operators know why the rounds are painted blue? And the answer isn't because the manufacturer of blue paint gave the lowest bid.

The U.S. military munitions community has a standardized color code system to identify the intended use of all munitions items used by the DOD. Within TAC, there are three frequently used colors, blue, yellow and brown, that instantly identify whether the munition is intended for training or "live" firing.

AIM-7 missiles are available in both live and training versions. Live AIM-7 missile warheads are

marked with a two inch wide yellow band painted around them. The rocket motor on a live round has a two inch wide brown band painted around the motor approximately 20 inches from the front. In the training version the bands are blue with "DO NOT FLY" stenciled in white on the radome, wings and fins.

AIM-9 missiles also come in live and training versions. The training versions are frequently flown as "captive carry" or "pilot training missiles" (PTM). Captive carry missiles are either assembled from an inert rocket motor and warhead or from a "dummy training missile" which replaces the rocket motor, warhead and target detector. Both types of captive carry missiles are identified with blue bands approximately two inches wide around them. The words "TRAINING" or "DUMMY" are on decals next to the blue bands. Live AIM-9 warheads have 2-1/2 inch wide yellow bands around them while the rocket

MUNITIONS STORAGE

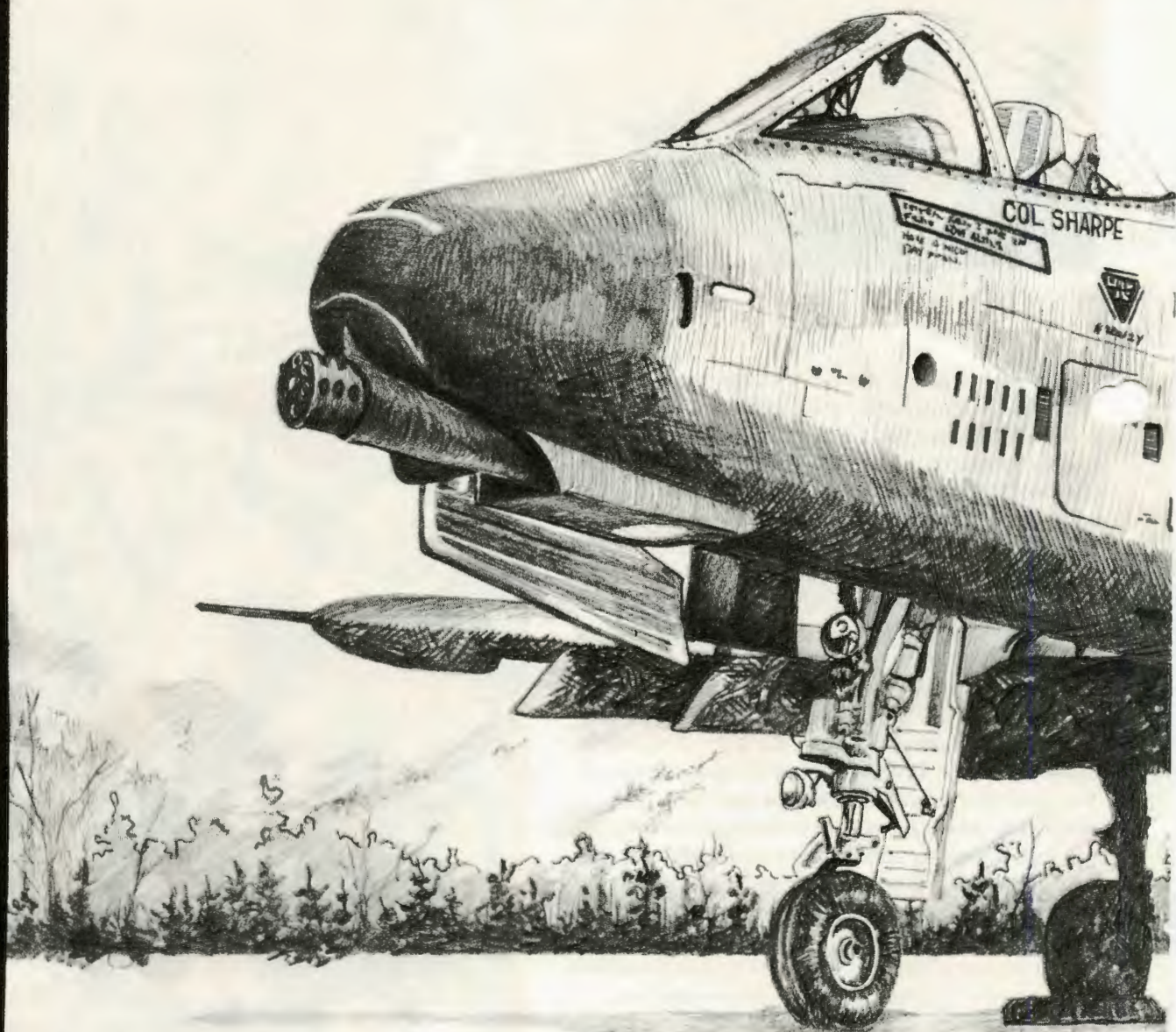
motors are marked with a brown band approximately two inches wide around the forward end.

With 20MM ammo, blue is the standard color used to designate a training round that contains no explosives within the projectile (bullet). Of course, there is a live primer and "gunpowder" propellant in the brass cartridge case to cause the projectile to be fired out of the gun barrel. 20MM ammo also comes with high explosives projectiles that will explode upon contact with the target. And, since the projectile is filled with high explosives, it is painted yellow.

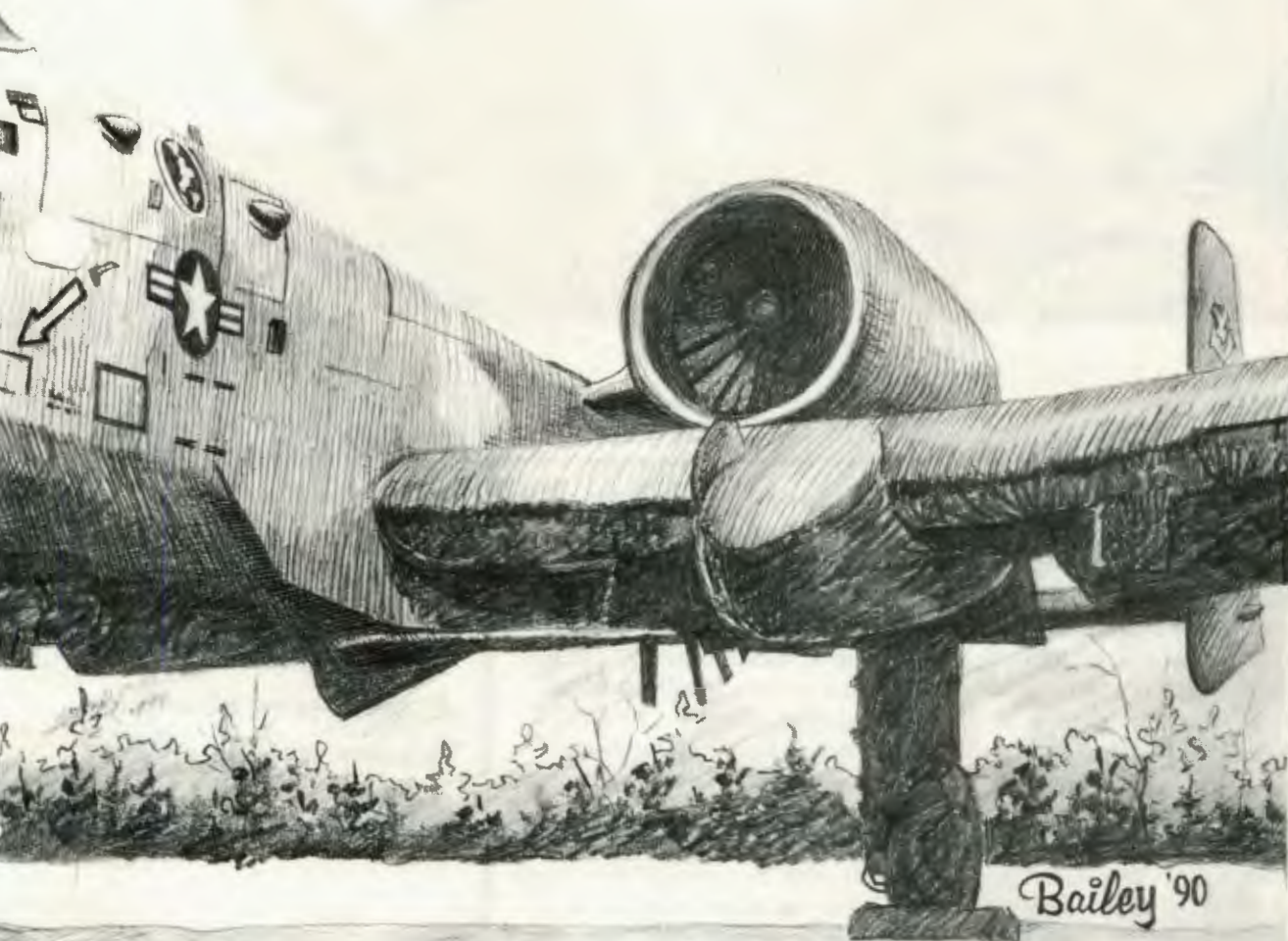
The other live ordnance item frequently used within TAC is the MK-82 bomb. Those bombs also come in training versions which are painted with various amounts of blue. Live MK-82 bombs have a wide yellow band painted around the nose fuze well. The munitions color code system is designed with the purpose of making all munitions readily identifiable for intended use. If you see blue paint/band and "INERT" or "DUMMY" marked on a missile, bomb or ammo, you can be confident that it is for training or captive carry use only. If you encounter a warhead or bomb with a yellow band or a brown band on a rocket motor, you should assume the round is live and will launch from the aircraft or explode as designed. And above all, if in doubt, contact a munitions load crew or the folks in the munitions storage area for assistance. They are the experts who can tell you with certainty what is loaded on the aircraft.



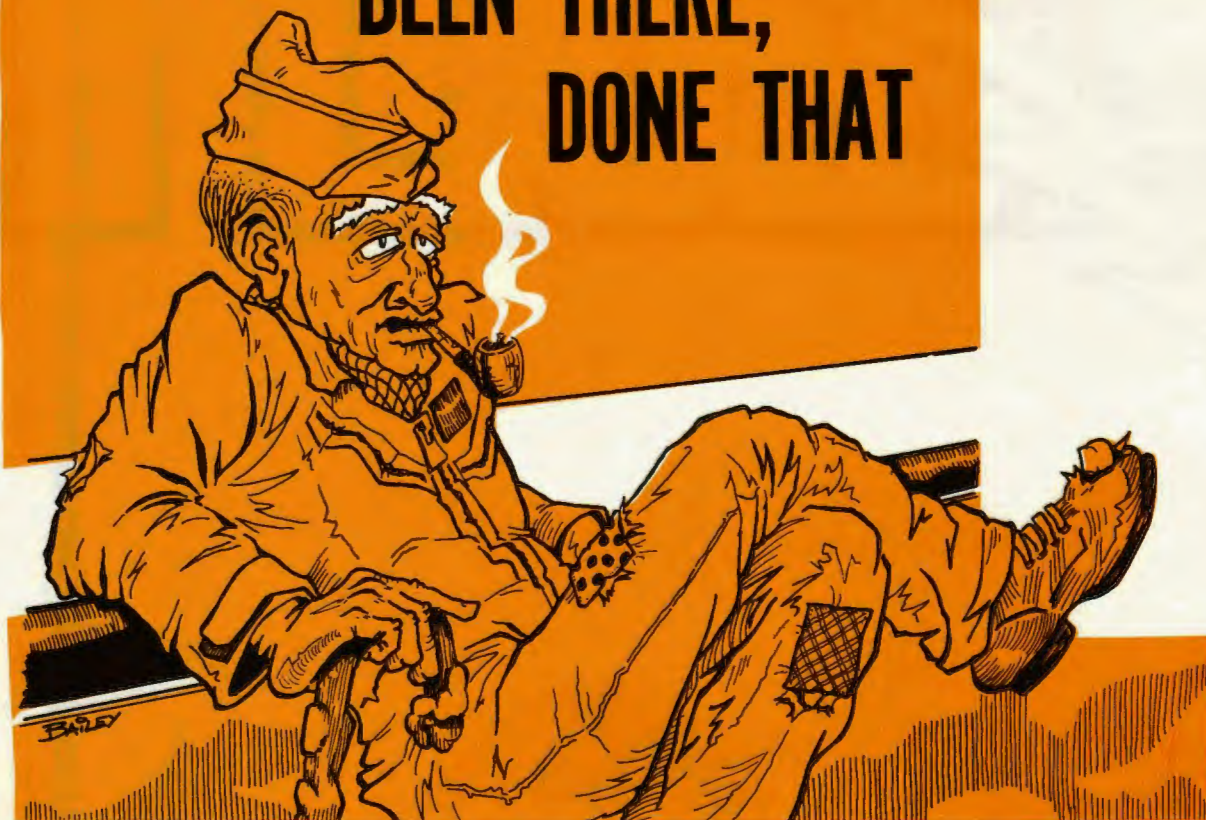
A-10 THUNDERBOLT II



DEBOUT



BEEN THERE, DONE THAT



Editor's Note: Welcome to the first in a series of articles designed to keep you the airplane driver and crew out of the spotlight. Our nonstatistically sound analysis (TLAR) indicates too many mishaps have the same alarming trend. An accident occurs, is investigated, the findings are published, and everyone remembers not to do that again for the next year or so. Then some new folks who weren't yet checked out in the jet when the first mishap occurred or some old heads who forgot the significance of what was previously learned, go out and fly an almost identical profile with the same predictable outcome. Then another message goes

out and everyone remembers not to do that again for the next year or so. At the cost of jets these days, that is an expensive way to get the word out. And so, this series is designed to publish the important lessons learned from previous mishaps without the added expense of having to fly the mishap over again. If you want to be part of a test group of aircrews who conscientiously read and apply what is published here, send us your name and address. Or, if you know someone who purposefully blows off articles/lessons learned like this, have them contact us, we need a comparison group to see who has a lower mishap rate.

**A new series of articles
to keep you "The Pilot"
updated on lessons
learned.**



Maj Dan J. Runyan
HQ TAC/SEF

The pilot was part of a multi-ship air-to-ground package including a pre-strike air refueling. After refueling his electric jet, the pilot forgot to close the air-to-air refueling (AAR) door which prevented the transfer of 2200 pounds of external fuel. When the forward fuel low level light illuminated with 3500 pounds of fuel remaining, the pilot failed to correctly analyze the situation and take appropriate corrective action. In other words he didn't recognize trapped fuel, did not follow the checklist, and did not discover the open AAR door. During the pre-cautionary landing pattern, the aircraft lost thrust due to fuel starvation, the pilot successfully ejected, and the aircraft was destroyed.

The year was 1979 and this was the first operational F-16 Class A mishap. We've come a long way in

ten years - or have we? Aural bingo warning has been added, bingo warning based only on external fuel (with the fuel quantity select knob in norm) has been added, and a trapped external fuel warning is coming in the near future. But over the decade we've had five class A/B mishaps and numerous Class C "close calls." The most recent fuel management mishap was in late 1989, and the story is nearly identical to the 1979 mishap. In every one of these mishaps, the fuel quantity indicating system has told the pilot exactly what was going on, but the pilots never recognized the problem until it was too late.

What can we learn from this? The checklist has been tweaked and warnings have been added to the dash one. All the hardware changes technically and economically feasible are being done. The

responsibility now rests, as it always has, squarely on the shoulders of you and me—the airplane driver. This responsibility requires knowing and understanding the aircraft fuel system (such as, what does trapped fuel look like on the quantity indicator?), following the published rules and procedures (timely fuel checks), and accurate and timely execution of the appropriate emergency procedure to include max range recoveries and flameout approaches.

The lessons learned in 1979 are just as appropriate in 1990. We've seen these fuel management mishaps occur all too regularly in the F-16 community—about every two years. That means we're due one in the next several months. **Let's see if we can't break this pattern and eliminate these senseless losses!!!!** ➤



DOWN TO EARTH

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

Jimmy Campbell *down to earth*
1 AF/SEW

It was a perfect day for doing some of those little things around the house that needed to be done. Not only was the weather comfortable with a slight breeze and a predicted high in the mid 70's, but Try Harder's wife had been making some strong hints about calling the repairman. Besides, he could use the nice weather as an excuse for putting up his new basketball goal.

Try's main interests were in aviation and he figured he could always sharpen his skills as a would-be aviator at eye and hand coordination with a little basketball. Besides, it was just plain fun to shoot a few baskets. Try had wanted to be a fighter pilot, but an accident with some dynamite

as a teenager left a ringing in his ears that kept him out of pilot training.

Try was one of those types who could do a little of everything, but he wasn't very skilled at working with tools. What he lacked in skill, he made up for in pure determination. He was a little loose with the safety rules, but what the heck; he was still alive and past 39.

There was one little project in the house that had to be done before he could get to the basketball goal. His wife had been pestering him to replace the electrical outlet in the hallway because it had been worn so much a plug wouldn't stay in.

He knew he should turn off the power at the circuit breaker

Try Harder and His Hair Raising Experience

before he started working on any electrical wiring, but the card listing which breaker controlled what circuit was missing. He also knew that if he started blindly throwing circuits he would have to reset all the electric clocks and the VCR, so he decided to do what he had seen a professional electrician do at his office. He would change out the receptacle while it was hot!

The electrician had put on some big heavy rubber gloves and went for it, and so would he. Try figured he could do the same thing, only he didn't have any of those big rubber gloves. No problem, he would just use his old worn leather gloves. After all, gloves are gloves aren't they?

Try put on his gloves and headed for the outlet with his screwdriver. He had removed the cover plate and had the receptacle out of the box. Things were going great; why should anyone have to be a sissy and turn off the power

work on a little old 110 volt circuit?

ZAPP, POW, CRASH! The screwdriver slipped making contact with the hot wire and Try's damp and salt soaked leather glove at the same time. The screwdriver then came in contact with the ground wire. Sparks flew, the circuit breaker popped, and Try

jumped grabbing his fingers and falling back, knocking a hole in the sheetrock wall behind him.

Now that the circuit breaker had popped, Try completed the task in the relative safety of a cold circuit. There was still that hole in the sheetrock that had to be fixed, but that could wait for another day.

It was time to put up the basketball goal. Try knew that his pesky neighbor Jim would be watching, so he put on a show. He looked all around making sure there were no overhead electrical lines that would interfere with him putting up the goal. He knew if he did anything dumb, he would hear about it from Jim who was a safety guy at the local Air Force Base.

Try was busy digging away with his posthole digger when Jim walked up. Try was starting to make another jab with the digger when Jim suddenly shoved Try hard. **CRASH, SCRRRATCH!** Try fell back throwing the diggers. They landed on the hood of Try's 1966 Mustang convertible, and in what appeared to be slow motion, they slid down the hood and crashed to the ground.

Try didn't know whether to cuss or fight when Jim offered his hand and asked, "Didn't you see that electrical wire in the hole where you were about to jab with the digger?" Try grinned and said, "No I didn't. Thanks, I guess I could have been electrocuted. Next time I am going to dig a hole to put up a fence, plant a tree or the like, I will call the power and phone companies first." Jim said, "Good idea, in most locals they will come out for free to mark the location of their underground wires."

Try filled in the hole and decided to stay away from any more electrical work for the rest of the day. So he went over to his Mustang to examine how deep the scratches were in the paint and in his pride.





INTERESTING ITEMS, MISHAPS WITH MORALS, FOR THE TAC AIRCREWMAN

HOW TO HAVE A FLIGHT MISHAP

Maj Don Rightmyer
16 AF
Torrejon AB Spain

1. Don't adequately plan the mission. You can play it by ear once you get "wheels in the well."
2. Don't listen to the flight briefing. It's the same old "standard" stuff anyway.
3. Disregard published flight discipline guidelines and rules. They're just written for "weak sticks."
4. Ignore the briefed and prevalent weather conditions. You're an all-weather type of guy in an all-weather jet. You can handle whatever comes.
5. Don't worry about whether or not you're current in the event you're planning to do on the sortie.
6. Don't worry about where your other flight members are in the formation or along the low level route. You've got enough on your mind with your own problems.
7. Fly the mission the way you think best. You don't need the flight leader in order to know what to do.
8. Try some new, innovative ideas whenever they come to mind. There's no better time than the middle of a sortie to delve into unexplored tactical territory.
9. Give the folks on the ground a good show. They love it when fighter pilots buzz them and make a lot of noise.
10. Use your before takeoff and airborne time to sort out family and work area problems. The quiet and solitude of the cockpit allow a lot of productive thinking time.
11. Don't worry about learning too much detail about your jet. These new computers and sophisticated technologies practically fly themselves. It's all automatic. Dash Ones are just written to support the lumber/paper industry.
12. If you're the flight leader, don't worry about the qualifications or skill levels of your flight members. They're "big boys" and can take care of themselves.
13. Don't worry about taking it slow when you get "back in the saddle" after leave, holidays, or TDY. You're just as sharp after a couple of weeks away from the cockpit as the day you last flew.
14. When you make a mistake or have a problem during a sortie, keep it to yourself. Everybody else thinks you're perfect, so why deny them that impression. It will never happen again anyway.

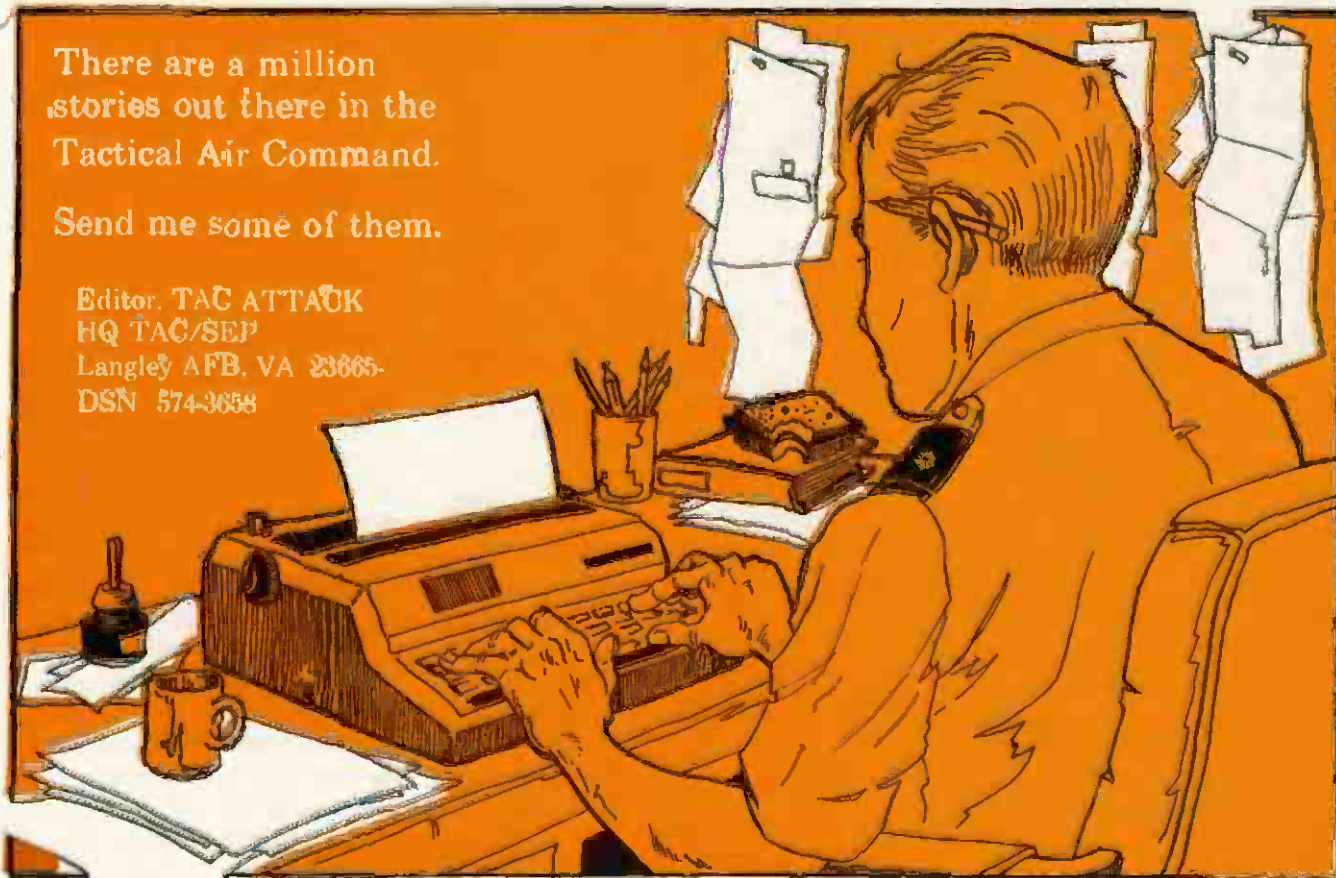
See yourself in any of those? If not, you could be kidding yourself. Remember—if you don't want to have a flight mishap, work to make sure the "bullets" above don't apply to you.



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

Send me some of them.

Editor, TAC ATTACK
HQ TAC/SEP
Langley AFB, VA 23065-
DSN 574-3658





DON'T FALL INTO THE

Col Stu Mosbey
347 TFW/DO
Moody AFB GA

Since coming to Moody AFB as the deputy commander for operations, I have made it almost a matter of ritual at every flying safety meeting to remind our pilots that complacency has killed more of their friends than any enemy of America.

I personally found out that complacency doesn't always kill—sometimes it just hurts a lot! I was performing my semiannual parachute training, training that I have probably done at least 30 or 40 times in my past 20 odd years of flying fighters. This time, however, I let complacency creep in where caution should have been. I



was trying to catch up from a 30-day temporary duty assignment and knew I had to have this training before I could fly here at Moody. I was in a hurry since I was scheduled to fly that afternoon. When we came to that part of the exercise which required that I be hoisted off the floor, then use the parachute lowering device to let myself down, the thought actually passed through my mind—"I should have my gloves on—oh to heck with it, it would take 10 minutes to go find them."

Without going into gory details, suffice it to say that one of the biggest shocks one can have in life is to look down at your foot and

see the end of your finger lying there.

The medical care I got was great. I'm all healed up now, except one finger is noticeably shorter, but was all the pain and suffering worth the 10 minutes I saved by not bothering to find my gloves and do that training right? No way!

The business of defending America is admittedly a dangerous one. Flying jets at speeds of 1,000 feet per second just a few hundred feet off the ground is inherently dangerous—working with thousands of gallons of JP-4 jet fuel is dangerous, and putting fuel in one of our F-16's requires

constant attention. Loading tons of cargo onto a C-141 aircraft offers plenty of opportunity for carelessness and injury. The end-of-runway crews work in an environment of noise, stress, and potential for danger everyday. Actually, I can think of no "safe" jobs in the Air Force. Weapons, medical, explosive ordnance disposal, supply, accounting and finance, every Air Force specialty code—all have hazards that complacency will compound.

So the next time any of you pass me, take a look at the hand I salute with and tell yourself that you won't fall into the complacency trap like I did. ➤



TAC OUTSTANDING ACHIEVEMENT IN SAFETY AWARD

Staff Sergeant Mark Jensen, 355th Equipment Maintenance Squadron, 355th Tactical Training Wing, Davis-Monthan AFB AZ, has significantly contributed to mission accomplishment and mishap prevention. Sgt Jensen was standing in the 333 AMU phase hangar during a routine meeting. Throughout the meeting, he watched a maintenance crew prepare an aircraft for towing. The individual driving the coleman tug backed it up to the aircraft in the hangar and positioned it for hook-up. The driver had exited the vehicle to check on something, when Sgt Jensen noticed that the coleman was starting to roll down the incline. Just 50 yards ahead, directly in

the path of the rolling tug, was a parked A-10 aircraft. Sgt Jensen immediately started running toward the rolling vehicle, caught up with it, and jumped in. He was able to apply the brakes and stop the tug from colliding with the parked A-10 aircraft. Although the parking brake had been set, it had failed to operate properly. Sgt Jensen then drove the vehicle to a safe, neutral area and parked it, chocking the wheels. His quick action prevented the possible loss of a valuable combat aircraft. Sgt Jensen demonstrates sound safety practices everyday. His continuous efforts as the 333d phase dock safety monitor have resulted in excellent ratings on the last two annual inspections. Several nota-



SSgt Mark Jensen
355 EMS, 355 TTW
Davis-Monthan AFB AZ



ble items are his initial newcomer briefings, his monthly safety briefings and his daily spot inspections. Sgt Jensen is an outstanding NCO and a superb example for others to be safety conscious at all times. His dedication and professionalism have earned him the TAC Outstanding Achievement in Safety Award.

Fleagle

AW, TH' COLORS OF FALL.
MOTHER NATURE HAS ONCE MORE
FILLED HER PALETTE WITH REDS,
BROWNS AND YELLOWS...

HARDISON

AND WIPED HER PIGMENT FILLED
BRUSH ACROSS TH' GREEN OF TH'
WOODS SIGNALING THE APPROACHING
CHILL.

© STAN HARDISON 1990

FLEAGLE'S GONE BONKERS
OVER AUTUMN THIS YEAR.

I KNOW AN MR. TALON AIN'T
HAPPY ABOUT IT 'CAUSE HE
AIN'T GITTIN' NO WORK
DONE.

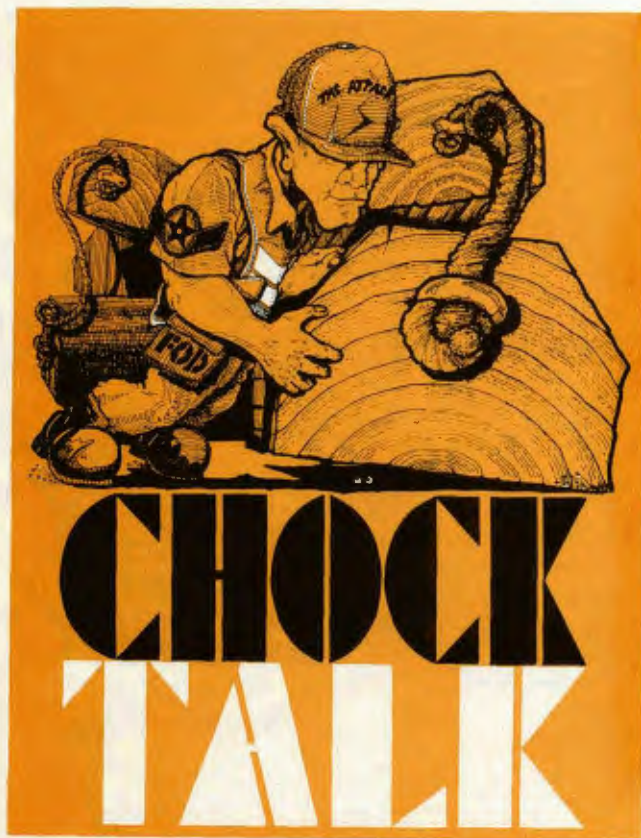
TALON
AIR SERVICE

FLEAGLE, YOU GONNA
COME IN AN' FINISH TH'
INVENTORY?

NOT UNTIL I'VE FELT TH'
POWER OF EACH COLOR AN'
TOUCHED BY EVERY TWIG
AN' LIMB.

THAT AIN'T ALL OF 'EM
BUT IT'S A START.

CRUNCH



chock talk

THERE I WAS

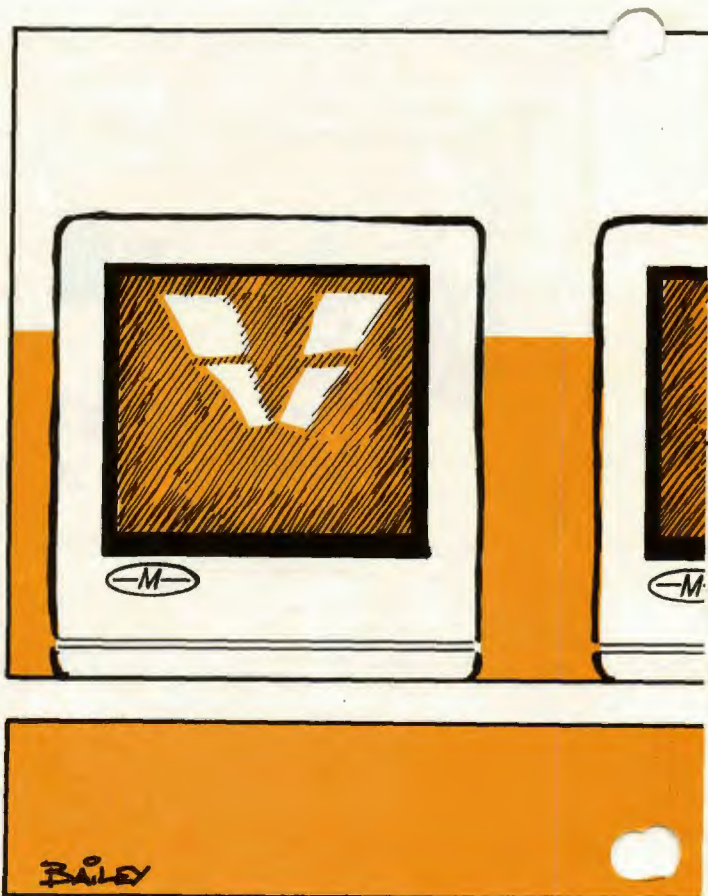
Mr. Bob Balsie
IBM
Owego NY

I work for a major computer company which designs and builds computers and avionics for the military. Before I became an engineer, I was an electronics technician in the same company; and I was responsible for debugging and testing existing products as well as helping to develop new ones.

The company that I work for is very safety conscious. One area in particular where they work hard to promote safety is in the area of eye protection, especially among those people who perform soldering work. As a technician, I was often called upon to do soldering work in an effort to analyze and pinpoint failures on various circuit board assemblies. Therefore, as a matter of course, I made it a point to wear my safety glasses any time that I engaged in any work which posed any type of eye hazard.

In an effort to design circuit boards which could contain as many components as possible, our mechanical designers had devised a card assembly which incorporated two circuit board assemblies mounted back-to-back on either side of an aluminum plate which acted as a heat sink. The boards were honeycombed with holes in which the component leads were inserted to make the circuit connections. The individual leads were then soldered into the holes. This created holes which were sealed by the solder on top and the aluminum plate on the bottom.

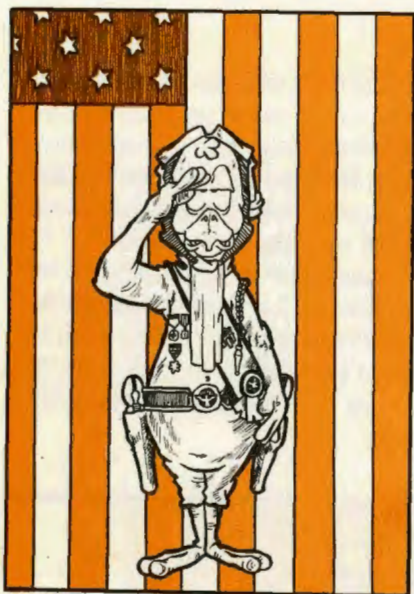
One day, it was necessary for me to remove a capacitor from one of the board assemblies, so I donned my safety glasses and put some fresh solder on the iron to get ready to unsolder the leads. Because the capacitor was small and the components were densely packed, I had to get very close to the assembly in order to see clearly. I touched the tip of the iron to the joint in order to melt the solder. Apparently, there was some soldering flux trapped in the hole under the solder and this flux has a boiling point far lower than the melting point of the solder. When I began to heat the joint, the flux in the hole started to boil and this pressurized the sealed hole. The solder



Perhaps you are a person who has been diligently using your safety glasses or other personal safety equipment, and they have never been called upon to save you from injury. Perhaps by now, you feel that you are just going through some useless ritual and you have about had it with the "wasted effort." I can tell you from experience, don't give up the good habits that you have developed! I was on the job for ten years before my safety glasses were called upon to protect me. But when I needed them, they were there. I hope that, should you have an accident, you will be able to say the same.

finally melted; and when it did, the hole "exploded" with a loud **SNAP!** The result was that liquid solder was spattered on the right lens of my safety glasses. Had it not been for those glasses, I would have had hot solder sticking to my right eyeball. I immediately called over the other technicians that I was working with and showed them what had happened. They all agreed that I was very fortunate to have escaped injury.

Was this just a freak accident? I had unsoldered dozens of components before and this kind of incident had never occurred. But freak or not, without the safety glasses I would certainly have been injured. I'm not saying that I would definitely have lost all sight in my eye, but I'm sure that my vision would have been impaired to some extent. As it is, I still have my 20/10 vision in **both** eyes.



FLEAGLE SALUTES

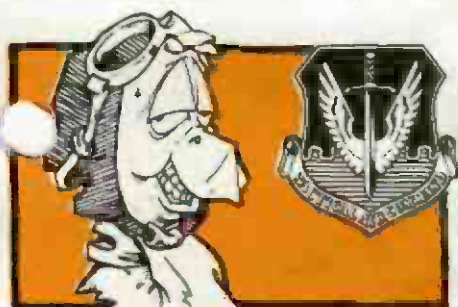
TAC'S OUTSTANDING AIRMEN

Technical Sergeant Leonard G. Wangen is the Assistant NCOIC of the Survival Equipment Shop of the 405th Equipment Maintenance Squadron, 405th Tactical Training Wing, Luke AFB AZ. In this capacity, he maintains a model workcenter safety program. His personnel are well informed on safety related matters and display an outstanding safety attitude. Sgt Wangen discovered a potentially serious safety problem with an Advanced Concept Ejection Seat (ACES) II drogue parachute. While replacing the drogue parachute canopy with a new item recently received from supply, he discovered one of the static lines was misrouted through the high drag bridle line. Three other drogue parachute canopies were also found with the

same problem. He immediately informed wing quality assurance inspectors to initiate a quality deficiency report and ensured the information was passed to higher headquarters. Through Sgt Wangen's expertise, safety concern, and quick response, a potentially critical condition involving an aircrew life support item was discovered and corrected. Actions such as these typify Sgt Wangen's concern for safety. He is an outstanding technician and leader whose concern for safety is reflected in every aspect of his professional duty performance. For his dedication and professionalism, Sgt Wangen earned a **Fleagle Salute**.



Staff Sergeant James H. Justice of the 1877th Communications Squadron, 49th Tactical Fighter Wing, Holloman AFB NM, was controlling local traffic from the control tower. An F-15 reported a five mile straight-in with a "gear down, full stop" call and Sgt Justice cleared him to land. At $\frac{3}{4}$ mile final, Sgt Justice noted his gear was not down and promptly sent him around, thereby preventing a serious mishap. Sgt Justice's alertness and heads up tower control earned him a **Fleagle Salute**.



TAC TALLY

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

• (SUCCESSFUL/UNSUCCESSFUL)

Total	TAC	ANG	AFR
AUG	AUG	AUG	AUG
THRU AUG	THRU AUG	THRU AUG	THRU AUG
FY 90	FY 90	FY 90	FY 90
FY 89	FY 89	FY 89	FY 89
2 24 24	2 16 16	0 5 8	0 3 0
0 13 6	0 7 4	0 4 2	0 2 0
3/0 20/0 20/4	3/0 12/0 10/2	0/0 6/0 10/2	0/0 2/0 0/0
0/0 1/1 1/1	0/0 1/1 1/1	0/0 0/0 0/0	0/0 0/0 0/0

CLASS A MISHAP COMPARISON RATE

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

TAC	FY 89	1.7	2.7	3.0	3.2	2.6	2.4	2.3	2.9	2.6	2.5	2.6	2.4
ANG	FY 89	0.0	0.0	1.5	2.3	2.8	3.1	3.2	2.8	3.0	3.6	3.2	3.3
AFR	FY 89	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	FY 89	1.2	1.8	2.5	2.8	2.5	2.5	2.4	2.7	2.5	2.6	2.6	2.5
MONTH	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

TAC'S TOP 5 thru AUG 1990

1st AF	9th AF	12th AF
"COMMAND-CONTROLLED CLASS A MISHAP-FREE MONTHS"		
130 48 FIS	63 507 TAIRCW	108 58 TTW
55 57 FIS	38 1 TFW	51 388 TFW
15 325 TTW	34 4 TFW	40 479 TTW
	19 363 TFW	32 355 TTW
	17 56 TTW	31 366 TFW

ANG	AFRES	DRUs
"COMMAND-CONTROLLED CLASS A MISHAP-FREE MONTHS"		
451 119 FIG	149 301 TFW	167 552 AWACW
427 147 FIG	112 482 TFW	58 28 AD
231 110 TASG	109 924 TFG	37 USAFTAWC
211 177 FIG	97 906 TFG	29 USAFTFWC
211 138 TFG	72 507 TFG	

