

FINAL ISSUE

MAY 1992

ANGLE OF ATTACK

With the start of a new year, TAC is initiating the TAC ATTACK, a monthly magazine written for the officers and airmen actively operating and maintaining the weapon systems of this command. The TAC ATTACK will be a series of verbal thrusts directed at potential accident areas within the command. Logistical and operational information for this purpose will be selected from all available sources. Above all, it will be your magazine, designed to furnish information which will assist you in doing your job better. To help make this a reality, you are urged to take an active interest in the magazine, and to submit material for publication, particularly if you have knowledge of an incident or procedure which would be of help or interest to others.

With these words, Lt Gen Jacob E. Smart, then the Vice Commander of TAC, launched the first issue of *TAC Attack* in January 1961. Now, 32-years later, we are closing an era in the history of mishap prevention with this last issue of *TAC Attack*. Tactical Air Command has come a long way since then, and our pages have reflected every step of that progress. You need only to scan back issues of *TAC Attack* to read a history of sorts. Our safety progress is there: our technical advances, our old and new aircraft and their problems, and the changes in our operational thinking. The old magazines also point out, too frequently, one of our human frailties -- our failure to learn from the mistakes of others.

As I peruse past issues of *TAC Attack*, I'm imbued with varied feelings and emotions. I feel pride in the long and successful history of mishap prevention the magazine embodies. We have made enormous gains in pursuing our goal of zero mishaps. Likewise, I feel tremendous pride in the efforts of the countless editors, authors, and artists who made *TAC Attack* such a longstanding success. At the same time, I experience an almost overpowering sense of sadness.



Sadness because a tried and true means to prevent mishaps is ending; a trusted institution is closing down. Sadness also, because we still lose people and assets in senseless mishaps. We have often said, "There are no new ways to crash airplanes." This same thought could apply to all mishaps regardless of safety disciplines. We have seen the same mishap sequences time and time again. The circumstances remain the same, only the people change. Perpetual relearning appears to be our destiny.

However, the pride I have in our past successes and the confidence I have in the future convince me that our mishap prevention efforts will continue to improve. The culture of safety, as we know it, will carry over to Air Combat Command and get even better. We have the leadership, the teamwork, the vision, and the power to make safety in the new command better than it has ever been. By dedicating ourselves to continuous improvement fostered by teamwork and excellence in performance, we can ensure that the lessons so faithfully documented in *TAC Attack* are not forgotten.

My thanks to all of our readers and contributors. You are the people responsible for the TAC culture of safety that permeates our entire working environment and causes us to view safety as an integral part of everything we do. With your help, we will make it even better in Air Combat Command.

BODIE R. BODENHEIM, Colonel, USAF
Chief of Safety

TAC Attack

DEPARTMENT OF THE AIR FORCE



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TAC Safety - Then and Now

Gen John M. Loh
Commander

Capitalizing on the strengths of our current commands while creating a new one requires each of us to change. In this era of constant, continuous improvement, we need to review and enhance familiar concepts and programs. As we establish Air Combat Command, we have an opportunity to provide greater capability to support our "Global Reach - Global Power" philosophy. That includes adapting our safety culture to serve Air Combat Command's unique needs. This final issue of

TAC Attack gives us an opportunity to look back at our past as we prepare for our future.

TAC has come a long way in mishap prevention. In the 1950s, our average Class A mishap rate was 25.2 mishaps per 100,000 hours of flying. Our aircraft losses in training almost equaled our losses during combat operations in Korea (1240 versus 1466). In an effort to improve, TAC established safety offices and trained full-time safety professionals to

investigate mishaps, analyze results, and make recommendations to prevent recurrences. This brought commanders and supervisors into the process, and we reduced the number of mishaps.

In the 1960s, our average Class A mishap rate was 10.2. Aircraft design problems caused many of those accidents. In response, we worked to improve the technical aspects of our aircraft. As our systems became more reliable, our mishap rate dropped further.

By the 1970s, TAC had driven the average Class A mishap rate to 5.1. Many people thought that 4.0 was the best we could hope to attain. But as TAC emphasized more realistic and better formal aircrew training programs, the mishap rate fell further. Programs like Red Flag, the Aggressors, low-level and composite force training improved our combat capability and our ability to fly safer. Despite operating in a more challenging environment, our Class A mishap rate continued to decrease. By the 1980s, our Class A mishap rate was down to 3.5.

Our safety efforts over the last four decades culminated in 1991 being our best year ever with a 2.0 Class A mishap rate. Our continuous improvement in safety over the last decade saved lives and aircraft. We saved the equivalent of over 300 aircraft

and almost 250 aircrews -- some 12 fighter squadrons -- in the last 10 years. That equates to over a \$6 billion savings.

The true test of our efforts came in the Gulf War. We flew more than 83,000 hours in Desert Storm with only two noncombat mishaps. In contrast, we flew 31,000 hours during the same time period here at home and we also had two mishaps. Putting those two figures together gives us a mishap rate of 3.5. Our combat-related mishap rate for the entire war was 16.76. Compared to World War II, with a mishap rate of 971.2, Korea, where the mishap rate was 210, or Southeast Asia, where it was 90, it's obvious our obsession with safety is saving lives and enhancing our combat capability.

Through our continuous efforts to emphasize and enhance our safety culture, we have seen dramatic improvements. But we cannot be satisfied where we stand today. We must constantly strive for a culture of continuous improvement. There is always a better way of doing things. We cannot let ourselves be lulled into a sense of final success or ultimate achievement. In four decades we've reduced our mishap rate by 92%; and we transitioned from the eras of management, engineering, and training, into an era of human factors. It was safer to fly

combat missions in Desert Storm than it was to fly in peace time until 1965.

But we can't rest on our laurels. We can keep improving. Training our people extensively in all work-related skills, developing their understanding of procedures, and refining these procedures through constant practice will bring us even greater rewards. We must do more than simply think about safety; working safely must become a natural part of everything we do.

Safety is part of our culture. If you see FOD on the flight line, you pick it up. You do it automatically because you know it could damage an aircraft and possibly cause an accident. You buckle your seat belt when you get in your car. You don't think about it -- it's part of your routine. We minimize risk through our safety culture -- it's second nature.

As Tactical Air Command and *TAC Attack* take their place in Air Force history, we can look back with pride on ending with our safest flying year ever. But we don't have much time to reflect on the past. We need to set new goals and standards for Air Combat Command. I believe a Class A mishap rate of zero is possible. Our command, our Air Force, our team members, and our families deserve nothing less than our best.



HEAVEN CAN WAIT

Reprinted from *TAC Attack* January 1961

Back in the operations section of a certain headquarters, a balding major replaced the telephone in its cradle, leaned back in his swivel chair, and eyed the stocky captain sitting on the edge of his desk. "As I was saying, last time we were down there, I was walking out to my aircraft and happened to look up as this F-100 was taking off. All of a sudden he rotated it into take-off attitude and almost at the same time, swerved to the right about 30 or 40 degrees." Automatically he demonstrated with his hand.

"He had the nose way high and essed back and forth. He seemed to be held aloft by the blast from his tail pipe alone. Sure was hairy looking; just like that color movie of the F-100 that clobbered at Edwards. Dust was flying in all directions and I'd have sworn he banged his left wing tip on one of his swings back toward the runway." He paused to pull at one ear, then

continued.

"Anyway, just when I expected to see a ball of fire, he pulls up from the cloud of dust, gets above the level of the trees, toggles off his drop tanks, and staggers on out. Made a couple of real cautious looking orbits of the field while another hundred looked him over. I decided the fun was over and went back to preflighting my bird." He paused and looked an unspoken question at the captain.

The captain shrugged his shoulders and said, "No, we never heard about it officially. In a way, it's too bad we didn't because we might have stopped another similar one. The pilot did submit an OHR on it tho, which we caught during our last survey. He was one of their stand board pilots and it really shook him."

The major asked, "Do you remember what caused it? Did he just pull it off too soon or what?"

"No," replied the captain frowning slightly, "as I recall, he blew a tire at just about lift-off speed. I didn't check as to whether or not the tanks had fuel in them...."

The major interrupted, "From the way they fell, I judged them to be empty, although some fuel spewed out as they left the aircraft. Anyway, he had it under control before he punched them off...."

"You know that sounds even more like the accident we had at Rainfield, that was a month or

so ago, before you came. This captain was with an outfit on rotation. They'd landed at Rainfield after the usual 8 hour drag. Had the birds serviced with about a thousand gallons which gave them close to full internal fuel.

"About 20 hours after servicing, they fired up for the next flight. Well, while sitting on the ramp that way, fuel drains back into the empty 450's. After the accident they checked some of the other aircraft and found some birds had drained back over 1500 pounds."

The major interrupted. "I thought they were suppose to pressurize the tips and empty 'em before starting their take-off - Dash One says something about acceleration. What did this guy do - forget to pressurize?"

"They think so. He was number three in the lead flight; only the leader aborted due to smoke in his cockpit. Number two almost got into trouble. He rotated rather briskly and kinda staggered off the runway. Number three rotated his just as fast; only he hadn't rolled his quite as far. He got into a nose high attitude and almost caught the tail skid and right wing tip on the lift-off. At least that's what some colonel said. This colonel was about 500 feet from the lift-off point, so he had a good look."

"Right after he staggered off the runway, his right wing dropped, came back up, then

went down in earnest. The bird yawed well to the right. About this time, someone gave him a call and told him to watch his nose. Perhaps he reacted to this; anyway, the nose started back down, but by then it was too late. The right wing dug in and that was all she wrote."

"Sounds like he went through the same ritual as the guy I watched," said the major. "The investigators didn't find anything wrong with the bird, did they?"

"No," replied the captain. "They checked out the control actuators and they were OK. They did prove from fuel gauges that he had 500 pounds of fuel in the left drop and 1100 pounds in the right. This probably had quite a bit to do with the accident, but...."

"Was it a hot day?" Queried the major.

"No, as a matter of fact, it was rather cool, but as I was going to say, he had pulled the bird off at about 2300 or 2400 feet and his calculated take-off roll was closer to 2600 feet, and as far as I'm concerned, this had more effect that the aft CG. Offhand, I rather think he was trying to impress someone by making a max performance take-off. He impressed 'em all right."

The major rubbed his chin, the said, "Yeah, you're probably right. That accident sounds similar to the hairy one I watched. Undoubtedly when the guy I watched blew his tire, he decided to get airborne rather than abort and pulled it into the

air before it was ready. He reacted to the blown tire rather abruptly and transmitted this abruptness to the control stick. Question is, how can we prevent another? I understand TAC has had three nose-high take-off accidents this year."

"That's right, or partly right. A couple of troops in an F-100 lost their AB after they were rolling good. They tried to pull off early, or at least that's what it looked like to several well-qualified witnesses. They went off beyond the end of the runway, nose 'way high, until they hit a boxcar some farmer was using for a storage bin. It killed both pilots. The other accident hardly fits; he had ample speed and apparently tried a roll. Why, no one knows; possibly he was tired of flying and figured he had a sure-fire method of getting grounded." He paused a minute, then continued.

"To stop similar mishaps, I'd

say education is the only hope. We can tell pilots not to pull the bird off before it's ready to fly, and to handle it gently when they do take-off. Of course, if they get a blown tire at the wrong moment, they'll have problems, and will have to make a split second decision. If they are below the aircraft's minimum flying speed, about all they can do is abort, because the drag of the blown tire plus the drag of whatever opposite rudder, brake, and nose gear steering they apply to keep on the runway will most likely keep them from accelerating to take-off speed. With a heavy external load they could reduce the required take-off speed by punching off the load at the risk of a damaged stabilator and if they are between the minimum take-off speed and normal take-off speed, they probably would do well to try to get airborne. If they do, they should keep in mind that they will get better

results by handling the machine as smoothly as possible and must remember that the aircraft will have a tendency to pitch up slightly when they jettison tanks."

"Should they elect to abort, and have difficulty keeping the machine straight, they may have to turn off the anti-skid and deliberately blow the opposite tire to even things up. Since the action will take place in a matter of milliseconds, they must have a course of action pretty well preplanned; otherwise they'll be too far behind things and will be unable to gain control."

"Regardless, everyone in the field must continue their efforts to improve tire reliability by keeping them inflated to the proper pressure and by using a point system."

"OK," said the major, "Why don't you write some of these things for the ATTACK and we'll feed it to 'em." ➤



General Disosway on Safety

Reprinted from *TAC Attack* July 1962

*"When you take a chance, you trust to luck.
When you plan ahead, you make your luck!"*

It seems unbelievable that a reasonable person could read the emergency procedures outlined in the Dash-One and still feel "It couldn't happen to me."

These procedures are, in effect, alternate courses of action. If we memorize them and know when to apply them, we automatically adjust the odds in our favor.

Yet, experience has taught us that a few will not plan to meet contingencies unless forced to do so.

For example, we are required to list an alternate airfield for instrument flight when our destination doesn't meet certain weather minimums. This requirement was laid on many years ago, and was not an arbitrary move. Rather, it was a clear determination by those shrewd enough to realize the priceless value of alternatives.

Thinking along these lines, let's plan every operation in such a manner that we can safely complete each mission even though a forecast tailwind of 125 knots turns out to be much less or from the opposite direction. Thus, we leave nothing to chance when we use our heads and always have an out when we fly.

We can renew our determination to do this by recalling the experience of early leaders of aviation. They quickly learned that the less they left to fate, the greater their control over destiny. It naturally evolved that the wisest of these leaders, and the ones who lived the longest, flew by plan and not by chance. They planned what they would do IF; they had a plan for living! ➤



A black and white photograph of two USAF Thunderbirds in formation, flying upside down. The aircraft are sleek, delta-shaped fighters with dark paint and white markings. They are flying against a cloudy sky. The text "TRAINING & AIR DISCIPLINE..." is overlaid in large, bold, white capital letters, and "key to maximum performance" is overlaid in a smaller, white, lowercase font below it.

TRAINING & AIR DISCIPLINE...

key to maximum performance

Capt M. A. McPeak
Lead Solo
USAF Thunderbirds

Reprinted from *TAC Attack* August 1968

Any fighter pilot worth his flight pay can do low altitude acrobatics...with practice. But if he attempts to fly upside down at skip bomb altitude, then the important consideration is his success rate. The Thunderbirds demonstrate sustained inverted flight literally a thousand times a year, at 100 or more different show sites, around varying ground obstacles and with show site elevations ranging from sea level at Langley to about 6500 feet at the Air Force Academy. And, of course, the only acceptable success rate is 100 percent.

Thunderbirds Five and Six are the solo pilots, number Five being the lead solo, and number Six the second solo. While the pilots of the "Diamond" formation demonstrate the beauty and grace of precision formation acrobatics, the solos are in the maximum performance business, flying upside down, doing maximum deflection rolls, or demonstrating low speed handling characteristics, all with minimum terrain clearance. During a routine airshow, the solo pilots make five head-on opposing passes with a programmed closure of 850 knots and a miss distance of 25 feet.

To the uninitiated, these and other solo maneuvers seem to be hair-raising "stunts" reminiscent of the old barn-storming days. The truth is that the traditional military concepts of training and discipline are the building blocks of

our airshow. How this is so, can be understood by examining some of the "inner workings" of the operation.

TRAINING

The Diamond pilots, lead, left wing, right wing, and slot, fly one position for their entire two-year tour with the team. However, a solo pilot spends his first year as solo wingman and then one year as solo leader. When he graduates to lead solo, number Five trains his new number Six. This is an ideal progression, since the year spent as number Six provides the best possible preparation for solo leadership and for the execution of some of the more difficult maneuvers performed by the lead solo singly.

Initially, the new solo pilot learns to fly precision formation. During the first few training sorties, he does very little on his own. This is important because number Six spends quite a lot of time on the wing. During the Calypso Pass for instance, he flies a normal wing position on the lead solo who is inverted. Moreover, the solos fly the outside wing positions for six-ship acrobatics. The outside of a six-ship roll or loop is not very comfortable if you can't formate. In addition, as Capt Jack Dickey, our slot pilot, pointed out in the May issue, we feel that formation training is ideal preparation for maximum performance flying.

So, at the outset we emphasize formation proficiency and take relatively short breaks for solo work. During the breaks, number Six will start learning the more simple maneuvers, such as the slow roll or inverted flight. He learns to do these maneuvers at altitudes well above show height

while being chased by the solo leader, who calls each maneuver. As his formation proficiency increases, more time can be devoted to solo maneuvers and terrain clearance. These can gradually be decreased, and the more difficult maneuvers, such as the roll on takeoff, point rolls and over-the-top maneuvers can be introduced. Only after the second solo has demonstrated mastery of these maneuvers do the solos begin to fly them head-on. Even then the lead solo pilot calls all the shots. The second solo tries to match the altitude and nose rotation rates of the leader for each maneuver. Thus, the training process is phased from the relatively easy to the more difficult. Each phase is mastered before the next step is taken.

Equally as important, we train hard. The solos normally fly twice a day during the training season. The missions last one hour, and there isn't much droning around turning cold air into hot. Although we do only one set of opposed aileron rolls in the airshow, we may spend days doing one set after another up and down our training area. "Train hard, fight easy." It's usually a relief to wind up training and hit the road. Flying official airshows then takes care of most of our training requirement.

During the training period we develop the habit patterns that are used throughout the show season. The importance of developing correct habit patterns cannot be overemphasized. From engine start to shut down, we strive to make each Thunderbird performance identical. All radio calls are broadcast in the same way every time. After start checks are made in the same order, every time. Even certain "jokes" are cracked, every time in the same way. They get a little corny, but if they weren't said, it would affect the rhythm of the show, disrupt the habit pattern or possibly counteract consistent performance. And consistent performance is the name of the game. No matter what the elevation of the show site, or how bad the show line, or who is watching, proper habit patterns protect us from fatal mistakes. It's often the unplanned, unpracticed maneuver that gets a jock into trouble.

AIR DISCIPLINE

Training insures that each man knows what is required of him and how to accomplish it. Air discipline is based on a grim determination to do the job properly. Pretty close is not close enough. Solo pilots, for instance, never approach a show with the attitude, "Today, I'm really going to show them how low I can fly inverted." We try to show everyone the same inverted pass we were trained to make. We don't get any points for frightening ourselves or the spectators, so we strive to do the maneuvers as programmed. We are required to enter and exit the show maneuvers at some minimum safe altitude; we shoot for that and no lower.

Discipline permeates all of our ground and air operations...even those not directly involving the airshow. For instance, on flights between show sites we cruise in "Thunderbird Spread" formation. In spread, the wingmen move from three-foot wing overlap out to wing-tip clearance where they can help navigate and visually clear the flight. Wing-tip clearance is then held throughout cruising flight. In other words, the fact that no one is watching is not allowed to breed sloppy work.

Air discipline means that we try to fly every maneuver in every airshow perfectly. So far as I know, none of us has ever succeeded. Perfection is an elusive thing. But the airshow is spectacular and crowd-pleasing and **safe** because of this disciplined approach.

CONCLUSION

These ideas about the worth of training and air discipline are based on the contributions made by over fifty pretty good fighter pilots who have flown with the team over the last fifteen years. Each year the accumulated knowledge and tradition is passed on to the new team members, making it possible for us to operate the way we do. Indeed, these concepts are endorsed by successful military organizations everywhere, and the fact that they form the cornerstone of the Thunderbird operation should not surprise the old, and still bold, TAC fighter pilot. ➤

GIBBER'S DOZEN BULLETS

Or how to survive a single-seat fighter

Maj John B. Gibbs
310 TFTS
Luke AFB AZ

Reprinted from *TAC Attack* August 1984

As this crusty old major was leaving my last assignment, a shiny new lieutenant asked me, "How do you keep from killing yourself flying single-seat fighters?" You would think after all these years I'd have a good answer, but all that came to mind was, "Don't fall asleep while flying." True, but very weak. Embarrassed to the point of academia, I sat down and wrote this. I hope it says something useful to present and future single-seat lieutenants. I'd like to see you all live to be crusty old lieutenant colonels.

Dear Lieutenant Whoever,

Forget my last answer. It was Friday night and very late. Here's a dozen bullets. This ought to be enough ammo to last you a career.

● **Goals.** This may seem like an overused term, but it is the most important aspect of flying to me. Not only does the squadron need goals to know where it is going, not only do you need goals to keep improving, but each mission and mission segment needs goals. Without them, flights become lax; discipline suffers. Fighter pilots must be challenged. Idle

hands and all that.

● **Instruments.** You must be the best instrument pilot there is. Handling complex situations or emergencies in the weather is not the time to discover you have no crosscheck. I know "sunshine IFR" is not the best place to develop good instrument habit patterns, but be honest with yourself - use a chase and really fly heads down now and again. Don't pencil-whip those approach requirements. Use your time in the simulator effectively; work on instruments, not trying to depart it or zoom to 100,000

feet. If it has a visual capability, crank in a 300-foot ceiling and 1 mile vis. Instrument flying is as important to single-seat flying as BFM.

● **Blindfold Cockpit Check.**

Have you done one since UPT? I can't always put my fingers on every switch the first time, but I can find every switch (and change TACAN channels) without looking. When it's IMC or night on the wing, I want to be able to handle the situation or the emergency without taking my eyes off the primary attitude indicator.

● **Humility.** Be humble (occasionally anyway). Don't let your ego hide poor or unsafe habit patterns. Listen to other people. Listen between the lines; criticism is sometimes veiled. Be critical of yourself. Being positive, not negative, makes a big difference in your flying attitude.

● **Efficiency (or economy of effort).** Organize your cockpit. Depending on the flying demands, place your checklists where they can do you some good, not where they require unnecessary movements or where they compete for your attention. Develop and use good habit patterns. Organize your missions in the same way. "Cosmicity" kills in my book. Simple tactics with straight forward backups always work best, especially in combat. One

of my squadron commanders put it best. "To the IP you are a clock; to the target you are a bomb." KISS (keeping it simple) is a proven technique.

● **Regulations.** Know them. How many accident reports have you read that might have been avoided if the pilot had followed regulations, known the Dash One better, or used common sense (see below). In today's Air Force, there's plenty of challenging tactical aviation within the regulations. If you don't like them, don't disregard them.

● **Sense (as in common).** I like to say that the rules of engagement we fly with are a replacement for common sense. We all know that most ROE were developed from accidents where someone had a lapse in common sense for one reason or another. Be aware of the impact of your decisions. Don't hesitate to make them, but use your head. Addendum for leaders: Treat your people as if they can think for themselves, or they will prove your worst suspicions to be well-founded.

● **Realism.** Try to achieve realism on all sorties. Incorporate fence checks into all missions. However, being "over realistic" is very dangerous. Losing a combat aircraft in a noncombat situation, because you pushed yourself or your wingman over the limit, is

inexcusable.

● **Unnatural.** If it feels unnatural (i.e., night weather formation), there is a good reason for it. It's your mind telling you to back off. You may be pushing the limit of your gas or your low altitude comfort level or the regulations. Listen to your personal warning device.

● **Lead (not led).** Every single-seat fighter pilot should be a leader. Just because you are a wingie doesn't mean you don't lead. Do you participate in mission preparation and debrief, or do you do as told? Do you tell your leaders what really went wrong, or do you just gripe at the bar? Don't let bad leaders lead you down the wrong path.

● **Emergencies.** Again, keep it simple. Have a plan to get your jet on the ground, wheels down, safely. Develop rules of thumb that allow you to maintain control while you analyze the situation. Climb, stabilize, cope. Don't kiss off your emergency procedure practice sessions. Learn from others' mistakes and situations.

● **Safety.** Added to make an even dozen. Seriously, if you follow all the above rules, safety will take care of itself.

Well, Lieutenant, good flying to you. Of course, the worst flying I ever had was great.

Cheers,

The Gibber ➤

EXPERIENCE

VS

CURRENCY

Major Pat Tank
HQ TAC/SEF

We had several Class A mishaps involving highly experienced pilots in the last few years. Many of these experienced pilots had something in common: They were low on currency.

Many flying units tend to put too much emphasis on experience without looking at a pilot's currency. The culture in these units has evolved in such a way that pilot experience is too easily substituted for flying proficiency and currency. As a result, supervisors and flight leaders are engaged in a decision making process that by default puts excessive emphasis on experience. How often have you heard of an experienced pilot turning down a sortie or backing off on mission objectives because he did not feel he was current/proficient enough? It just does not happen. There are many pitfalls inherent in giving too much credit to experience

and indeed substituting experience for currency and proficiency.

History is full of incidents where highly experienced aviators became mishap statistics. Many had 1000, even 2000 hours in their assigned aircraft, but they lacked proficiency in the mission or task. Their proficiency was low because they weren't required to be current in the event or hadn't

flown recently. In one incident, a pilot had not flown for 23 days but was considered current for LOWAT missions. During a rejoin at low altitude, he channelized his attention, apparently on a radio change, and flew into the ground. Here is a small sample of mishaps involving experienced pilots with low currency that occurred within the past year:

MISSION

ACM
BFM (2 IPs)
BFM
ACBT
Another LOWAT

RESULT - CLASS As

Midair (1 Fatality)
Midair
Out of Control
Out of Control
Collision with the ground

In the first BFM mission listed, two IPs ran into each other on a basic fighter maneuvers mission. In the ACBT recurrency mission, an instructor pilot put his aircraft out of control. What is the objective on a recurrency mission? Should we be max performing the jet so much we put it out of control?

An experienced person has skill in a particular area. Pilots with thousands of hours flying a particular aircraft are skilled and very experienced. However, this skill is directly related to their proficiency. Because proficiency is a function of currency, a pilot who is current is considered proficient. As currency decreases, proficiency and skill also decrease to some degree in every pilot. Therefore, even an experienced pilot must fly often to keep his flying skills at a safe level.

"Proficiency" and "currency" are not necessarily synonymous. A pilot's demonstrated ability to perform the task is the governing factor. We all know the "squares" we are required to fill to maintain currency. But meeting minimum currency requirements may not keep us proficient.

Today's aircraft are not harder to fly. But with more advanced, complicated systems they are harder to employ because more employment options are

available. Using the HUD's velocity vector as a crosscheck makes instrument approaches much easier and "Death Dots" make mental wind corrections a thing of the past. Technology helps us employ the aircraft, but technological advances can lead to a false assumption--basic flying is no longer important.

The only remedy for lapsing currency is to get "back to the basics." Basic flying is important. We must stress precise basic instrument skills. Fly the aircraft before trying to employ it. During low altitude work, fly the jet before worrying about the radar. In the air-to-air arena, ongoing refresher training in basic aircraft handling and BFM reminds us how to fly the aircraft near the edge of the performance envelope. It also teaches us to recognize that edge and avoid exceeding it. Only after we have established basic flying proficiency can we move on to more demanding tasks.

Every flight lead must know his flight members. He must know their experience and be sensitive to their currency and capability. Some of that information is available through AFORMS, but most comes from knowing and leading the other members of the flight. Also it is the responsibility of the flight members to inform the flight lead if they are rusty in an event

or mission. If an individual (even one that is experienced and respected) lacks currency in a certain area or mission, the flight lead must keep that limitation in mind. Those areas must be briefed in detail and that part of the flight carefully monitored.

Solid flight leadership begins with thorough preparation. A key part of that preparation is a careful look at the experience and currency of the flight members. Experience alone does not guarantee proficiency. Currency is the key to proficiency and, ultimately, the cornerstone of safe, sound, flight operations. Supervisors and flight leaders should never substitute experience for proficiency and currency.



Gen John M. Loh
26 Mar 91 - 31 May 92



Gen Robert D. Russ
22 May 85 - 26 Mar 91



Gen Jerome F. O'Malley
28 Sep 84 - 20 Apr 85



Gen Gabriel P. Disosway
1 Aug 65 - 31 Jul 68



The God of War, having points of aerial supremacy which would meet the demands of much thought and study, presented to him this mandate.

I want a mighty sword of that can be found in the on golden wings. The wings of care for in their strength. Into the molten gold you will pour Light Bomber, Tactical Reconnaissance. Thus, the sword of personal combat Forces, and Interdiction, connected together will strike and destroy an enemy as it strikes.

The Symbolism



Gen Frank F. Everest
1 Aug 59 - 30 Sep 61



Maj Gen Otto P. Weyland
8 Jul 50 - 16 Jul 50
1 May 54 - 31 Jul 59



Gen John K. Cannon
25 Jan 51 - 31 Mar 54

Gen Wilbur L. Creech
1 May 78 - 28 Sep 84



Gen Robert J. Dixon
1 Oct 73 - 30 Apr 78



Gen William W. Momyer
1 Aug 68 - 30 Sep 73



been consulted regarding the finer
y, agreed to devise a special weapon
mands of modern warfare. After
he summond his blacksmith and

the hardest temper and finest metal
universe. This sword will be borne
ngs must be molded with the greatest
th lies the capability of the sword.
the potentialities of Fighter Bomber,
ce, Troop Carrier, and Guided Missile.
for Air Superiority, Support of Ground
o and supported by the golden wings,
surely and swiftly as lightning destroys

cal Creation



Gen Walter C. Sweeney, Jr.
1 Oct 61 - 1 Aug 65



Maj Gen Glenn O. Barcus
17 Jul 50 - 25 Jan 51



Maj Gen Robert M. Lee
24 Dec 48 - 7 Jul 50



Lt Gen Elwood R. Quesada
21 Mar 46 - 23 Nov 48

The "IDES OF

is You! "MARCH"

"Beware the Ides of March!" We all know what that came to mean to Julius Caesar. But, you say, it is not March. True enough! However, when you consider what that warning meant and the results of ignoring it, we get down to the real meat of this article. Loosely interpreted we could say the following about the "Ides of March": Changes are taking place, ill winds are blowing and the fight is on! The changes we are seeing every day affect each of us, some to a greater degree than others but affected just the same. The downsizing of the force, forming new commands, new uniforms, slower promotions, job uncertainty, fewer workers and potentially longer hours are just some of the changes putting stress on each and every one of us. Stress can translate into decreased awareness, increased danger, and increased frequency of mishap incidents and injuries. These then are the ill winds of the "Ides" and the fight is on to prevent these mishaps and injuries. How are we going to do that? By caring! Supervisors, care about your workers. Commanders, care about your supervisors and workers. Workers, care about your fellow workers. "How can I do this," you ask? By being aware of changes in behavior, demeanor and work habits. Maybe a person who is always immaculate and prompt starts coming in late. Perhaps their shoes are scuffed and their uniform unironed or dirty. Maybe a normally cheerful person seems moody and preoccupied. Maybe someone you know who doesn't drink suddenly develops a fondness for alcohol. What am I saying? Things out of the ordinary are symptoms of increased stress and danger. Commanders, supervisors and, yes, even coworkers must be aware of the "Ides of March" and the ill winds that are blowing throughout organizations. Ferret out the problem, win the fight, and continue to lower mishaps and preserve our most important resource -- PEOPLE. CARE!! >

Hazards of Experience

W. C. Sweeney, Jr.
General, USAF
Commander

Reprinted from *TAC Attack* August 1964



In a surprising number of instances the accident presentations by our Wing Commanders include such phrases as "he was one of our most experienced" or "he was one of our very best." A close look at the individual's record discloses that he was worthy of such appraisal, without overstatement. This would seem extremely puzzling, since aircrews of such caliber **should** have the lowest accident potential of all . . . however, the statistics reveal otherwise. The accident trend does move progressively downward as experience increases, but levels at an approximate point of 2500 total hours and then starts upward again!

We all recognize and take appropriate safeguards against the hazards of **inexperience**. However, we do not seem to recognize and give sufficient attention to what I have called the "hazards of **experience**." While this may seem to be incongruous terminology, such hazards do in fact exist, as is borne out by statistics and underscored by the familiar refrain at accident briefings. It is my thorough conviction that in very large measure these hazards are brought on by complacency and inattention. Webster describes complacency as "a state of serene self-satisfaction" or "calm inattentive contentment," and adds to inattention the synonyms: "unheeding, unmindful, disregard."

Based on a black and white interpretation of these definitions, I am certain that most of our aircrews would forthrightly defend themselves against any charge of complacency. However, these are insidious attitudes that are not easily recognized, and we are not dealing with absolutes . . . but rather with multiple shades of grey. Within these shades of grey I am convinced that we are all vulnerable . . . and far too many fall prey . . . to the hazards represented by these attitudes. At first it may be a small shade of difference . . . perhaps the tendency to skip lightly over a portion

of the checklist because it has become "routine." As experience progresses, so may the shade of difference, with the individual edging ever closer to "calm inattentive contentment" and a "kick the tire" complex even while religiously going through the prescribed motions and procedures. Ultimately a switch is left off, or a pull-out is started too late, and these hazards take their toll.

You can overcome these "hazards of experience" . . . if you **recognize** them, and stoutly resist the notion that with increased experience you, or those you supervise, become immune to foolish mistakes . . . if you resist the "take-off standard; join-up standard; tactics standard" approach in briefings and give full consideration to **all of the hazards** which will confront **all of the members** of your flight, including yourself. I am confident with your thoughtful support that we can make real progress in this particular aspect of our operations. ➤

3 Little Devils

at the Gates of HELL



Chaplain (Maj) Clarence E. Drumheller
834 CSG
Hurlburt Field FL

Reprinted from *TAC Attack* December 1969

Satan sat at his desk outside the Gates of Hell. After lighting his pipe, he leaned back in his chair and crossed his feet on top of his desk. He was in deep thought.

Although there were wars, riots, and disasters causing considerable mayhem among earth's humans, there was one area which caused him due concern – the U.S. Air Force's Ground Safety Program. The program, as laid out by the Air Force, was so effectively designed that Satan's forces were greatly discouraged. Satan knew he had to do something unusual to raise the morale

and effectiveness of all his little devils.

Being no simpleton when it comes to creating mischief, Satan, after considerable thought, decided to sponsor an Air Force-wide Anti-Safety Contest. Accordingly, he devised an elaborate program of incentive awards which was bound to excite every little devil under his widespread command.

Satan offered his enticing awards in three categories. The lowest category consisted of several three-day passes which would be given to any little devil turning in a creditable piece of anti-safety mischief. This, he thought, would interest all of his clever minions without exception.

To this incentive, he added a second category, offering not only a three-day pass but also an all-expense paid vacation in Hell. Winners of second place could see and enjoy all human suffering and misery which their devilish anti-safety work brought about. What little devil could possibly turn his back on this delight!

Greatest of all awards would be the Grand First Prize – a two-week paid vacation in Hell, automatic promotion, and the coveted "Devil of the Month" award, giving the winner privileges never before offered to any little devil.

Satan decided that this contest was so vital in his efforts to bring down the Air Force ground safety record, that he himself would judge each entry.

Soon after word of the award had gone out, three little devils appeared at Satan's headquarters outside the Gates of Hell. Each had done his damndest. Each sought the coveted Grand First Prize. Who would be the winner?

Satan leaned back in his chair and puffed his pipe. "Send the first contestant in," he said to his Executive Officer.

The first little red-suiter stood before Satan's flaming red desk, snapped to attention, and gave his fiendish report.

"I've done a magnificent job," he said. "In view of your inspiring contest, I have convinced hundreds of people that they don't need to fasten safety belts, especially when driving short

distances. Since most fatal accidents happen a few miles from home, you can see, O Prince of Demons, the carnage that's going to result from my work."

Satan took the pipe from his mouth and exhaled a billow of smoke. "That's a pretty good piece of anti-safety business," he said. "The failure to use seat belts is bound to cause many bloody fatalities. You have earned a three-day pass. I'm afraid, however, that it doesn't entitle you to more because really safety-minded people will still fasten their belts, whether for long trips or short ones. We absolutely must come up with something better than that."

With tears of disappointment burning in his eyes the First Little Devil did his about-face and left the office. Satan called for the next contestant.

The Second Little Devil was smiling broadly. The failure of the first fiend to win the Grand First Prize bettered his own chances.

"I've outdone him by a mile of brimstone," said the Second Little Devil with a superior air, while motioning with his thumb to the door through which the first had passed. "I've really come up with something demonic."

"Spill it," said Satan, clutching his pipe and leaning forward eagerly in his chair. "Don't keep me in suspense all day."

"I've chalked up two atrocious accomplishments, either of which should make me a winner," he said. "First, as you know, alcohol, even in small amounts, impairs judgment, slows reactions, and makes drivers take unnecessary chances. Acting on these facts, I have easily convinced hundreds that drinking in moderation is a lot better than being called a blue-nosed Puritan. Already you can see the mangled bodies, and hear the cries of widows and children resulting from the highway accidents which my abominable scheme has caused."

"Excellent," said Satan. "This is the kind of heinous thing I want. What else have you accomplished?"

"Secondly, I have spread the word that if one has been drinking, driving is safest late at night

and in the wee hours of the morning. Most police forces reduce their strength during these hours, and there is less traffic on the highways. A really daring driver, I tell them, can open up and see how much his hot rod will do. Wow! You should see all the one-car crashes I've brought about with this satanic plan. So if you'll give me my Grand Prize, I'll rush down to hell and watch 'em burn."

"Mmmmmmmmmmm," said Satan, refilling his pipe. "That's a dandy piece of devilment, I must admit. It certainly entitles you to second place, an all-expense paid vacation in hell where you can watch the people you have sent there writhe and scream. However, I wanted something with a wider influence for the Grand First Prize."

After admitting the Second Devil through the Gates of Hell for his three-day paid vacation in the land of fire and brimstone, Satan called for the third contestant.

Third Little Devil, with creases sharp as razors in his red flannel underwear, squared his shoulders, clicked his heels, threw a smart salute, and reported:

"Sir, how does this strike you? I've taken complete advantage of that natural homo sapiens characteristic to be lazy, crazy, irresponsible, and resentful of authority. I tell them that safety is only the business of the Commander and the Safety Officer – not theirs. I tell them that safety regulations are just an attempt to regiment them and limit their freedom, and that really smart cookies will ignore them, so long as they don't get caught. Then I teach them to stick together in their safety rebellion, and to cover up for one another in their unsafe practices.

"It's really my work that makes airmen leave their seat belts unfastened. Because of me they throw cigarette butts into waste baskets, and smoke in bed because no one reports them. They fail to report known safety hazards saying it's not their business. I've even taught those with a modicum of interest in their own safety to show a selfish lack of concern for the safety of others."

"My monstrous work, Sir, will spread unsafe practices like wild fire. It will tie up

Commanders everywhere trying to explain the lack of safety on their bases. And to think, it's all because of me. I know how to take advantage of human weakness, selfishness, and irresponsibility. My evil work is bound to have far reaching results."

Before the Third Little Devil could finish his report, Satan's red phone rang so loud that it literally danced on his desk. Satan placed the receiver to his ear. A wild and devilish expression crossed his face. His excited hand emptied the pipe into the trash causing another delightful fire.

Shortly, Satan dropped the receiver on its cradle, walked over to the Third Little Devil, and warmly pumped his hot little hand.

"Congratulations," he said. "That was the operator. He tells me the switchboard is jammed with calls reporting accidents of every description. For this imaginative and effective piece of devilment, you have won the Grand First Prize. You will get your two-weeks paid vacation in hell, where you can watch all the human misery your unsafe practices have caused."

"Convincing Air Force personnel that safety is somebody else's business has won for you the highest approbation ever achieved by any little devil. I hereby proclaim that you are not only Devil-of-the-Month but 'Devil Forever,' and I am promoting you to the position of Hell's Anti-Safety Officer for life. Now have you anything to say?"

"Yes Sir," replied Little Devil Forever. "If anybody wises up and discovers that Safety is Everybody's Business, we're through. Therefore, I request permission to forego my pleasant vacation in Hell and return to duty."

"Permission granted," said Satan, "And may carelessness and indifference to safety reign forever."

With a click of his heels and a snappy salute, Little Devil Forever turned and skipped gleefully back to Any Air Base, where he is hard at work right now. ➤

CARING IT MAKES THE DIFFERENCE

CMSgt Ronald Christiansen
Chief, TAC Ground Safety

Reprinted from *TAC Attack* July 1986

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

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

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

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

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

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

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

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

Caring does make the difference—a lifesaving difference—and I love those folks



who went out of their way to keep this fellow alive. ➤

WEAPONS WORDS

Capt Ken Pesola
HQ TAC/SEW

Reprinted from *TAC Attack* September 1979

Ever look toward that day when technology resolves each of our problems? We in the safety "biz" do.

Fact: Today's weapon systems are designed with more built-in fail-safe features than ever before.

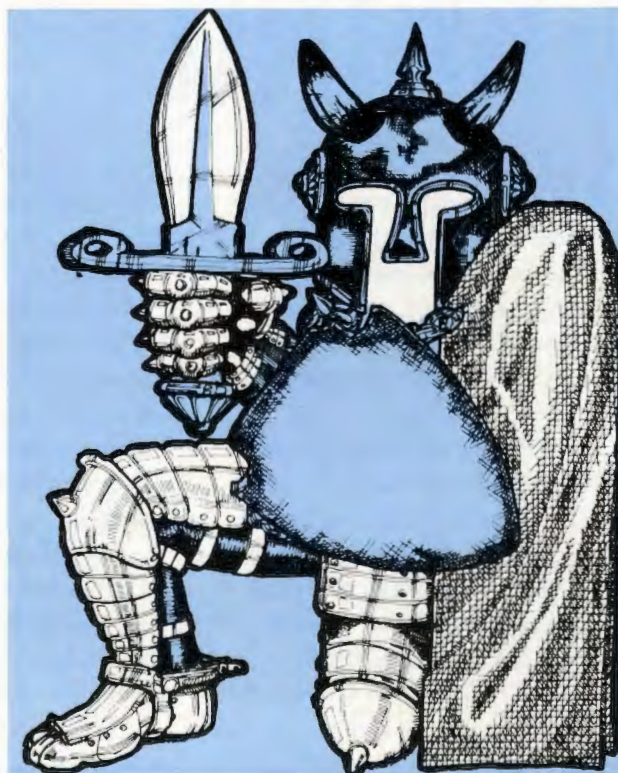
Fact: Our onboard weapon systems are more technologically advanced than ever, and system reliability is hitting new highs.

Unfortunate Fact: We humans are still plagued by mishaps. When Murphy strikes, we are sometimes "lucky" - sometimes not.

How many remember the flight line accident of a few years back where failure to follow tech data resulted in the inadvertent firing on the ramp of an F-4D SUU-23 20MM gun pod. This caused extensive aircraft, AGE, and flight line expeditor vehicle damage, and the death of one flight line technician.

The explosive safety regulation (AFR 127-100) states that aircraft with forward firing ordnance must be parked facing a direction with the least exposure to personnel, equipment and facilities.

Following this common sense mandate could have saved a life. Recent compliance by TAC personnel did just that.



After experiencing hydraulic failure, an A-10 aborted its gunnery mission and diverted to a secondary recovery base. The aircraft was parked in the designated aircraft FFO parking area. The following morning, hydraulic and gun system technicians arrived from the A-10 home base to work the system. After erroneously assuming the GAU-8A gun was jammed, the personnel attempted to clear a 30MM round in the sear (firing) position. After the gun locking/unlocking cam was removed, the crew pulled the gun safing pin. The GAU-8A firing pin released and the gun functioned as advertised, firing one round of 30MM TP ammo across the parking apron, taxiway, runway, perimeter fence and public highway. The projectile wasn't found, but it was believed to have impacted in an uninhabited field approximately 1,600 feet from the FFO parking location. Bottom Line: No injuries nor property damage. Just luck? Not really. Realizing equipment is subject to failure and humans to error, the sound logic behind designating combat aircraft parking spots and maintaining a "clear fire zone" for 2.75 rocket,

missile, and gun equipped aircraft makes a bunch of sense. Without practicing this safety technique, this recent mishap might have cost more than an expended 30MM round.

We can't eliminate all our Murphys, but we can at least minimize their results.

The only panacea to the FFO problem is the adequate spacing of parked aircraft and the maintenance of clear zones. Limited budgets preclude acquisition of the acreage necessary to totally alleviate parking congestion. However, we can minimize unwitting targets in our clear fire zones by continuously reminding our personnel of the hazards associated with FFO and employing effective flight line supervision. Forward firing ordnance does and will fire inadvertently. Take heed.

MISSION OR SAFETY...OR BOTH

Capt Jonny J. Hepler
51 COMPW (Tactical)

Reprinted from *TAC Attack* September 1979

My eyes hurt! It's cold and the rain is running down the front window of the step van. The windshield wipers are slapping back and forth; they seem to keep time with the chatter on the radio. The darkness stretches on forever, only broken here and there by the distant glow of light-alls. The light-alls identify the location of aircraft undergoing maintenance work. You have entered the world of the Weapon's Expeditor.

The Weapon's Expeditor is waiting for the call that an aircraft is ready for the load crew. Today's surge has been hard on the aircraft, and most of them come back Code III. That always

adds pressure to the mid-shift because they know they will get the aircraft late due to the heavy maintenance that must be done prior to munitions loading.

The call comes in: "Aircraft 293, location Mike 04, ready for load crew." The Weapon's Expeditor starts the step van and tells the waiting crew chief to get his load crew ready. Aircraft 293 requires a complete configuration change and full load of practice bombs. This bird had received a functional check flight (FCF) today and required a SUU-21 on the left inboard station, a MER on the centerline, and a TER on the right inboard station. The step van pulls up by the aircraft and the load crew gets out. The number four man, who had been dropped off on the way over, is arriving with a SUU-21 on the MJ-1 lift arms.

As the Weapon's Expeditor drives off, he hollers to the crew chief: "I'll be back in an hour. Make it fast! We're behind schedule." Then adding with emphasis: "Use your checklist. We don't want anybody hurt."

The Weapon's Expeditor realizes the error he almost made. He almost put the mission before the safety of his people. If you make the same mistake that the Weapon's Expeditor almost made, you might have to carry a heavy burden on your conscience for the rest of your life.

The BDU-33 and the MK-106 practice bombs can burn, maim, or kill, if handled improperly. If the safety device is not properly in place and the practice bomb is dropped, there is a very good chance the spotting charge will function as designed. A small charge will blow white phosphorus out the tail end of the bomb. If you have your hand over the end of the bomb, the least you can expect is to be severely burned. You might even be killed. So, next time the mission starts coming before the safety of your people, remember that any commander would rather have a late or missed mission than an injured member of his organization!

THINGS THAT GO “BOOM”

Lt Col Gordon F. Carmichael
Chief, Weapons Safety Division
HQ TAC

Reprinted from *TAC Attack* April 1972

An interesting and important part of our work in the command accident prevention program requires us to review and evaluate accident and incident reports submitted by TAC organizations and to keep a running tabulation on the effectiveness of the weapons safety program. Our statistics tell us that the steady reduction in the number of accidents from year to year proves, beyond doubt, that you are becoming more professional in your work and that your equipment is safer and more reliable than it was just a few years ago.

If asked to identify one specific problem that contributes to the majority of our mishaps, the task would be easy - failure to use technical data or failure to use technical data correctly. A recent accident just about epitomizes all we have ever said and written about using checklists and what can happen when you try to beat the system.

The story starts with the takeoff of an F-4 on a cross-country training flight for a student pilot. Shortly after takeoff, the instructor pilot noted that the left wing tank would not feed and elected to return for maintenance. Repair consisted of dearming the airplane, removing and replacing the wing tank, completing the jettison check, and the final step of rearming the airplane. When the maintenance personnel completed their work and signed off the maintenance forms, the aircrew accepted the aircraft and departed on the first leg of the cross-country flight. The following day two additional legs were flown, the first with the IP occupying the front seat and the second with the student. The cross-country flight was uneventful and at destination the airplane was turned over to transient maintenance for post flight and refueling and the crew left the flight line. On the morning of the second day, the crew arrived at the airplane to

prepare for the return flight to their home station. The instructor pilot proceeded to perform the before exterior inspection (front cockpit), although transient maintenance personnel had not arrived nor had the maintenance preflight been accomplished. The IP did not use the Dash One checklist and failed to notice that the wing station jettison switch cover was in the up position. While the IP was performing the exterior preflight, transient maintenance personnel arrived and applied external power to the airplane. While getting strapped in the front cockpit to prepare for takeoff, the IP noticed the wing station jettison switch cover in the up position. When he reached down and closed the cover, the full wing tanks jettisoned to the ramp.

The investigation revealed some interesting facts concerning the accident:

- * It could not be determined who raised the wing tank jettison switch cover that set the stage for the accident, but it was determined that the cover was not safety wired when the left wing tank was installed prior to departing the home station. The loadcrew told the investigating officer they thought the crew chief would safety wire the jettison switch cover.

- * The instructor pilot failed to use the checklist while conducting the before exterior inspection (front cockpit) check and missed the one step that would have prevented the accident. The instructor pilot also failed to use the checklist to conduct the before exterior inspection on the first flight following wing tank installation.

- * Wing tank safety pins were not carried or installed on the cross-country flight, nor were other required safety devices installed prior to refueling at several en route bases.

Following the accident, the aircraft was impounded at the cross-country base. Numerous checks were conducted on the jettison system and associated equipment, but the malfunction that caused the tanks to jettison when the guard cover was closed could not be duplicated.

This accident wasn't particularly spectacular as

far as accidents go; it was just the most recent of a long list of accidents due to tech data violations that should not have happened. It also points out that no matter who you are or what your job, you can get bit...if you elect to play the game with your own rules.

As accident reports are received from other units and other commands, they are retransmitted to TAC units so that you may learn by the mistakes of others. The following more spectacular, TAC accident briefs are presented for this purpose; hopefully, they will prevent your next accident due to improper use of technical data.

* Two loadcrews had to violate tech data to cause this accident; either crew could have prevented it. The first crew downloaded a SUU-20 dispenser from an F-4 airplane without first unloading the two live rockets installed in the dispenser. The second crew uploaded the dispenser containing the rockets on another airplane and while performing the bomb and rocket functional checks, fired a rocket. The rocket went through an NF-2 lighting unit, turned 50 degrees, hit the ramp approximately 500 feet from the launching airplane, then passed beneath the wing of a combat loaded B-52 and impacted the blast fence to the rear.

* Approximately a year and a half after the above accident, the same unit did it again. This time, only one loadcrew was involved and the dispenser contained only one rocket. As you have probably guessed, the rocket fired during a functional check, only this time there was no equipment damage but there was an injury. The number three man received severe burns and had to have his left eye removed. A high price to pay to save a few minutes and a little work.

* At another base, an F-4 aircraft returned with hung ordnance in the SUU-20 dispenser. The download crew downloaded the remaining practice bomb but overlooked the three loaded rockets. The weapons release checkout crew failed to ensure that the rockets had been removed and consequently fired a rocket while performing a functional check. Numerous discrepancies combined to set the stage for this accident, but the outdated checklist that didn't direct the weapons release crew to check for "rockets removed" was probably the catalyst that pulled it all together.

* Ten months after the above accident, the same base chalked up another rocket firing accident. The formal report is long and involved but, basically, a loadcrew removed a fully loaded dispenser from one F-4 and installed it on another airplane. The functional check crew failed to ensure that the munitions had been removed from the dispenser and launched a rocket when they applied voltage to the rocket release system. Both rear tires of an MB-4 Coleman were impaled by the errant rocket.

* Gun systems came in for their share of attention also. During the preparation of a SUU-23 gun for a gun pod/aircraft functional check, the loadcrew failed to safe the gun in accordance with the checklist and when the trigger was pulled one round fired. Two loadcrew members were injured by shrapnel from the round striking the nose gear strut and the perforated strut had to be changed.

* Four accidental firings of 20 MM guns occurred in one eight month period.

* The three accidents associated with the M-39 gun concerned improperly performed functional checks. The crews did not follow tech data and did not ensure the guns were clear. The last accident concerned a violation of TO 11A-1-33 in that maintenance was being performed on an aircraft containing ammunition and explosives material. The accident board cited personnel error as the primary cause of the accident and listed the following contributing causes:

The gun firing lead of the M-61 gun was not disconnected.

The clearing sector hold back tool was not installed.

The armament master switch was not checked in the safe position.

* A qualified maintenance technician or weapons mechanic was not present when maintenance was being performed on an armed or explosives loaded aircraft.

As we said before, these brief accident summaries are presented as a reminder that it can happen to you and the easiest way to make it happen is by not using your checklist. More than half of our accidents are caused by people, and the majority of these are caused by people who won't read or follow technical data.

LIVE SAFETY

Brig Gen Bill Ball
28 AD/CC
Tinker AFB OK

Reprinted from *TAC Attack* October 1990

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 Safety" 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 safety. 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 ultimate impact would be very significant. 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 positive 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 hazard yet do absolutely nothing about it. These situations occur on and off duty. Two quick examples: 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 difference, i.e., wearing eye protectors 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 commit 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!"**



The TAC Commander

Gen Jerome F. O'Malley

Reprinted from *TAC Attack* April 1985

First, I want to strongly thank and compliment everyone responsible for TAC's excellent flying safety record. Your outstanding efforts resulted in TAC earning the Secretary of the Air Force Safety Award for 1984, and it was a personal honor for me to receive the award on your behalf from Secretary Orr in February. Although no accident rate is desirable, your improvements in flying safety have been magnificent. You're doing many things right, and you're working harder than ever before -- supervisors and new guys alike. The level of concentrated, realistic training in TAC is the highest I have ever seen in my career. I feel that we are better prepared for war right now -- April 1985 -- than we were during World War II, Korea, Vietnam or anytime since Vietnam. The realism is there, and we're getting the flying time needed to reap the benefits of that realism.

Still, with all that we have accomplished, I am very concerned about the increase in command-controlled accidents -- those accidents that were caused or could have been prevented by people in TAC. This is a subject

that I discussed in the January 1985 issue of *TAC Attack* and it still worries me very much. What really troubles me is that the command-controlled accidents were, by and large, caused by experienced people in relatively nondemanding circumstances. Take, for example, the maintenance crew improperly preparing an F-4 centerline fuel tank for flight. The result -- fire immediately after takeoff and the loss of an aircraft. Then, there was the pilot who tried to go around on one engine with the speedbrakes out and another pilot who shut down the wrong engine. All of these spell **complacency**.

When aircrews fly a demanding RED FLAG mission, all indications are that they plan it well, brief it well, and it's well thought through. However, when performing a routine mission like picking up an airplane and flying it back home, some aircrews are apparently not applying the same degree of thoroughness -- they are not thinking through the simple and are reserving their thinking time for the more complex.

And it isn't the lieutenants who are making the mistakes -- we're



supervising the lieutenants pretty well. But, we're not doing well at all with their supervisors. For example, it was a supervisor who shut down the wrong engine.

Admittedly, we are not operating an airline; we are preparing for war. When we do that, we are going to lose aircraft. If realistic training for war were the problem, I would have to give some thought to backing away from it. But considering that over 90% of our 1984 accident rate was command-controlled, training realism is not the problem -- complacency is! We have to turn that around and give the same rigorous disciplined approach to the mundane, day-in and day-out tasks that we give to the demanding missions.

You proved in 1984 that you can train more realistically and fly safer than ever before, and I compliment you on your efforts. The challenge now is to eliminate those accidents that are within our power to prevent. You are the professionals -- you can do it! ➤

Fleagle

WONDER WHAT TH'EDITOR
WANTS TO SEE ME ABOUT?

TAC ATTACK
MAGAZINE

FLEAGLE, I DON'T KNOW ANY OTHER WAY TO
TELL YOU THIS OTHER THAN COMING RIGHT
TO THE POINT. THE MAY EDITION
WILL BE THE LAST ISSUE OF
TAC ATTACK.

HUH...?

DO THIS MEAN
I'M OUT OF A JOB?

NOT
NECESSARILY.

THERE WILL BE A MAGAZINE, NEW NAME AND THE
WORKS. SO WHY DON'T YOU JUST HANG LOOSE
FOR A WHILE AND LET'S SEE IF YOU FIT IN
THE NEW PICTURE.

GUESS I AIN'T
GOT NO CHOICE.

HARRISON

NO TAC ATTACK...
JUS' AIN'T GONNA
SEEM TH' SAME.

GUESS TH' ONLY THING
LEFT FER ME IS HOME
TO PEA ISLAND.



TAC TALLY

The establishment of Air Combat Command & associated force realignment requires us to suspend the TAC Tally in its present form.

TOTAL			TAC			ANG			AFR		
MAR	THRU MAR		MAR	THRU MAR		MAR	THRU MAR		MAR	THRU MAR	
	FY92	FY91		FY92	FY91		FY92	FY91		FY92	FY91
1	4	8	0	5	4	1	7	4	0	1	0
1	8	4	0	1	1	1	4	3	0	2	0
1/0	8/1	6/1	0/0	4/0	3/0	1/0	4/1	3/1	0/0	0/0	0/0
0/0	0/0	0/2	0/0	0/0	0/0	0/0	0/0	0/2	0/0	0/0	0/0

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

* (SUCCESSFUL/UNSUCCESSFUL)

CLASS A MISHAP COMPARISON RATE

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

TAC	FY 91	0.0	0.0	0.7	1.8	2.2	2.2	2.2	1.9	1.7	1.8	1.8	2.0
	FY 92	4.0	2.2	2.3	2.9	2.4	2.0						
ANG	FY 91	3.8	2.0	1.3	3.9	3.2	4.0	5.2	5.0	4.9	4.8	4.3	4.3
	FY 92	0.0	6.6	6.2	8.2	7.4	6.8						
AFR	FY 91	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	FY 92	0.0	9.9	6.6	5.0	4.7	3.9						
TOTAL	FY 91	1.2	0.6	0.8	2.3	2.4	2.6	2.9	2.7	2.5	2.5	2.4	2.5
	FY 92	2.5	4.1	3.9	4.7	4.0	3.5						
MONTH	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

TAC'S TOP 5 thru MARCH 1992

1st AF		9th AF		12th AF	
"COMMAND-CONTROLLED CLASS A MISHAP-FREE MONTHS"					
74	57 FIS	57	1 FW	51	355 FW
34	325 FW	36	56 FW	50	366 WING
		28	31 FW	45	27 FW
		27	33 FW	31	49 FW
		21	354 FW	30	37 FW

ANG		AFRES		DRUs	
"COMMAND-CONTROLLED CLASS A MISHAP-FREE MONTHS"					
470	119 FIG	187	301 TFW	186	552 ACW
446	147 FIG	166	482 TFW	77	28 AD
256	110 FG	128	924 TFG	56	USAFAWC
230	138 TFG	116	906 TFG	5	USAFFWC
172	155 TRG	91	507 TFG		

