TAC ATTACK

DECEMBER 1988

ANGLE OF ATTACK

You're probably sitting somewhere between Turkey Day and Christmas as you read this issue of *TAC Attack*. Things can begin to get a bit hectic at this time of year and certainly have the potential to impact the way we do business over the next few weeks. Of the many things that affect our safety record, one of the biggest, I think, is our attitude. While most of us probably think of December as a joyous time of year with Christmas and the beginning of the new year, for many of our people who are separated from family (due to TDYs, being single or being away from home), this can be a time of sadness because they are alone. Supervisors must get into the act and stay in touch with what's going on with their folks. Don't let our unaccompanied people spend the holidays by themselves. Try to incorporate your people into the holiday activities sponsored by your unit. I would even encourage you and your people to consider including those who are alone in your family plans and get-togethers.

Remember that the roads are going to be a lot more treacherous in the weeks ahead. The typical weather conditions for this time of year will make many roads wetter or icier, depending on where you're located. The roads are also going to be more dangerous because many folks will be having a hot toddy or two more than normal. So, be careful and watch out for the other guy; he's probably not watching out for you.

A word of caution for the holiday shopping season: many of us with spouses who are famous for being quality (and more significantly quantity) shoppers need to be careful when lifting stacks of boxes and packages so we don't strain our backs. Don't laugh! My boss at the base where I came from had a spouse that kept him at constant risk of suffering such an injury. Watch yourself so you'll be in good shape to do your job after the holidays.

I'd like to wish you happy holidays from myself and the entire safety staff at TAC Headquarters. We wish you the very best for the holidays and the new year ahead.

Jack Gawelko

JACK GAWELKO, Colonel, USAF
Chief of Safety

TAC ATTACK

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TACSP 127-1

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PRIORITIES PRIORITIES PRIORITIES PRIORITIES

Maj Richard A. Kirkpatrick
TAC Flight Safety

Everything you do is based on your concept of personal priorities. Where you live, the job you have and the person you marry are some decisions you make based on your own concept of personal priorities.

A while back I was leading a two-ship DACT mission against two Navy F-18 Hornets. At eight miles from the merge, with what I thought was a good radar sort on the two bandits, my wingman began collapsing from the tactical formation position. Incredulously I watched as he continued to float toward me, and then rapidly pulled into me to cross overhead. It was obvious that we were locked onto the same bandit, and that my wingman had gone for his missile shots. During the debrief I asked whether he had me in sight during that engagement. He admitted that he didn't and that he felt it was more important to go for the missile shot at that point than to regain the visual. After I calmed down from my initial reaction, he asked me what I thought his priorities should have been. That's the topic of this discussion.

Everything you do is based on your concept of personal priorities. Where you live, the job you have and the person you marry are some

decisions you make based on your own concept of personal priorities. Given that fighter pilots are a fairly homogeneous group, you can assume there is a lot of similarity in our priorities in the air.

MCM 3-3 lists basic top priorities as:

(1) Maintain aircraft control.
(2) Never hit the ground (or anything attached to it).
(3) Never hit anything in the air (i.e., your lead/wingman).
(4) Never run out of fuel.
(5) Never get shot.

The list continues to lower priority tasks such as maintaining proper formation or not missing any radio calls.

The wingman was 500' AGL, line abreast, in the vicinity of a known tower. He looked inside to check his map, turn on hot mike, check the radar and check six (three times). He glanced up just before hitting the tower.

Priorities are not constant with time. They are constantly rearranged to fit with a particular situation. The middle of a dogfight at 20,000 feet isn't the time to be more concerned with hitting the ground than hitting another aircraft. This rearrangement of priorities is a conscious decision based on prior experience and training (another term for it is situational awareness). As a mission progresses, unforeseen circumstances may force you to abandon a lower priority task for a higher priority one. A MiG appearing at six o'clock should make you quit worrying about proper formation position. If your experience and training have emphasized the wrong order of priorities, then your decision later will be wrong. An inflight emergency, for example, may lead you to forget about maintaining aircraft control.

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The mishap crew were informed of a fuel leak. They isolated the leak to the left engine and, after a delay, shut it down. In their rush to recover the aircraft, the crew didn't accomplish many checklist items. As the aircraft was configured to land, it pitched up, then down, and impacted the runway. When the crew lowered the gear and flaps simultaneously, they depleted the available hydraulic pressure and the aircraft lost pitch authority.

Training programs, simulator missions, SEPTs, flight briefings and debriefings combine to establish your inflight priorities. Pilot training teaches the basic priorities of maintaining aircraft control, analyzing the situation, and taking proper action. RTU expands these rules in the context of flying fighters. SEPTs and EP sims reinforce these basics as they apply to your aircraft. The flight lead sets the particular mission priorities in

PRIORITIES

the flight briefing. Most of the time the priorities for the mission are written on the board in the form *of* objectives. Flight leads *don't* list the least important objectives first, because this is also a list of priorities. The list, however, is always incomplete because most of the highest level priorities (i.e., never hit the ground) are often assumed and therefore, not addressed.

The newly-MR pilot was number 2 on a trail departure for a range mission during an overseas deployment. He hadn't input all the INS data before takeoff and planned on navigating off of lead. He was unable to get a radar lock after takeoff, lost lead, and turned in the wrong direction.

During an attempt to rejoin with the flight, he dove through a hole in the undercast and was unable to avoid hitting a tree.

Only a constant, detached, professional analysis of all aspects of a mission will identify those instances where misprioritization leads to a performance breakdown. The time to realize that your priorities are skewed is before an unforeseen event forces you to make an unconscious jump in priorities. An honest analysis of performance is required, but often we are blind to our own failures. That is why we have instructor pilots and flight examiners, why it is so vitally important to have definable objectives, and to assess performance and the breakdown of performance relative to these objectives.

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A proper understanding of your priorities before you fly is a major factor in the success of the mission. The examples in this article actually occurred, and all of them occurred recently. Review your own priorities before you fly and review them again in the debrief. It's too late once that MiG is camped at six. >

AIRCREW OF DISTINCTION

Maj Frederick R. Griese
312 TFTS, 58 TTW
Luke AFB, AZ

As Maj Frederick Griese made a low approach in an F-16 Falcon following a simulated flameout approach at home base, the engine's response as he advanced the throttle to military power was normal. As he retracted the landing gear at approximately 180 knots, however, he noticed a significant loss of thrust which was verified by his quick scan of the engine instruments. Maj Griese was confronted with two options: 1) accomplish the critical action procedures for low thrust on takeoff, requiring about 10 seconds to complete, or 2) extend the landing gear and prepare for a departure end cable engagement.

Maj Griese quickly chose the second option and initially reduced backstick pressure to reduce angle of attack and prevent a slow speed stall, traded altitude to maintain airspeed and simultaneously lowered the landing gear. After confirming all three gear were down, he then increased backstick pressure to regain a landing attitude. Maj Griese touched down about 1500-2000 feet prior to the departure end cable, lowered the hook and, shortly thereafter, engaged the departure end cable at about 150 knots, the maximum emergency engagement limit of the F-16C/D.

Postflight analysis revealed a fuel control problem. Had Maj Griese chosen option one, he would have had to complete the critical action procedures and ended up in backup fuel control (BUC). A recreation of identical conditions in the operational flight trainer determined that the time necessary to regain usable thrust was not available. The result – Zoom, Stores Jettison, Eject. Given the in-flight conditions Maj Griese was experiencing, the option he chose was the only correct one.

The exemplary knowledge of F-16 aircraft capabilities and outstanding display of airmanship demonstrated by Maj Griese under extremely challenging conditions have earned him the TAC Aircrew of Distinction Award.

TAC tips

INTERESTING ITEMS, MISHAPS WITH MORALS, FOR THE TAC AIRCREWMAN

Nonstandard is not standard

Don't make assumptions. "Non-standard" is **not** standard. A flight of two F-4's filed for and was cleared to fly a formation departure out of an airfield situated near a large metropolitan area. Low ceilings, high temperature, and a wet runway combined to preclude a formation takeoff or a join-up under the weather immediately after takeoff. Therefore, rolling with only 15-seconds spacing, the flight maneuvered for a radar trail departure – a nonstandard formation procedure. No apparent problem existed until Departure Control handed the flight off to Center about 25 miles east of the departure airfield, and it was determined that the wingman was four miles in trail. Both Departure Control and Center had planned for the wingman to be within the standard formation block (defined in FLIP as ". . . no more than one mile laterally or longitudinally and within 100-feet vertically from the flight lead . . ."). Clearance within the local area's highly congested airspace had not been provided to #2.

By letter of agreement, nonstandard departures are not authorized at the incident airfield. Had the flight lead communicated his intention to make the nonstandard departure, Tower would have informed him that they were not authorized. While nonstandard departures are a vital element among pilots' available procedures, unless prior arrangements have been coordinated, nonstandard formations are authorized only "when the flight leader has requested and ATC has approved other than standard formation dimensions."

I didn't know

A couple of F-15s were loaded up for the day's mission, each with one captive AIM-9 and one captive AIM-7. During low altitude intercept practice, one of the pilots armed up his system for a simulated Sparrow delivery. When he pressed the weapons release button, the AIM-7 missile fell from the aircraft. There had been some confusion with the aircraft's weapons load from the first sortie of the day. The pilot on that flight had questioned the status of the missiles, but the flight line dispatcher confirmed that they were inert captive-carry AIM-7s and -9s. Oh, they were inert all right (no warhead or rocket motor), but the AIM-7 had (although it didn't need to be) been

carted. The pilot flew the mission without arming the weapon systems – thus, no problems. Unfortunately, the pilot on the second sortie didn't see that carts were installed during his preflight. So, when he told the weapons system to release, it did just that.

There are only three things that you want the stuff hanging on your airplane to do – either stay strapped on for the entire flight, jettison in an emergency or come off and hit a target. Use your preflight to make sure that all of your bombs, missiles, BRUs, TERs, TGMs and so forth are either going to stay where you last saw them or come off on target when requested. Anything else results in a wasted sortie when your expendable munitions don't expend or loss of valuable training tools when your captive - carry ordnance does.

When you see something out of the ordinary on your aircraft, you can *assume* everything's OK or you can *make sure* everything is. Guess which is smarter?

The ultimate coincidence

A flight of A-7s was preparing for an air-to-surface mission. The briefed emergency of the day covered a fuel low level light with 3600 pounds of fuel remaining. This malfunction can indicate a failed fuel selector valve which traps fuel in the aft and mid tanks. The checklist only provides for recovery of some of the trapped fuel.

Later, following the planned weapons events on the range, lead and number two proceeded to a nearby airport to do a practice precautionary landing approach. To complete a recent check ride requirement, number two led the approach with his leader evaluating from a chase position.

While the two-ship was about 65 miles out from home plate during RTB, the unbelievable happened. Number two got the fuel low level light with 3300 pounds of fuel remaining. Emergency fuel was declared, direct routing was obtained from Center and the checklist was completed. On this particular day, the trapped fuel wouldn't budge, thus usable fuel at that point was less than 800 pounds. Two took the lead, flew maximum range cruise to an idle descent,

and accomplished a flawless precautionary pattern and landing. His usable fuel at touchdown was 300 pounds.

Practice does make perfect. Paying attention during the flight briefing, especially during the EP of the day. is important. Any questions?

Ice foddies

What comes to mind when your weather briefing includes the possibility of icing conditions during your flight? Fouled pitot tubes and static pressure ports that give bogus instrument readings? How about the possibility of engine damage due to icing conditions? On one occasion, an F-16 encountered rime icing conditions and subsequent FOD damage to several fan blades. The damage occurred even though the anti-ice system was on and working.

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

How Many More

SrA Timothy J. Turner
366 TFW/MACAA
Mountain Home AFB, ID

How many times have we read the story? Somebody gets hurt, or worse, dies. Expensive equipment gets damaged or destroyed. How many more times do we have to see it before we start paying attention?

Why are the mistakes made? We take precautions and yet still things go wrong. We can't stop every mistake, but we can cut down on the mistakes caused by "Human Error." The truth is we are *only* human. But this is not a good reason or excuse for forgetting to fol-

TIMES? TIMES? TIMES?

low procedures. Our procedures are in black and white – right in front of us while we're working.

Technical Orders. In Maintenance, T.O.s are the law. Everything must be done according to the T.O. But how often is the T.O. merely ignored or forgotten?

How often have you heard or said, "I've done this a million times," or "I know this by heart?" Odds are they do know it. But what if you forget something? After all, we're only human. We can't remember everything. So what happens when we forget? Hopefully nothing, yet we can't depend on that.

It's not a matter of how fast we do it, but how well we do it.

It doesn't matter how fast you do it if you do it wrong.

Something can go wrong. The problem is as we become familiar with our jobs, we tend to remember everything through practice. Then one day when there's a lot of work to be done, we hurry ourselves a little and start doing things by memory. This gets us in trouble. It's not a matter of how fast we do it, but how well we do it. It doesn't matter how fast you do it if you did it wrong. We don't need to memorize the procedures, but rather be familiar with them. By being familiar with our T. O.s., it ensures that we can do our work exactly as it should be done, using the T. O., and in the shortest possible time.

If you have a T.O. that is wrong, submit a change.

Don't keep passing correct, or incorrect, information by word of mouth; write it down!

Submit, see if it's right.

If a T.O. isn't clear, get it corrected.

But some people out there say, "It's not in the T.O., but this is what it should be. This is what I was told it was," or "The T. O.'s wrong; this is the way it should be done." There is no excuse for these kinds of comments. If you have a T. O. that is wrong, submit a change. Don't keep passing correct, or incorrect, information by word of mouth; write it down! Submit, see if it's right. If a T. O. isn't clear, get it corrected. If you think there's a better way of doing something, then prove it and submit a change. The T. O. may be the law, but laws have been changed for the **better.**

The consequences of not using T.O.s are many. I won't go on about how many dollars worth of equipment is lost each year due to not following T. O.s. I won't say anything about the loss of lives due to not following T. O.s. We hear about these things all the time. How many more times does it have to happen before people learn? We have to believe that everything we do is done right. It may not be your own life at stake (or it may), but you have to believe that somebody's life *is* at stake. If you wouldn't trust your own life to what you've worked on, why should anybody else? Our job is to accomplish the Air Force mission. Only by following T. O.s do we do our jobs right and ensure to the best of our ability the safety of both men and machines.


Fleagle
THAT WEATHERMAN'S FULL OF BEANS. IT AIN'T COLD OUT THIS MORNING.
US MAIL
BETTER GIT ON DOWN TO TH'LINE AN' SEE WHAT'S STIRIN'.
WIND'S KICKING UP A LITTLE BIT.
DERN IF IT AIN'T GETTIN' COLD.
ARE YOU CRAZY? WHERE'S YOUR COAT? DON'T YOU EVER LISTEN TO TH' WEATHER FORECAST?
HARDISON
?
WHY AIN'T YOU MOVING?
I BELIEVE THIS HERE FELLER GOT A MITE TOO COLD. WHERE CAN WE GO TO THAW HIM OUT?

TAC GROUND SAFETY AWARD OF THE QUARTER

MSgt Linda M. Thrower
27th Medical Group
Cannon AFB, NM

MSgt Linda Thrower incorporates her personal safety consciousness into every aspect of her duty performance. She accomplishes effective unit safety orientation of new personnel and provides comprehensive holiday/vacation briefings that have subsequently been incorporated throughout the hospital facility. She also disseminates safety information from base and higher headquarters through monthly staff meetings, bulletin boards and unit communication books. She assures staff and patient safety by monthly safety inspections, screening checklists and day-to-day vigilance. She corrects any violations on-the-spot or institutes appropriate measures.

MSgt Thrower always goes beyond problem identification by persisting in the permanent resolution of any hazards. For example, when a suggestion to install convex mirrors in the hallways was dropped, she aggressively pursued the matter, recognizing the potential problems at the building's elevators, and ensured that the required items were placed on order.

In another instance, infants and toddlers being transferred by ambulance to downtown facilities were being held by their parents. These children were either too small or too well to be strapped to litters and too large for the neonatal transport unit. MSgt Thrower contacted Family Services, the agency responsible for the base's free infant carseat loan program, and secured the permanent loan of an infant carseat. In addition, a local auto insurance company donated two toddler carseats to the hospital. Through MSgt Thrower's direct efforts, infants and toddlers are now transported safely and securely in the unit's emergency vehicles.

MSgt Thrower has clearly demonstrated a sincere concern for the safety of her co-workers as well as hospital patrons and earned the TAC Ground Safety Award of the Quarter.

COMPLACENCY

Mr Charles Lutz
TAC/DA

Back in the "old corps," sometimes called the "brown shoe" days, a great and historical event took place which propelled the fledgling United States Air Force into its glorious future. It was the Berlin Airlift, begun just nine months after the Air Force became a separate service in September of 1947.

In June of 1948, the city of West Berlin was blockaded by the Soviet forces occupying the eastern zone of what had been Nazi Germany, effectively stopping the flow of life's necessities to the city and its people. West Berlin was an enclave governed by the United States, the Soviet Union, Britain, and France. But it was in Soviet-controlled territory, captured as World War II in Europe was coming to an end. All land routes to the city were closed. Only three air "corridors" were open. The blockade was a Soviet effort to force the United States and its allies out of West Berlin. "Operation Vittles," as we called the airlift, put an end to that scheme. By now, you might be wondering what this capsule history has to do with safety. Plenty!

This is the 40th anniversary year of that monumental victory over communist aggression, a Herculean allied feat which put the word airlift into the dictionary. Considering the round-the-clock flying under less than optimum conditions, despite a number of accidents and some loss of life, the unprecedented operation was a safety *tour de force.*

But this is also the story of "Stubby," a young, black and tailless dog of dubious ancestry, who taught me a lesson in safety.

Back then, it wasn't unusual for each squadron to have a mascot.

It was the Berlin Airlift, begun just nine months after the Air Force became a separate service in September of 1947.

Stubby was a friend to all, but his true allegiance was to a flight engineer who took Stubby on the sometimes twice daily run to Berlin aboard a C-47 aircraft.

When it was time to go flying, Stubby simply leaped into the open cargo bay which was 3 to 4 feet off the ramp. At the end of the flight back at Rhein Main, Stubby just leaped out the open door and headed home for a "crew rest."

After several months of flying the C-47, the units transitioned to the larger C-54. (Max gross weight at takeoff was 75,000 pounds. Just think of what a few C-5s could have done!)

But now, Stubby had a problem. He couldn't "mount up" as he had done before. It was a good 8 to 10 feet to the cargo deck. On his first trip to the divided city in the "new" aircraft, Stubby had to be carried aboard. As usual, he stayed on board in West Berlin as provisions for the beleaguered civilian population were off-loaded.

After touchdown on the return trip to Frankfurt, Stubby found he had a bigger problem. He just couldn't wait to get his feet on the ground. Several hours in extra noisy and unfamiliar surroundings were enough to shake anyone. When the rear cargo door was opened, a black, fast-moving streak shot past the crewmember and into

A Synonym for Disaster

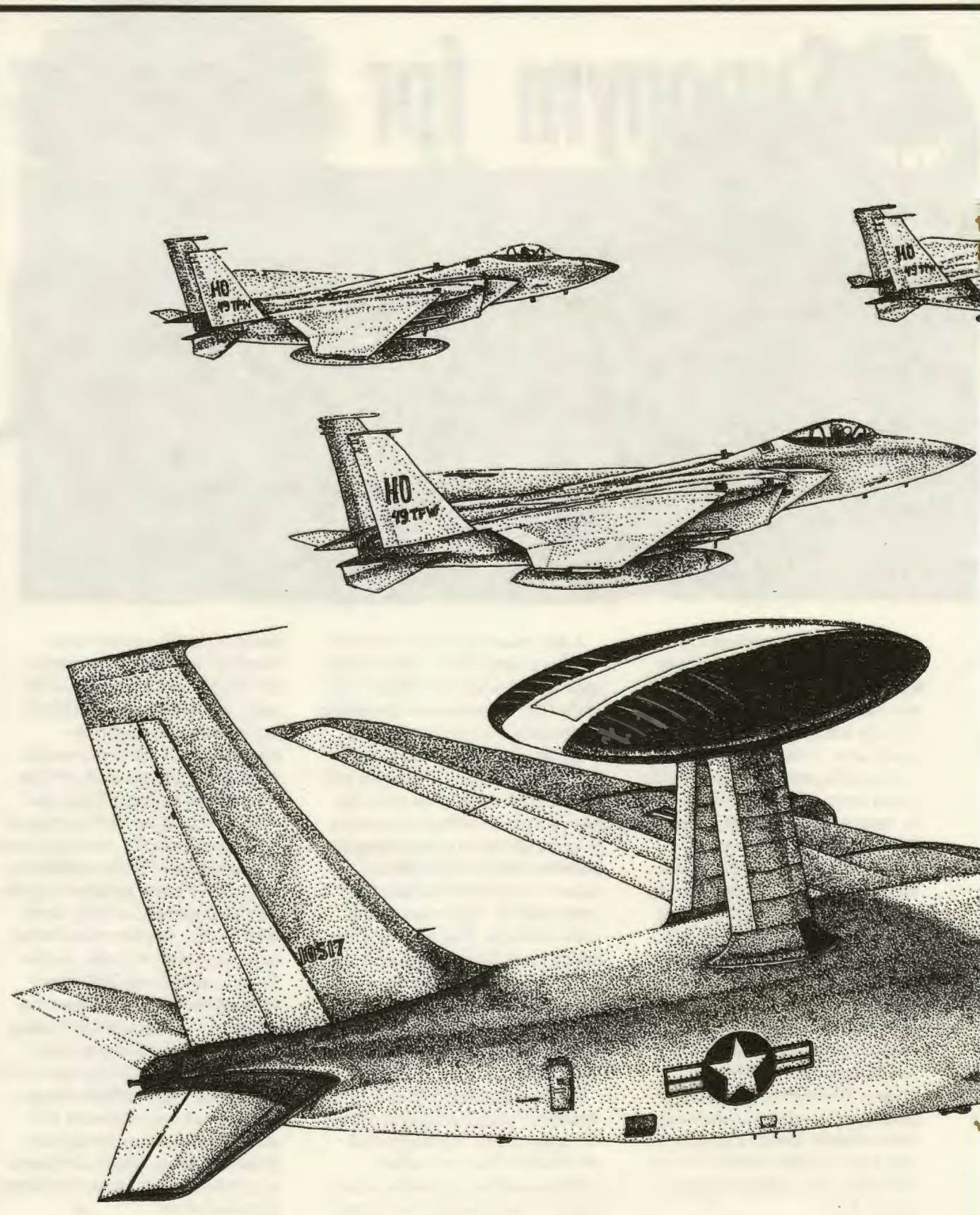
space. Stubby screwed up! There was a muffled thump as the furry fellow hit the concrete. But the old boy was tough. He only suffered a few cuts and bruises and was back on all fours in a few weeks. But, as a result of his miscalculation, Stubby would never again allow himself to be "escorted" on board any aircraft. Who says animals are dumb?

Stubby learned a lesson from a serious error in judgment. Stubby made the mistake of anticipating something that wasn't there. He was complacent. He let habitual behavior take over. How often do we humans do that? When we get in the habit of doing things automatically, without thinking, we place ourselves and others in danger. Whether driving a car or piloting a jet, make it a practice to stay one move ahead. Use that checklist. Stubby couldn't, but you can. Keep your mind on the business at hand.

A few years ago in the crash of a civilian airliner which was on final approach, the last recorded words of the flight crew were a discussion of the price of a good used car. It truly was their final approach. Senseless – Stubby-like, if you will. And then there was the crew that placed a paper coffee cup over the gear handle light (after pulling the warning horn circuit breaker), because the horn blew intermittently and the light stayed on at cruise altitude. That Stubby-like action made for a smooth gear-up landing. I'm sure you've heard and told stories like these, never thinking it could happen to you. It can and will if your checklist isn't your Bible.

I believe that the men and women of today's Air Force are better trained than in years past. I also believe that our modern machines and equipment are the world's best. Despite the sophistication of the flyers with their "wonder" weapons, a dangerous and deadly thread links us to the past – something that has killed just as surely as an enemy – complacency! I think you get the message. But remember, old Ben Franklin said it best, "They that won't be counseled can't be helped."

The Berlin Airlift came to an end in September of 1949; and Stubby went DNIF (duty not involving flying) permanently, settling down with "Lady," another mixed breed dog adopted by our unit. And as the acknowledged airlift champions of the world, we were soon called upon to support the United Nations force in Korea in June 1950. Yes, we finally managed (with the help of a mild sedative) to get Stubby and Lady on board the aircraft headed toward our new home in Ashiya, Japan. And most of us (checklist followers) lived happily ever after.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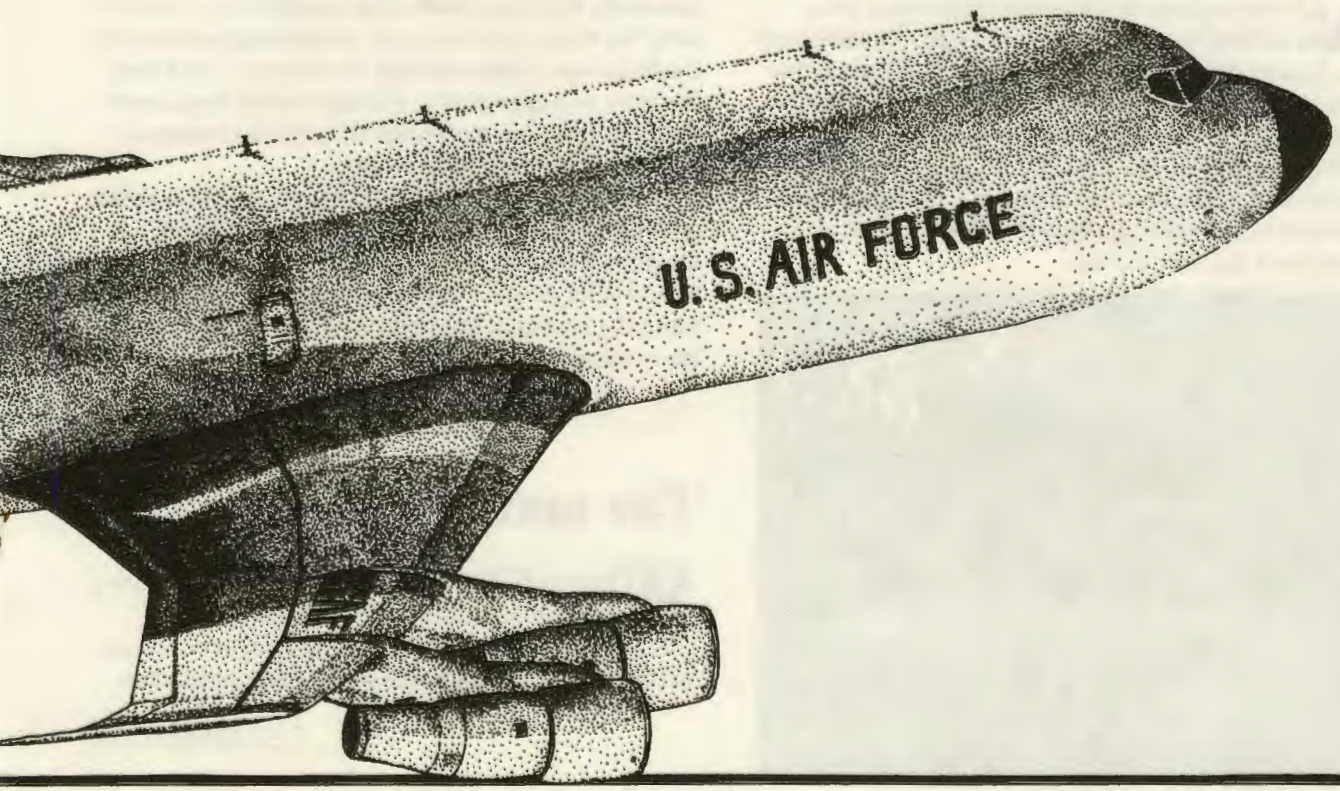
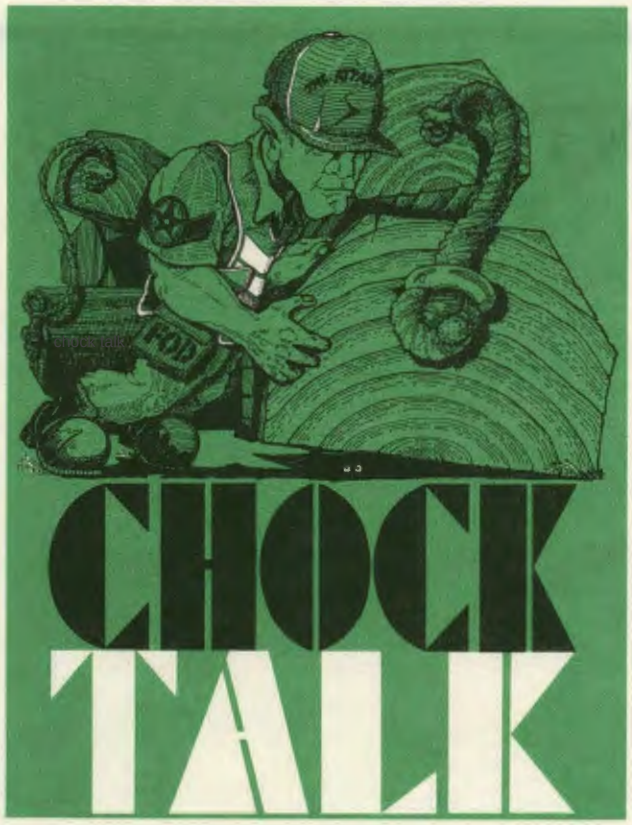
E-3A SENTRY (AWACS)
WITH F-15 EAGLES

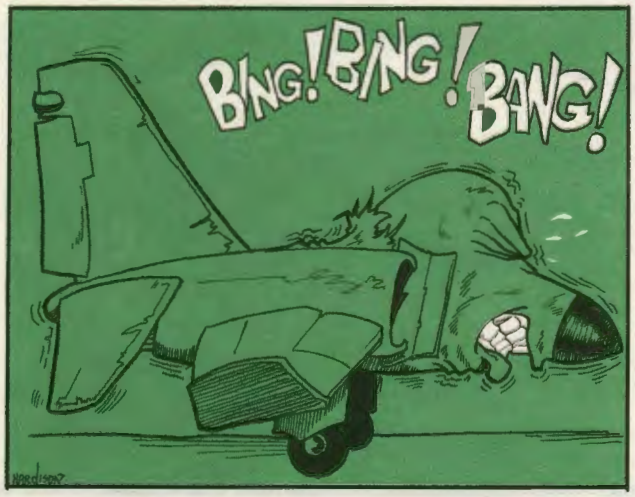




Incidents and Incidentals with a Maintenance Slant

Know your job

An F-4 was placed in the sound suppressor for a jet calibration and high-power engine conditioning run. Intake inspections were made by qualified engine run mechanics, both before and after the run. During the swing shift, the engine was inspected and run to clear an equipment cooling writeup. After the run, mechanics found a rivet missing in the left intake and serious foreign object damage (FOD) was discovered throughout the compressor.



The problem occurred as a result of some sheet metal repair work that had been done improperly. After assessing a couple of gouges in the aluminum skin at the bottom of the left engine intake, the sheet metal foreman decided to have them repaired. He instructed the mechanic to drill the gouges out with a number 30 drill bit and install a 1/8 inch cherry max fastener in each hole. Instead the mechanic drilled the holes with a number 10 drill bit and used 3/16 inch fasteners, creating a knife edge condition on the countersinks which resulted in the holes being enlarged by the fasteners. Unfortunately, the foreman inspected the work and approved it. During the last engine run, the FOD fastener was pulled through the enlarged hole and ingested into the engine.

The mechanic who did the faulty repair either didn't understand the proper repair procedures for the job assigned or simply chose not to follow the instructions he had been given. A faulty inspection only complicated the problem. Reminds you of the old saying, "A job worth doing is worth doing right," doesn't it?

The omitted step

When an F-15 was towed to the Hush House for a checkout due to an augmenter blowout problem, it received a FOD inspection from the crew prior to the engine run. The inspection revealed an

improperly seated screw in one panel and eight screws missing from four other panels. The crew then did an intake inspection, but the missing screws were not found. The engine run crew chief then chose to continue to run the engine instead of giving the aircraft back to flight line maintenance to correct the problem.

During the subsequent engine run, sparks were observed coming from the rear of the number one engine. Inspection of the engine at that point revealed serious foreign object damage throughout the engine, requiring the core and inlet modules to be sent back to the depot for repair.

The lesson to be learned from this incident is obvious. We are continually reminded of the importance of FOD walks and intake inspections in order to stamp out the loss of valuable work hours and resources to foreign object damage. FOD prevention is crucial to successful mission accomplishment. When you find foreign objects or evidence that some exists, don't omit the next important step – follow-up to correct the problem.

Watch those fingers

A worker was assigned to move two 55-gallon drums that weighed 470 pounds each. He loaded both of them on the forklift tines and headed for the new storage area.

At the new warehousing location, the worker stopped to ask where they wanted the drums to be placed. Before he jumped back in the forklift, the worker checked the drums to ensure they were still centered. Noticing that the front drum was slightly off center, he took his leather workman's gloves off to "get a better grip on the drum," bent down and lifted the drum approximately 3 to 5 inches off of the right tine and pushed it back into position. As he laid the drum back down, he pinched the tip of his left middle finger between the underside of the drum and the right tine. He felt pressure and a little pain but did not realize his finger was jammed tightly between the drum and the tine. When he stood up, he ripped the tip of his left middle finger completely off. The amputated tip of the finger was crushed beneath the weight of the drum and efforts by the hospital to save it were unsuccessful.

You work around a lot of heavy and sometimes sharp objects that can cause serious physical damage if you're not careful. If you're doing some intensive physical moving, take extra care to make sure that you're not going to suffer either damage or loss to one of your fingers or toes.

There - Take that

An F-4 had just been topped off with fuel at one of the hot pits, and one of the technicians disconnected the refueling nozzle and handed it to his assistant. The second man raised and swung the nozzle, trying to swing the hose clear of an AIM-9 missile on the aircraft. Unfortunately, he was unable to control the momentum of the hose and the nozzle struck the missile, shattering the radome.

Using a little more brain and not so much brawn can take a few more seconds but usually prevents a costly item, such as a missile, from having to go back to the depot for repairs. Think about it. If we do it smart, safety takes care of itself.

Been There, Done

Been there, done that...

Capt Sam Huffstetler
434 TFTS
Holloman AFB, NM

Well, folks, it's time once again to sit down and learn from the mistakes of others.

After all, someone has said there aren't any new causes of mishaps, just old ones revisited.

"There I wuz, just coastin' out west near Herman's Manor when all of a sudden a four-ship of Rhino strikers came smoking out of the haze. Waaall, let me tell you, boy, I just got me a self-sorting Lima shot on the leaders and gunned the others – in the face, of course . . ."

Yessiree, we do love those war stories, especially when they reinforce our warrior image. Unfortunately, there are thousands of "war stories" or "there I was" accounts out there that don't get the press they ought to. These stories tell how we almost killed ourselves by making a not-so-smart move. Or how we learned from a mistake we've made. Well, folks, it's time to once again sit down and learn from the mistakes of others. After all, someone has said there aren't any new causes of mishaps, just old ones revisited.

So here we go with a series of articles designed to "tell on ourselves." Read and heed, pilgrim, 'cause you might as well learn from my mistakes rather than make them yourself.

There I was in my mighty Eagle Jet, doing 1 V 1 night intercepts over the South China Sea. Our area was northwest of Okinawa, some eighty-five miles away from home base at Kadena. The weather was standard February fare – a single deck of variable thickness at 14,000 feet.

Being a good wingman, I had studied the usual safety items related to night flights, especially for overwater and in mixed weather. If you have ever flown at night over water, you know that sense of flying into an ominous "black hole." Looking out over the nose of the jet, one could see, oh, maybe six feet. It's pure instruments and radar interpretation out there, and visual illusions are common. But they would never happen to me, right?

After the third intercept, I was proceeding southwest in the area to set up for one more. The cloud deck was just underneath me at 16 grand and was barely illuminated by the one percent moon that seemed to be standard for night sorties. Feeling pretty good about my cosmic intercepts, I glanced at my left nine o'clock only to see lights coming up through the clouds real (and I mean REAL) close, heading in the same direction.

Wait a minute. Lead is at my six for 20 miles. Nobody else is supposed to be out here. Those lights are too bright to be squid boats down on the water, besides the clouds are too thick for the lights to penetrate. What else could it be? These areas aren't off limits to civil traffic, but I'm not too close to an airway, I think. In the two seconds it takes for my mind to muddle through the options, suddenly the lights emerge from the clouds.

Good grief, it's an airliner!

All I can see is the long string of lights from the cabin windows. He's so close I can't even see the wingtip nav lights. Don't see any people in those windows, but that doesn't matter . . . I'm flying ten feet over a 747's wing, and it's time to "get outta Dodge!"

I plug in full blower and roll into a six G, 80-degree right bank. Sixty degrees and a quart of adrenaline

That...

later, I look back to my left seven to pick up the wayward heavy's lights. To my horror, he's not behind me. The lights are still very close at my left nine, following me through the "hiyakka" pull to get out of his way. What?? No miserable Northwest Orient crew-dog could follow me through that kind of maneuver!

The light begins to dawn in my now disoriented cranium. I recover the jet and begin a gentle turn back to the south to get a good look at the "bandit" off to the left. It isn't an airliner bent on flying Thunderbird close formation with me. Instead, I'm looking at the lights of Okinawa, 85 miles to the southeast. On my southbound leg, I had flown to the edge of the cloud layer, and had seen the island's lights as the clouds thinned. From the northwest, Okinawa appeared to be a long string of white lights, just the right size to make me think that it was "something else."

Good grief, it's an airliner!

All I can see is a long string of lights from the cabin windows.

He's so close I can't even see the wingtip nav lights.

BEEN THERE, DONE THAT...

So now I have two other problems. First, the aircraft seems to be tumbling uncontrollably. Fortunately, I realize that the jet is straight and level – it's my brain and middle ear that are gimballed. I throw the autopilot on and my internal gyros begin to cage themselves. The second problem is obvious. Is anyone going to find out that I made a defensive break for, uh . . . an island?

That question is answered quickly when the silence is broken with a radio call, "Two . . . You OK?"

"Yeah . . . I'll tell you about it later . . ." I wondered how I was going to explain my way out of this one.

So what did I, Mr. Pilot, learn from this encounter? First and foremost, maintain control of your aircraft as you react to unexpected situations. Had I not had the presence of mind to level the wings and give the jet to George, I might have gyrated myself right into the water. The quick, unexpected onset to six Gs and accompanying bank "dumped" my vestibular system, and it took a few seconds to overcome the sensation of tumbling. When you know that the turn is coming, it's easier to maintain some level of spatial orientation – but high - rate turns at night are still a bit more difficult than the customary turns during the day.

Second, that good old depth perception you depend on so much during the day just isn't as good at night. Think about your last night mission. Did you see another aircraft in the radar pattern on a converging heading that looked as if he was only a mile or so away? You also probably realized later that he was five miles off on a parallel course. Yeah, yeah . . . I know. It's one thing to misjudge a mile versus five miles, but ten feet and 85 miles? Look, I'm not a rocket scientist, but I'm not as dumb as I look either. If it could happen to me, it might happen to you.

So what did I, Mr. Pilot, learn from this encounter?

First and foremost, maintain control of your aircraft as you react to unexpected situations.

I talked myself into believing the lights were part of a jet, now what they were in reality - an island 85 miles away.

Finally, humans tend to sort what we see into recognizable categories. When you visually acquire lights in the distance while night flying, you will try to identify them using preconceived images in your mind. Since I "knew" that the lights off to my left were very close, it was natural for me to identify them with something big that would have a long string of lights oriented along the horizon. I talked myself into believing that the lights were part of a jet, not what they were in reality – an island 85 miles away.

You have undoubtedly experienced this to a lesser extent yourself. In the air-to-air environment, it is common to padlock and begin a conversion on your assigned bandit, only to discover that he is a heavy flying well outside the airspace. Mud-movers see it, too. How many people have visually acquired the horizon lights on a night bombing ride only to discover that they are flying off of a star constellation?

What's the bottom line? Shoot, I don't have all the answers, but a few clichés, tired as they are, still apply. Cross check your instruments often. Perform evasive action whenever you think it is necessary, but expect the consequences. Night flying is more conducive to visual illusions and spatial disorientation. Do you have a plan to get your jet and pink bod out of a difficult situation? Finally, don't jump to conclusions about what you think you see out there.

So now it's your turn. Let's share some of these war stories with each other, and maybe we can learn something. Send them directly to *TAC Attack*. They're just itchin' to get new ideas and bylines (or print your story anonymously if you'd rather).

WEAPONS WORDS

Nuclear training? Me!

Maj Jonny J. Hepler
HQ TAC/LGWP

The subject of required nuclear training and evaluation has recently become a more frequently discussed topic. Usually, the first question is: "Am I required to have nuclear training?" The answer is simple. If your organization has a nuclear weapon listed as a primary or support munition on the Unit Committed Munitions List (UCML), then, as a minimum, assigned personnel must receive nuclear surety training and are subject to nuclear surety evaluation during a HQ TAC/IG visit. Furthermore, as the Weapons Standardization Section/Division is responsible for load crew training, they must ensure all load crews are *certified* on *nuclear support munitions* in addition to the requirements found in MCR 66-5.

A few more specifics apply to personnel assigned to the Munitions Branch. Nuclear training is required and must be conducted by all units in the Munitions Branch which inspect, handle, store, maintain, test, or transport nuclear training shapes. Personnel must be certified on nuclear weapons tasks if the nuclear weapon is a primary munition on the UCML, or they must be qualified on nuclear weapons tasks if a nuclear weapon is listed as a support munition on the UCML – IAW TACR 136-102. Also, personnel must be qualified on stacking/unstacking weapons in frames, and 75 percent of mobility-tasked personnel in each Combat Munitions Unit and Combat Storage Unit must be trained on emergency destruct and command disablement system procedures. Finally, the individual in charge of a nuclear training weapons convoy must be a Munitions Branch representative, be a 7-level or higher, and be responsible for briefing all personnel accompanying the convoy.

These items do not encompass all the required nuclear training items, but should be enough to get the ball rolling on a program which may have been neglected. Good luck on your next nuclear training evaluation!

Take notice

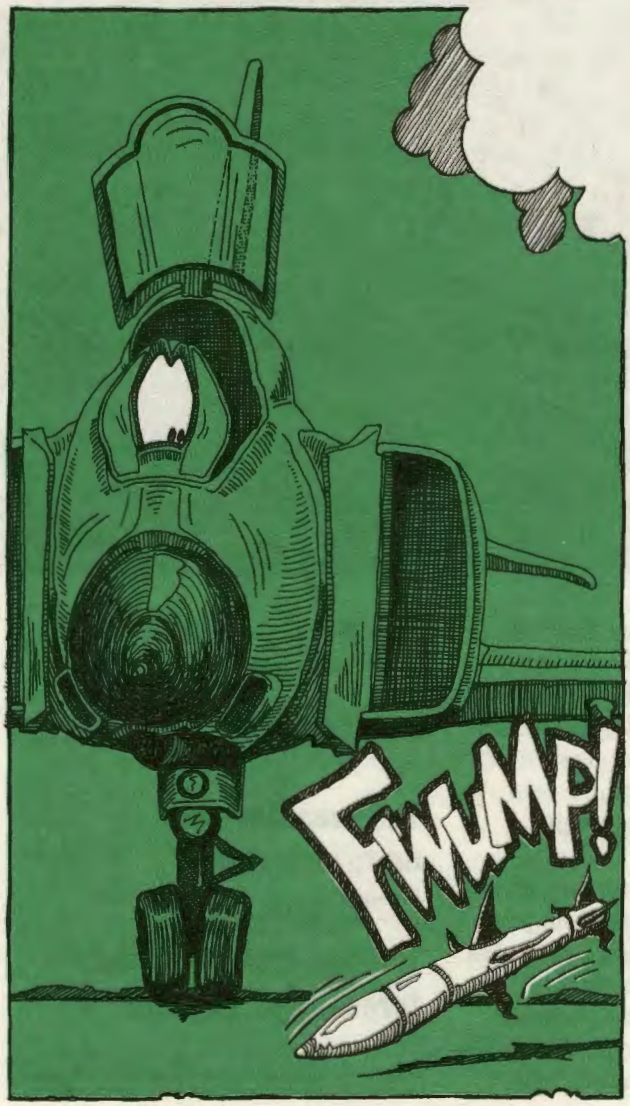
Amunitions handling crew was loading a trailer with containers of computer control groups. While inside the storage building, one crew member was attempting to pick up two containers of the parts with a forklift. Unfortunately, the driver allowed the forklift's tines to go too far under the containers, catching a stack of eight boxes behind them. When the forklift tines were raised and the driver began to back out, the spotter noticed the stack of containers swaying back and forth. He shouted for the forklift driver to stop; however, the top six containers in the stack were already falling.

What could have prevented this incident? A team effort. The spotter was there specifically to check the work area and serve as a second set of eyes for places where the driver couldn't see. The driver's job was to transport the required munitions safely from the building to the trailer. His job is not only to watch where he's driving, but where those tines are going as well.

Out of order

During an operational readiness inspection, a load crew was assigned the task of loading two AIM-7 missiles on an F-4. The load crew chief instructed his crew to prep the stations for stray voltage checks and upload the missiles according to the applicable technical order (T.O.).

While preparing the left aft missile launcher, the number two man installed two Mk-9 impulse cartridges in the station. Meanwhile, the load crew chief climbed into the cockpit and had power applied to the aircraft in order to do the stray voltage checks. As the crew chief rotated the selective jettison switch from the "Off" to the "Left Aft" position, he heard a loud bang, and was told, of course, that the impulse carts had fired. *Surprise, surprise, surprise.*



The maintenance folks were not able to determine why the impulse carts fired since the load crew chief had not depressed the "Push to Jett" button. The fact remains that voltage was present and fired the carts when the switch was rotated. That's *precisely* what stray voltages are all about. The crew member working on the station had installed the impulse carts prior to performing the stray voltage check, which was in reverse order from the prescribed checklist sequence. Make sure you don't have to experience something like this mishap to drive home the point – checklists are in a particular order for a reason.

Comedy of errors

There was nothing comical about the series of errors that led to this mishap's occurrence. An F-4 returned from a local exercise training mission with three BDU-33s still loaded inside a SUU-21 dispenser. The aircraft was scheduled to become a load crew trainer the following week so it was towed to a hangar and the SUU-21 was downloaded by an unqualified weapons load crew. They didn't document the fact that the dispenser still contained unexpended munitions and it was placed in a storage building for use in later missions.

When the SUU-21 was identified as due for a 180-day inspection, the swing shift armament crew placed it on a work stand and connected a tester. When the load crew chief opened the doors of the munitions dispenser, he noticed the three practice bombs inside and notified the shift supervisor who told him to close the dispenser doors. As the crew chief tried to do that, he activated the wrong switch and the bomb was ejected and impacted the floor, burning him and shattering an overhead light fixture.

Any single element in this mishap could have led to serious problems: unqualified load crew, improper or incomplete documentation, inattention to the presence of practice bombs inside the dispenser, and incorrect switchology. Taken together, they were allowed to be a mishap looking for a place to happen. Unfortunately, they could *all* have been avoided.

A SOF's WORST NIGHTMARE

Maj Dan Kunyan
TAC Flight Safety

Imagine yourself in this situation – you are the morning SOF (supervisor of flying) and have just launched the first go. The weather was marginally OK – 1200-foot ceiling and 7 miles visibility, and forecast to improve. You've got three good alternates with weather about the same as the home drome, and forecasted to stay up. Fifteen jets take off and things are going pretty routine. But now your game plan starts to fall apart – and quickly!!

Thunderstorms move over the primary and secondary alternates making them unusable so a weather recall is initiated. Four jets make it back and land safely, but then the weather at home base takes a dive to a 400-foot ceiling and ¾-mile visibility. There's only one option left – send everybody to the farthest, and most seldom used, alternate. The weather there is supposed to be a 2000-foot ceiling and 6 miles vis. But now something else goes wrong. Communication to the airborne aircraft was ineffective and six of the eleven aircraft did not know of the recall or divert until they began recovery. So they start

The weather was marginally OK
- 1200 foot ceiling, 7 miles visibility, and forecast to improve.

their weather divert much later than they should have.

The final straw occurs when the weather at the divert base deteriorates to 1000-feet ceiling, 1-1/2 mile vis with thunderstorms, standing water on the runway, and prevailing crosswinds/tailwinds. There is no option left for the diverting jets but to land under these conditions. To make a long story short, of the eleven diverting aircraft, five landed with IFE's (emergency fuel), and three engaged cables on landing, but they all made it. If it wasn't for a final bit of luck and some superb airmanship on the part of several of the diverting pilots, this scenario could well have become a disaster for the U.S. Air Force.

Thunderstorms move over the primary and secondary alternates making them unusable so a weather recall is initiated.

This incident is true. It happened recently in one of our overseas commands. The entire sequence was further complicated by communications problems associated with host nation controllers and weather personnel. The resulting investigation found the weather and weather forecasting system to be causal. While the SOF was not causal, there are some important lessons for all TAC SOF's to learn from this incident.

Communication to the airborne aircraft was ineffective and six of the eleven aircraft did not know of the recall or divert until they began recovery.

What went wrong in this situation? Ignoring the presumptions of Monday morning quarterbacking, we can basically say the SOF was relying on faulty information as he made his launch and his divert decision. No one, no matter how experienced or capable, can be expected to make correct decisions under those conditions. The only information this SOF had was the marginally acceptable weather forecasts (1200 - foot ceilings) and the knowledge that this information had a reputation for being unreliable. Using this information, the SOF launched his unit's aircraft, but it soon became obvious that all the forecasts were bad and no reasonable options would be left. In retrospect, if the SOF had deferred the launch decision, by slipping or cancelling the first go, this incident would not have occurred.

In November's *TAC Attack*, an article was published that discussed the concept of "SOF Savvy," which means making correct decisions based upon all available information. The article also recommends that SOF's never "press the weather." This is obviously a prime example of why. What can other SOF's learn from this incident? Simply put, before making a launch decision, analyze the information available. Know where it came from and decide if it can be relied upon. If the information (weather or otherwise) is shaky, then don't make a launch decision. In this case, waiting a few hours until the information was reliable enough to make a "savvy" decision, and losing a few sorties would have been a much better course of action. And again, "don't press the weather!" Sorties can always be made up, but aircraft and pilot lives cannot. >

YOU NEVER KNOW WHEN YOU'LL NEED THEM

you never know when you'll need them

Sgt C.J. Conder
RAF Bentwaters, UK

The plan was for my wife to get the kids ready, then drive to the shop and pick me up so we could go to the amusement park together. Normally I drive, but I had to work the previous night shift and it was to be a long trip.

Both of the kids have their own car seats, and we always buckle them in. Once, to get our two-year-old son to agree to be buckled in, my wife answered his "Why?" with "cause we're the buckle-up family, that's why." So now and then he will remind us that we "haff ta be da buck 'o-uff famwie."

Well, after a short trip to the gas station and foodland, we were set. The sky was clear, the roads were dry, and our brakes were in good working order. We were off. Less than two miles from home, my wife swung wide to see around a sharp curve. Just as she did, a car appeared.

Needless to say, if you lock your brakes up, you can try to steer your car in any direction you want, but you will only go straight. That is exactly what happened. We skidded across the road and into the oncoming vehicle.

The speed of the impact was less than 25 mph, but the force was enough to "total" both cars. We each had a few bruises, my wife had a slight whiplash, and I had a pulled muscle in my lower back. The kids just wanted to know why we had stopped.

I can say that if we had not used our seatbelts, my wife would be able to tell you the flavor of the steering wheel; of course that would be after they replaced her teeth. I would have given our windshield a goodnight kiss with my face or forehead and needed some serious stitchery work. But all we needed after the accident was a few days of rest and another car. So, it doesn't matter whether the reason for an accident is yours or someone else's, just make sure you're in the "buckle-up group" so you can live to tell about it.

TAC OUTSTANDING ACHIEVEMENT IN SAFETY AWARD

SSgt Timothy M. Conkey

SrA Scott E. Petrelius

355 AGS, 355 TFW
Davis-Monthan AFB AZ

SSgt Timothy M. Conkey and SrA Scott E. Petrelius were discussing the mission with the pilot of their A-10 following engine shutdown when they heard a loud pop in the rear of the aircraft. Sgt Conkey checked the exhaust of both engines and discovered flames engulfing the inner cowlings on number two. He quickly grabbed the ground fire extinguisher and handed the hose and nozzle to SrA Petrelius who was positioned by the engine.

Sgt Conkey then proceeded up the crew ladder in order to discharge the aircraft fire bottles from the cockpit. After expending one bottle, the fire light in the right engine "T" handle remained on, and SrA Petrelius stated that the blaze had spread to the rear of the engine.

After Sgt Conkey had expended the aircraft fire bottles, he asked the pilot to put on his helmet and report the fire to the tower. At the same time, Sgt Conkey retrieved a second ground fire extinguisher in order to finish putting the remaining blaze out.

The timely, decisive actions taken by Sgt Conkey and SrA Petrelius ensured that the damage was limited to a valuable USAF aircraft.

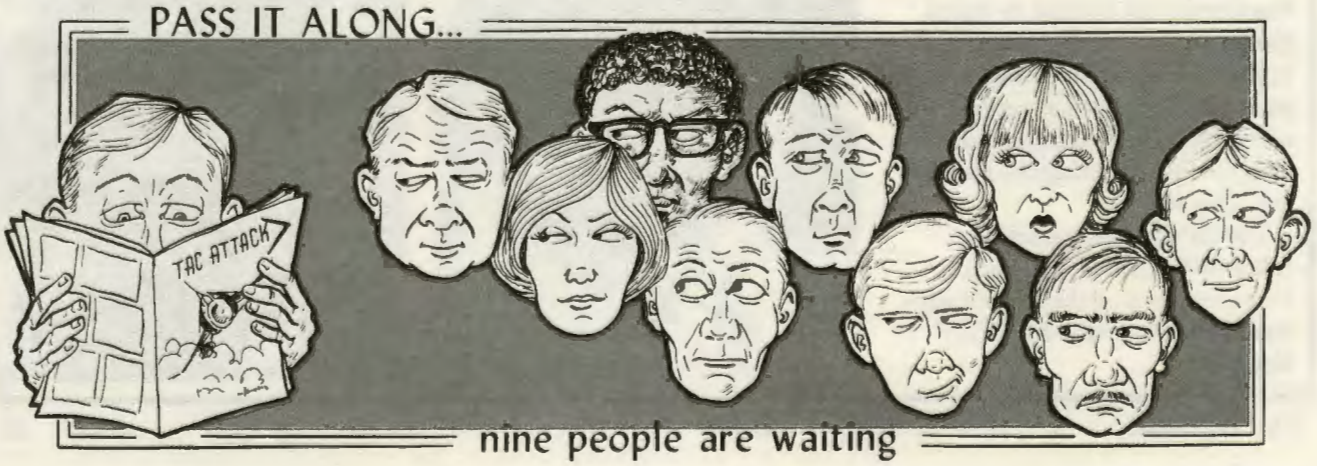
TAC OUTSTANDING ACHIEVEMENT IN SAFETY AWARD

SSgt Charles B. Reynolds
27 CRS, 27 TFW
Cannon AFB, NM

The local area around Clovis and Cannon AFB, New Mexico, was experiencing heavy lightning, hail, tornadoes, and flash flooding when SSgt Charles Reynolds was returning at night from a trip 35 miles away. Although it was not raining when he started the trip, as he got closer to Clovis, New Mexico, an intense lightning storm began and it started to rain.

Realizing the possibility of road hazards ahead of him, Sgt Reynolds slowed down appropriately for the worsened road conditions. During the next few miles, the increasing rain dramatically reduced his driving visibility. Suddenly, Sgt Reynolds hit a large flooded area of water that was flowing swiftly across the road. He fought to maintain control of his auto; and, when his car came to a stop, it was sitting in the opposite lane of the highway.

Wanting to ensure other motorists could avoid the deteriorating road conditions he had encountered, Sgt Reynolds turned around and drove out of the flooded area, parked his car on the edge of the road about 20 yards before the obstacle, and turned on his emergency flashers. As a result of his actions, seven motorists were prevented from entering the flooded area and Sgt Reynolds was attributed with potentially saving the lives of those he enabled to avoid the road hazard. Sgt Reynolds' safety consciousness and concern for others have earned him the TAC Outstanding Achievement in Safety Award.



TAC TALLY

	Total			TAC			ANG			AFR		
	OCT	THRU FY 89	OCT FY 88	OCT	THRU FY 89	OCT FY 88	OCT	THRU FY 89	OCT FY 88	OCT	THRU FY 89	OCT FY 88
CLASS A MISHAPS	1	1	4	1	1	4	0	0	0	0	0	0
AIRCREW FATALITIES	0	0	2	0	0	2	0	0	0	0	0	0
• IN THE ENVELOPE EJECTIONS	1/0	1/0	3/0	1/0	1/0	3/0	0/0	0/0	0/0	0/0	0/0	0/0
• OUT OF ENVELOPE EJECTIONS	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0

• (SUCCESSFUL/UNSUCCESSFUL)

TAC'S TOP 5 thru OCT 1988

1st AF		9th AF		12th AF	
CLASS A MISHAP-FREE MONTHS		CLASS A MISHAP-FREE MONTHS		CLASS A MISHAP-FREE MONTHS	
98	318 FIS	68	33 TFW	44	58 TTW
45	325 TTW	41	507 TAIRCW	37	35 TTW
33	57 FIS	27	354 TFW	31	474 TFW
12	48 FIS	21	23 TFW	23	37 TFW
		16	1 TFW	19	49 TFW

ANG		AFR		DRUs	
CLASS A MISHAP-FREE MONTHS		CLASS A MISHAP-FREE MONTHS		CLASS A MISHAP-FREE MONTHS	
215	110 TASG	98	482 TFW	15	USAFTAWC
190	138 TFG	88	924 TFG	7	USAFTFWC
172	177 FIG	76	906 TFG	1	28 AD
167	114 TFG	50	507 TFG		
131	155 TRG	37	917 TFW		

CLASS A MISHAP COMPARISON RATE

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

TAC	FY 89	1.6											
	FY 88	6.4	3.4	3.0	2.7	2.6	3.3	3.0	3.1	3.3	3.2	3.0	3.4
ANG	FY 89	0.0											
	FY 88	0.0	0.0	0.0	0.0	0.9	2.2	2.5	2.7	2.9	3.0	3.5	3.2
AFR	FY 89	0.0											
	FY 88	0.0	10.6	7.7	5.9	9.5	7.9	6.7	5.8	7.5	6.8	6.2	5.7
Total	FY 89	1.1											
	FY 88	4.3	2.9	2.4	2.2	2.5	3.2	3.1	3.1	3.5	3.3	3.3	3.5
MONTH		OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP

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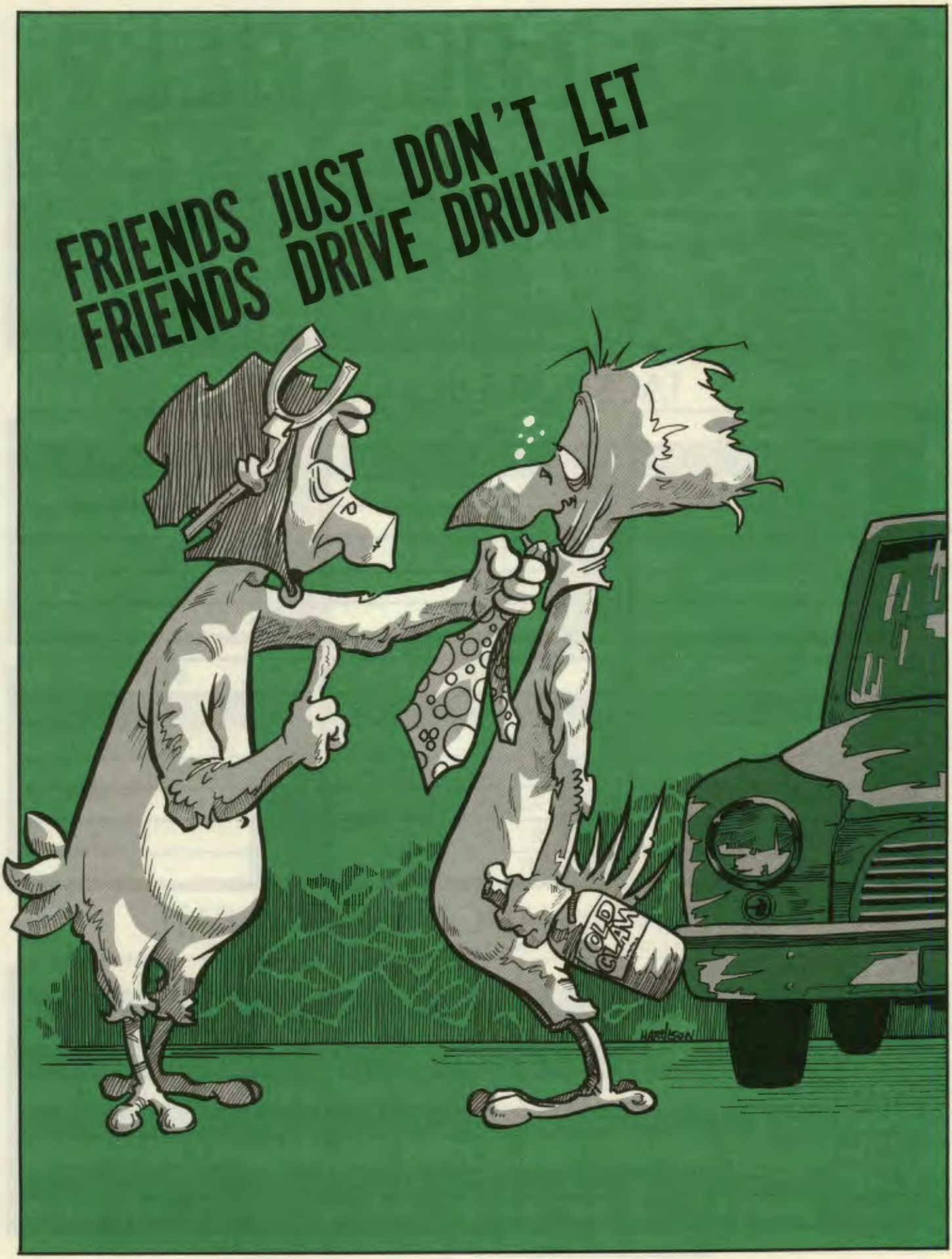
FRIENDS JUST DON'T LET
FRIENDS DRIVE DRUNK
OLD CLAW
HARRISON