

TAC ATTACK

AUGUST 1987



ANGLE OF ATTACK



Well, the flesh peddlers called the other day full of promises, pledges and a deal I couldn't turn down. The base commander's job at Myrtle Beach was opening up and would I be interested? Of course, they already knew I'd kill for the chance at another command—so my answer was easy. And to the joy of some, I'm sure, this will be my last "Angle of Attack."

An "old" (read *expression only*) crusty fighter pilot will be sharing the TAC philosophy with you beginning next month. Col Jack Gawelko is well known for his abilities as a top fighter pilot and professional officer. I'm certain you will find his "Angle of Attack" refreshing and his tactics on risk management and flying smart a solid "shack."

This job has been one hell-of-a-challenge—the troops I've worked with are the best this country has spawned; the units I've visited and flown with the most dedicated and determined in the USAF. Oh, it's been discouraging at times; mainly because as a Safety puke you somehow feel partly responsible for every smokin' hole and life

lost. But there have been the high times, too—working on new ideas like COMPAS and the COBRA Team (Combat Oriented Base Risk Analysis Team); watching the dynamic leadership of our Safety team grow by leaps and bounds. Seeing credibility, real credibility, established by our Chiefs of Safety. I could go on and on.

In this business it's difficult to rack up your successes. The question, "How many mishaps did you prevent today, Coupe," has never been my favorite. On the other hand, if one looks at the record, they will see we have indeed made progress in all areas. Credit must go to our commanders. Without their direct support and involvement, we would have never made a dent. But the key factor is and will continue to be . . . YOU.

Remember to wear the TAC patch proudly. We need to keep a positive attitude, but to be a "TOP GUN," i.e., the best in the Air Force, we need to take the same positive attitude and square it—I call it A².

One doesn't become a TOP GUN with attitude alone; it takes firm self-discipline to square the A. Self-discipline to

ensure that we do things right the first time, every time—the same way we need to be able to fight in combat.

But we also need to have the will to win—the disciplined attitude it takes to win by the rules. Anyone can cheat and sometimes even win, but the TOP GUN knows a cheater will be the first to go in combat. The *consistent* winner's will to win is firmly based on A² and self-discipline. Anyone (in the air or on the ground) can be a TOP GUN; but first, you have to want to.

If I had to sum it up, I'd have to say . . . Boss, it's been fun . . . (read *FUN*) and I'd be proud to fly your wing anytime, anyplace. To each of you—be proud. You have helped build the best command in the United States Air Force—keep making it better.

Remember to check 6 for bandits, but don't forget about the Amarougians at 12.

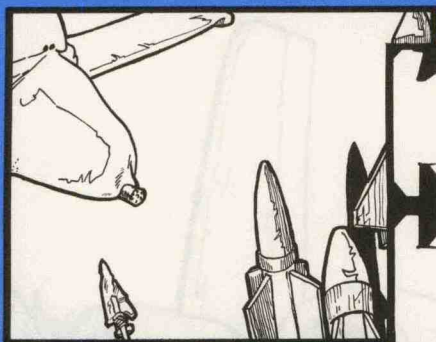
Bon chasseur (Good hunting).

Edsel J. DeVille

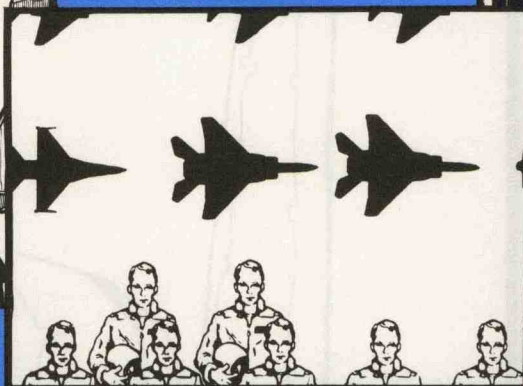
EDSEL J. DE VILLE, Colonel, USAF
Chief of Safety

TAC ATTACK

DEPARTMENT OF THE AIR FORCE



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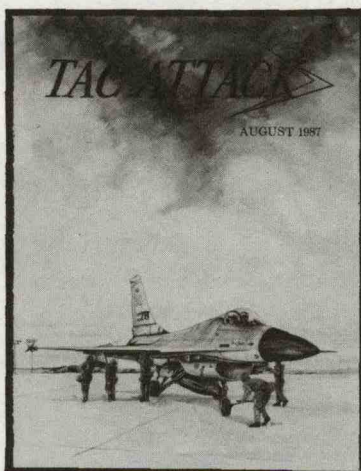
TACRP 127-1

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THE AIR FORCE

GEN ROBERT D. RUSS
COMMANDER



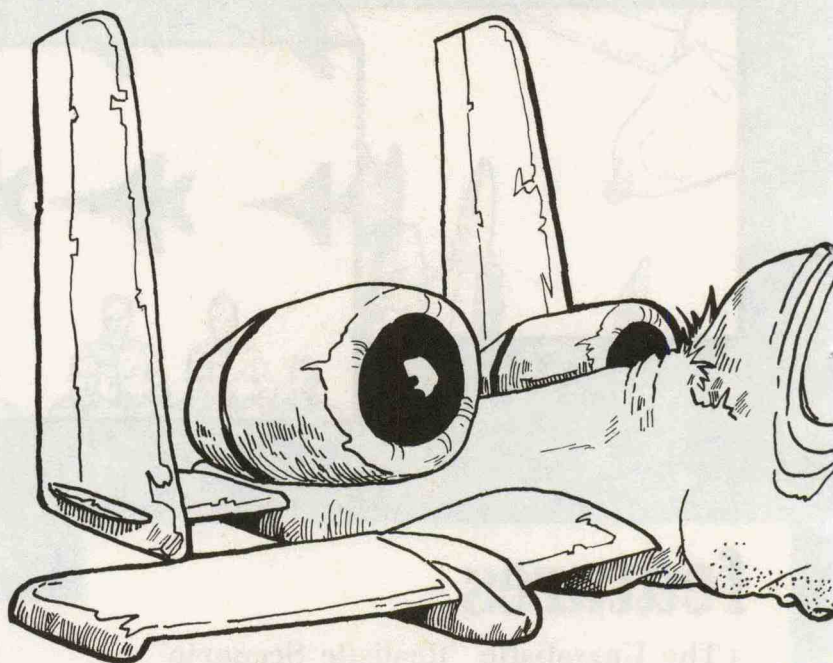
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Major Harley Davidson
TAC Flight Safety

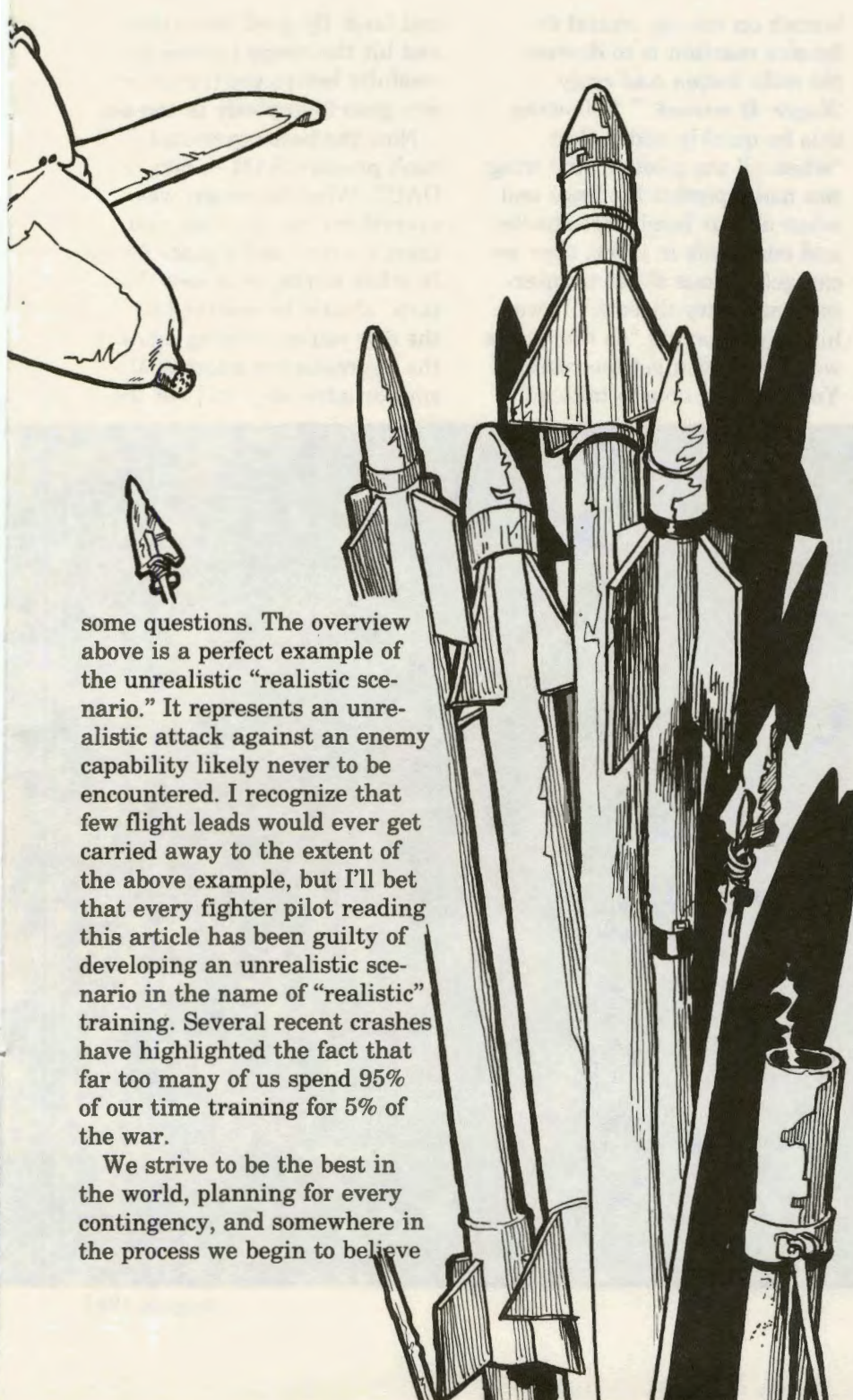
"Time hack, 0900-now." The briefing begins exactly on time and the flight lead, like all good flight leads, begins by stating the mission objective followed by a brief overview.

"Our objective today is realistic combat training. Therefore, we'll simulate stepping to the aircraft in a heavily contaminated CBR environment. After takeoff and once clear of the airfield traffic area, we'll descend to our en route altitude of 300' AGL in a 4-ship box formation. Expect an air threat consisting of MiG 21s, 23s, 27s, 29s and helicopters all armed with the latest Soviet all-aspect

air-to-air missiles. Once we're in the target area, expect SA-6s, 7s, 8s, 9s, ZSU 23-4s and other AAA in all quadrants. Although we would normally expect a widespread target-rich environment, today we will work on enhancing our target acquisition capability by attacking a heavily defended green-camouflaged command post located in a tree line. We'll all attack the same target. Acquiring the target will require total concentration, but don't forget the air threat. I'll brief the four different attack formations in a few minutes. Ordnance all day long will be Maverick and guns. Are there any questions on the overview?"

Well, I hope there would be

THE UNREALISTIC "REALISTIC SCENARIO" (or BFMing the imaginary threat)



some questions. The overview above is a perfect example of the unrealistic "realistic scenario." It represents an unrealistic attack against an enemy capability likely never to be encountered. I recognize that few flight leads would ever get carried away to the extent of the above example, but I'll bet that every fighter pilot reading this article has been guilty of developing an unrealistic scenario in the name of "realistic" training. Several recent crashes have highlighted the fact that far too many of us spend 95% of our time training for 5% of the war.

We strive to be the best in the world, planning for every contingency, and somewhere in the process we begin to believe

that pushing "realism" beyond reality will somehow enhance our combat capability. We plan exotic maneuvers to counter tactics that the enemy doesn't use. We dogfight in regimes where enemy air doesn't operate. We give the enemy advanced air-to-air missiles and SAMs in quantities and capabilities that just don't exist. We simulate attacking unrealistic targets and, worse yet, we simulate ordnance and delivery modes inappropriate for the situation. We communicate with and count on support from all kinds of friendly forces who probably won't be there when the war starts. We continue to fly at 200-300' AGL (the heart

When all the pilots in the wing can make perfect landings and when all our bombs are shacks and our strafe is 100%, then we can get serious about countering imaginary threats.

of the small arms envelope) to counter a SAM array that may not exist (and for sure won't after the second or third day of the war) and pop-up to simulate "snakes and nape" flying right over the heart of our tar-



THE UNREALISTIC "REALISTIC" (or BFMing the imaginary threat)

get's defenses.

We're out there BFMing invisible attackers and their invisible missiles all the time. The question is "How do you BFM an imaginary threat?" Let me give you one man's philosophy. During a pilot meeting, my wing commander described his personal defensive maneuver against an invisible SAM something like this, "When a flight lead or Stan Eval pilot calls a missile

launch on me, my initial defensive reaction is to *depress the mike button and reply 'Roger. It missed.'*" Following this he quickly added that "when all the pilots in the wing can make perfect landings and when all our bombs are shacks and our strafe is 100%, *then* we can get serious about counter-ing imaginary threats." It was his way of saying "do the basics well before you get too cosmic." You must be able to take off

and land, fly good formation and hit the range targets successfully before you'll ever be any good to anybody in combat.

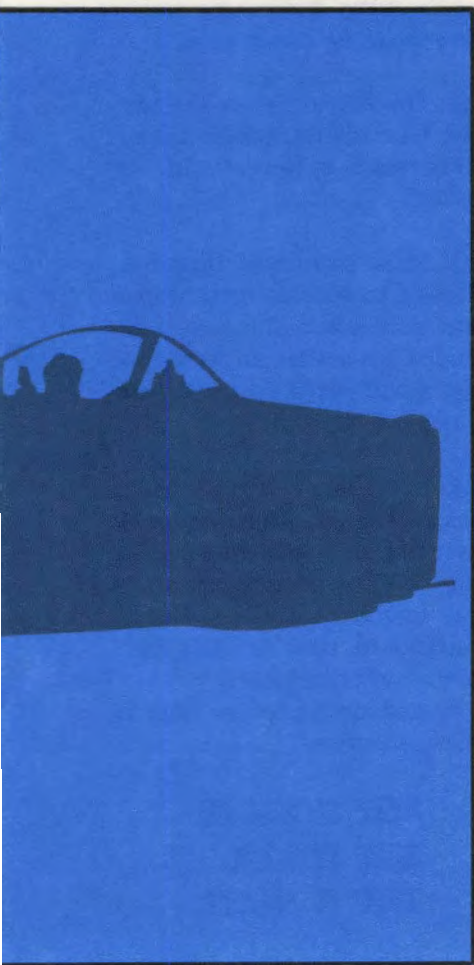
Now the boss never said don't practice SAM breaks or DACT. What he meant was everything has its place and there's a *time* and a *place* for it. In other words, your best "bat turn" should be reserved for the day you're training against the aggressors or another dissimilar adversary and not the



SCENARIO"

"phantom MiG" you've thrown into today's scenario. "Sure," he'd say, "honor the threat with a radio call or a turn, but

Don't get so wrapped up in defeating something you can't see that you hit the ground or run over your wingie.



TAC ATTACK

don't get so wrapped up in defeating something you can't see that you hit the ground or run over your wingie." What really happens when we push "realism" beyond reality? Let me share a couple of thoughts. First, negative learning takes place. Everyone knows that the threat drives our tactics. It doesn't require a tactical genius to recognize that as the threat goes up, we are forced into more difficult and usually less effective tactics. We do our young wingmen a tremendous disservice when we make the enemy bigger than he really is because it drives us to invent complicated and unrealistic tactics to deal with these "bigger than life" enemy threats. Worse yet, these exaggerated threat scenarios teach our young pilots that they can fly into the worst possible situation and come out alive. After all, when was the last time anyone got shot down by an ATOLL or SA-8 during one of our training scenarios? We always return, having successfully attacked and destroyed the target regardless of the briefed threat, don't we? How long has it been since the squadron commander walked around and attrited a couple of four-ships because they foolishly attacked, "alone and unafraid," a target where the briefed threat was too great for any fighter to survive. Believe me, no one ever enhanced their

combat capability and lived to grow old by assuming an air of invincibility. If we want realistic combat training, then we ought to spend more time discussing the probabilities of getting shot down and then realistically design our tactics to ensure force survivability while accomplishing the mission.

Another kind of negative training takes place when we begin to fill training squares during our realistic scenarios. Now, I'm not naive. I know that as long as there are squares to be filled, we'll be filling them during our daily combat exercises. The danger comes when our young wingman thinks that some *unrelated* training event is a valid part of our scenario when, in fact, it may be totally inappropriate. Example: today's scenario is "low threat", however, #2 needs to fill a low altitude navigation square and #3 needs to accomplish a high threat attack. So, the flight goes out at 300' AGL and attacks the low threat target using a LAB (low angle bomb) pop maneuver. There's nothing wrong with doing this *if* the flight lead makes sure *all* flight members understand that the purpose of such tactics is to fill squares; but in no case should any flight member step to the aircraft thinking that a 300 AGL pop is the best low threat tactic.

BFMing the imaginary



THE UNREALISTIC "REALISTIC SCENARIO"

(or BFMing the imaginary threat)

threat has a number of inherent dangers. Consider two of our most recent A-10 crashes. In the first, we had a mid-air collision (both aircraft crashed, one fatality) when the lead element in a four-ship maneuvered against an *imaginary* bandit (no MiG, no aggressor, no baron—just empty sky). In the second, the pilot flew himself into the ground while making a break turn to defeat an A-10 baron at the element's 6 o'clock (fatal). What a tragic and needless waste of combat hardware and human life! For just a moment, those unfortunate pilots gave the simulated threat the status of reality. The simulated threat became their number 1 priority. In their enthusiasm to create realism, they forgot reality. The real threats in our peacetime training *never* change: THE GROUND (with its near perfect Pk), OTHER FLIGHT MEMBERS, OTHER PLAYERS IN THE SCENARIO and

In their enthusiasm to create realism, they forgot reality. The real threats in our peacetime training never change.

THE STRANGER. The imaginary threat, at best, never rates a priority any higher than 5th or 6th.

I think every fighter pilot alive has professed the KISS principle, but do we really practice what we preach? Supervisors, do you listen to the kind of scenarios being briefed on a daily basis? Do you throttle back those flight leads who push beyond "reality" in an effort to achieve realism? Do we throw up the flag when unrealistic threats or tactics are introduced into squadron or wing exercises? Who gets the best grades on check rides; those who want to start the briefing an hour early in order to brief the minute details of their cosmic scenario, or those who walk in with a simple, realistic plan which they execute with precision? Do our pilots understand that complicated scenarios are not the answer to a difficult target/threat situation—a simple, well understood plan is what it will take? Do they recognize that the essential by-products of simplicity are increased combat effectiveness and enhanced safety? Do we place undue emphasis on the simulated threat and merely pay lip service, or completely ignore the *real* threats (ground, flight members, etc.)? Think about it, are we really practicing what we

preach in regards to realistic training? I think not—and it's time for a change. Finally, let me offer some personal philosophy on how to avoid the unrealistic "realistic" scenario.

1. Avoid mixing combat scenarios with unrelated training events whenever possible. If you must mix the two, ensure that all flight members are aware of the differences and the reason for doing each.

2. The threat drives the tactics. Unrealistic threats inevitably result in unrealistic tactics.

3. If the simulated threat is allowed to become more important than the real threat (i.e., ground and other aircraft), you can rest assured that disaster is not left to chance.

4. In terms of their chance to succeed, most cosmic scenarios start out slow and then sort of taper off. While complex plans may look impressive on the chalkboard, they do little for combat effectiveness.

In conclusion, let me pass on three "keepers."

**KEEP IT SIMPLE.
KEEP IT REAL.
KEEP IT SMART.**



AIRCREW OF DISTINCTION

Major David A. Bina was leading a three-ship surface attack mission when he noticed that his F-16 would not respond to throttle inputs. Although military power was selected, the engine was stabilized in mid-range afterburner due to internal failure of the throttle cable.

Aware that weather conditions at Hill AFB would make recovery difficult, he decided to climb and proceed directly to Michael Army Air Field although he had never practiced a simulated flameout pattern there. The flight arrived overhead the field at 24,000 feet MSL with Maj Bina establishing a 3-4G orbit with speed brakes out to maintain 350 KCAS while he coordinated with the SOF.

Michael Tower is not manned on Fridays, so Maj Bina directed his wingman to check runway status and low altitude winds. Since coordination with the SOF and General Dynamics lasted about 20 minutes, pilot fatigue became a problem as his fuel weight decreased and airspeed became harder to control without increased G's. While the forecast winds had indicated he should land on runway 30, his wingman reported that he should land on runway 12 which would give

him a cable capability on the departure end.

Fatigued, low on fuel and all options exhausted to solve or minimize his problem, Major Bina set up for a forced flameout pattern and landing. From 24,000 feet MSL, he spiraled down to 12,000 feet, turned on the EPU and JFS, and utilizing a high G turn to deplete airspeed, lowered the gear at 330 knots. Once his gear was down and locked, he shut down the engine with the fuel master switch. He landed approximately 3,000 feet down the runway and brought the aircraft to a safe stop.

Major Bina avoided the traps that have caught so many others unaware. His outstanding airmanship and correct decisions under pressure saved a valuable TAC aircraft.



Aircrew of Distinction

Major David A. Bina
4 TFS, 388 TFW
Hill AFB, UT



TAC tips

Tac Tips

INTERESTING ITEMS,
MISHAPS WITH MORALS,
FOR THE TAC AIRCREWMAN

Needed: A FASH Program?

A midair collision between a jetliner and a fish—that's right, a fish—delayed an Alaska Airlines flight for about an hour while the plane was inspected for damage.

"They found a greasy spot with some scales, but no damage," said the airport manager.

And how can a jet hit a fish? Just as the airliner passed 400 feet after takeoff, the flight path of the jet and an eagle, fish in talons, crossed. As the larger "bird" approached, the smaller bird dropped its prey. The eagle was unharmed but the fish was presumed dead.

What's the moral? Well, we may not be ready to start a FASH (Fish Avoidance Strike Hazard) program but it highlights the fact that no matter where you're flying, you've got to be aware of your operating area and the inherent hazards you're likely to encounter. If you're flying around in the Pacific Northwest or Alaska, apparently you'd better watch for "flying fish" in addition to the normal bird strike possibilities.

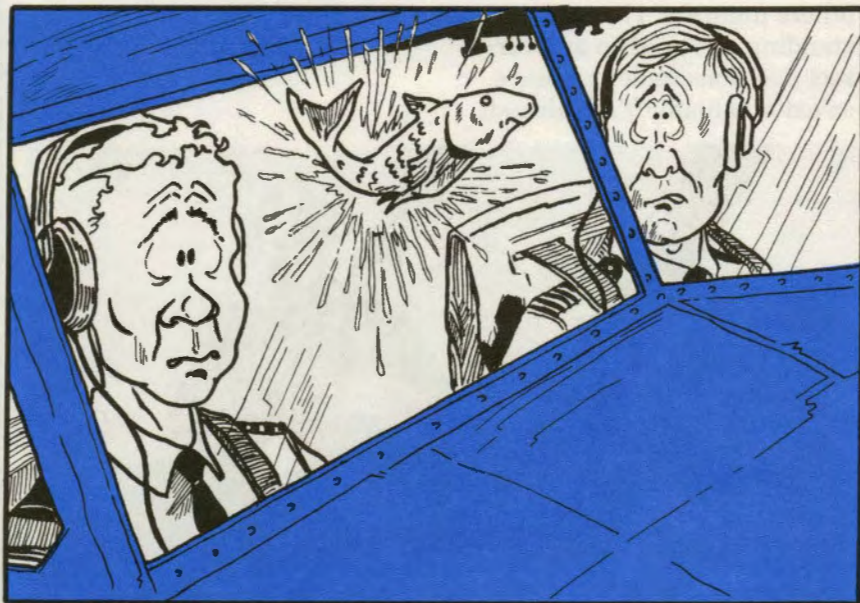
(Thanks to *The Anchorage Times* and MSgt Mike Leahy, Alaska ANG)

Get-Home-Itis strikes again

A flight of four fighters recovered at their weather divert base recently after thunderstorms closed down operations at their home station. After the weather cleared at home, the 4-ship cranked engines in preparation for the trip home. The crew chief handling one of the jets noticed a fuel leak in the lower wing root area. Two fuels specialists were redballed to the aircraft and directed the pilot to shut down while the other three aircraft launched for home. The leak was determined to be between "a heavy seep" and "a running leak." The TO requires a red X entry for a running leak in that area. The pilot stated that he had to get home for an "important meeting" and went into Base Ops to call home. The specialists continued to work the leak; exploring all possible avenues for fixing the airplane quickly and legally.

The pilot returned to the aircraft and told the fuels specialists that he had received approval from Ops for a one-time flight with the leaking internal wing tank.

The specialists, the flight chief and the crew chief all felt that the aircraft should have



been grounded until the leak was fixed. However, in their desire to help the pilot make his "important meeting," they decided to *pack rags in the area of the leak*, close up the jet and send the aircraft home (against their better judgement and TO directives). This decision was influenced by the pilot's statement that he had been cleared for a one-time flight and his insistence on getting home. The jet flew home uneventfully but this story could have had a much different ending if a small spark had occurred near those fuel-soaked rags. Just how important can a meeting be?

Prepare for the unexpected

How well do you prepare for a flight? You should

plan your mission and route in detail against the unexpected, such as an emergency landing, a divert or an emergency landing at a divert field. Flying from the same field in the same general area lends itself to routine briefs and routine planning. A brief based on familiarity can bite you when you are most vulnerable.

When was the last time you shot a practice approach to the field you normally brief as your primary divert? When did you last look at the approach plate for your divert? Do you just assume you'll get a PAR or a visual straight-in? Approaches change, frequencies change and NOTAMed maintenance occurs on runways and arresting gear regularly.

I was recently on final approach at a divert field in a damaged aircraft (no flaps and

slats) at night. The tower wasn't on the frequency I remembered, and going around was not a real attractive option at the time. I had much more to do than play musical chairs with radio frequencies. A few minutes spent reviewing my divert field frequencies would have saved me 30 seconds of frantic page-flipping and a number of gray hairs.

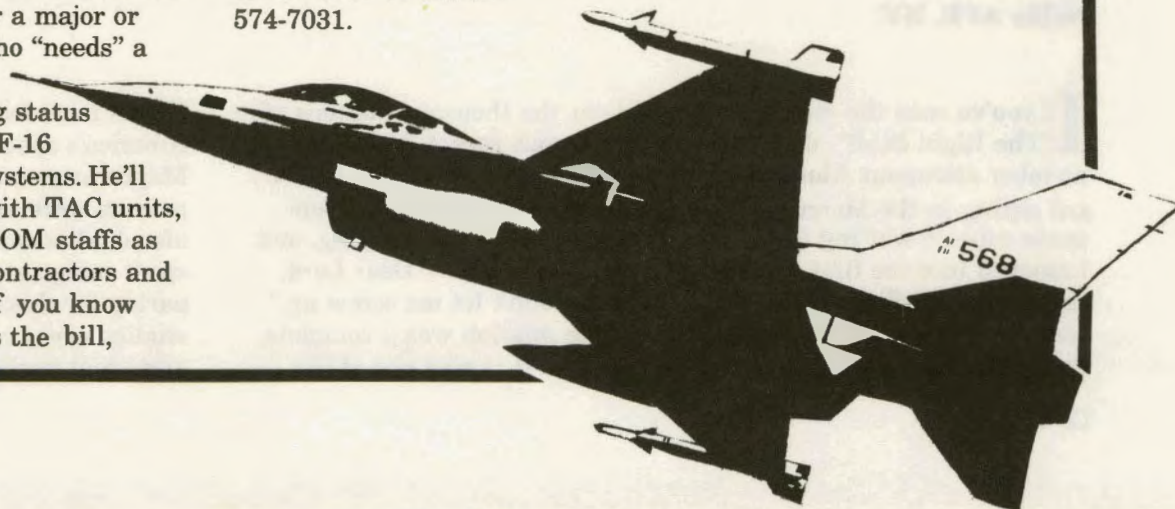
So, the next time you brief your "divert as usual", do something unusual: Break out the plates and look at the approach and the frequencies. See if something has changed from what you believe it to be. You just may be surprised.

(Adapted from article by Ltjg Bill Wilson, VAQ 134, in *U.S. Navy Weekly Summary of Aircraft Mishaps*.)

WANTED: F-16 PROJECT OFFICER

The HQ TAC Flight Safety Office is hiring an F-16 pilot to report as soon as possible. We're looking for a major or major-selectee who "needs" a staff tour, wants to continue flying status and cares about F-16 operations and systems. He'll fly the F-16C/D with TAC units, work with MAJCOM staffs as well as aircraft contractors and never be bored. If you know someone who fills the bill,

ask him to write TAC/SEF, Langley AFB, VA 23665-5001 or call AV 574-7031.





MUNITIONS SUPPORT DURING A RED FLAG DEPLOYMENT: Success is in the preparation.

Lt Col Patrick J. Smith
Captain Travis M. Wheeler
TFWC/SE
Nellis AFB, NV

If you've seen the movie, "The Right Stuff", do you remember astronaut Alan Shepard sitting in the Mercury space capsule waiting to be launched into the first American suborbital flight? Do you remember what he was thinking? Well, he wasn't thinking

about the thousands of tons of dangerous rocket fuel underneath him that would soon be ignited to blast him heavenward. No, he was praying, and his prayer was—"Dear Lord, please don't let me screw up."

The mission was a complete success. It is now one of the

flights recorded forever in America's space history. Why? Maybe astronaut Shepard's prayers were answered, but he also did his share. He had spent many, many hours preparing for this mission; he'd studied every conceivable situation and trained himself to

react to it. Alan Shepard was prepared. He didn't "screw up" and the mission succeeded. It was a historic first step.

The success of any endeavor depends upon preparation.

The success of any endeavor depends upon preparation. The more preparation, the greater the odds are for success. Munitions personnel (461XX or 462XX) deploying for the first time to participate in a Red Flag at Nellis AFB need to remember this. If you want to prevent mistakes; if you really want the deployment to be a success; you need to prepare yourself mentally, physically and professionally.

Many of you are probably thinking—"mentally? What does that mean?" Well, your question can best be answered by a question; several, in fact. Have you ever seen six different types of aircraft loaded with munitions and lined up twenty deep waiting for an end-of-runway check prior to takeoff? Did you know that more than 40 percent of the yearly allocation of live munitions for the entire Air Force

mental preparation because every Red Flag is a challenge.

The hectic pace, the heavy workload, and the tight flying schedule are going to physically tax you, to say nothing of heat in the summertime, cold in the winter and wind gusts that may reach 45-50 mph at any time of the year. You're going to work hard and you're going to play hard as well. Las Vegas with its numerous casinos, night clubs, swimming pools and golf courses is only minutes away. But don't take our word for it. Talk to some-

expect, you need to prepare yourself professionally. That's not as strange as it sounds. It involves finding out the types and quantities of munitions you'll be using. You probably



Did you know that a typical Red Flag launch consists of over 80 sorties in less than 45 minutes?

is built up, transported, loaded and expended at Nellis AFB? Did you know that a typical Red Flag launch consists of over 80 sorties in less than 45 minutes? You're going to need

one in your career field who's been there. You'll find that a Red Flag deployment involves a lot of hard work, but it also provides satisfaction—as long as you're physically prepared for it.

Now that you know what to

It involves getting back to the basics and rereading the tech orders and checklists - especially the cautions and warnings.

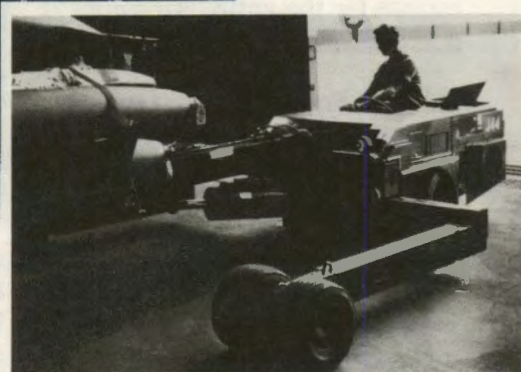
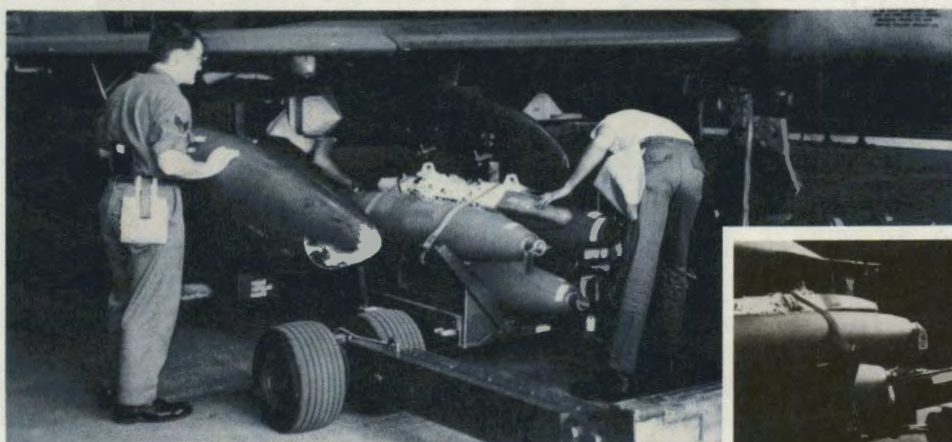
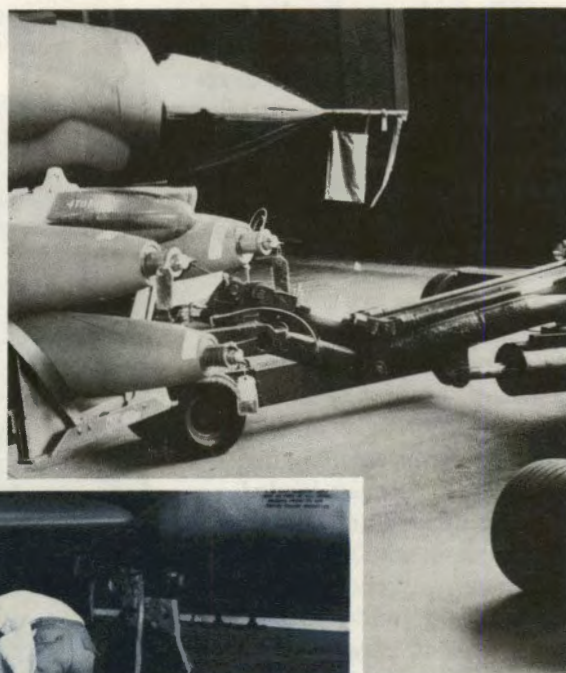


MUNITIONS SUPPORT DURING DEPLOYMENT: Success is in the

don't use many of them at your home station. It involves making sure of your ability to satisfactorily perform your job with each munition type. It involves getting back to the basics and rereading the tech orders and checklists—*especially the cautions and warnings*. And, above all, don't be embarrassed to ask

pin out of an FMU-26B/B fuze during download and inadvertently pulling the battery firing device lanyard and arming the fuze. Just because you don't use a munition at your home base doesn't mean you

ercise. Your unit will work primarily as an autonomous team. That means you have to provide your own tools, tech data and test equipment to do the job—especially significant if you're on a load crew.



questions. Being unsure of a checklist procedure or the meaning of a warning could lead to a potentially dangerous situation that will be a lot more embarrassing than asking questions. "Such as?", you ask. Well, such as leaving the safety

have an excuse for using it improperly at Red Flag. Most importantly, live ordnance is a way of life at Nellis.

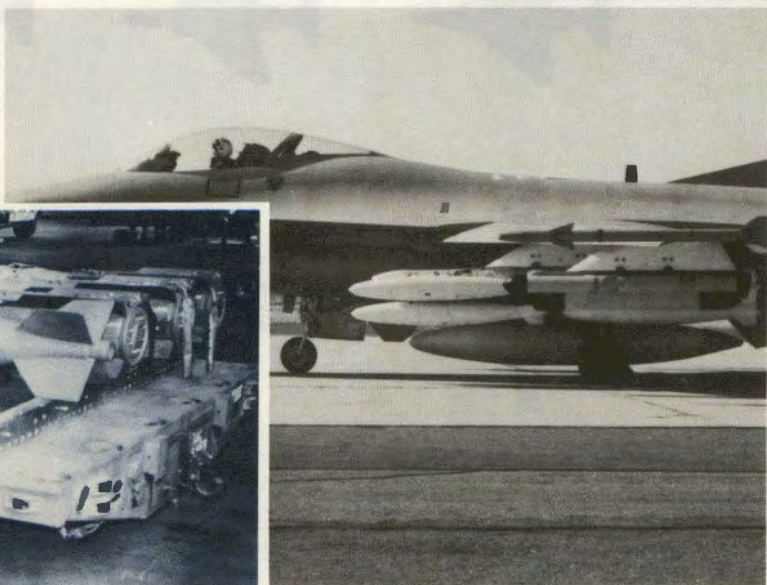
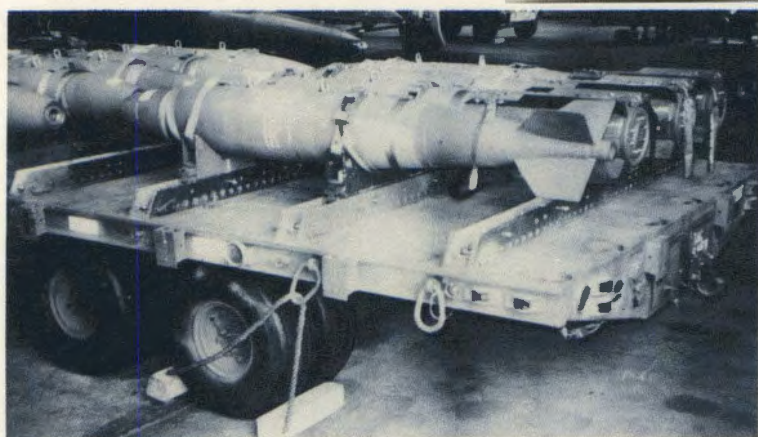
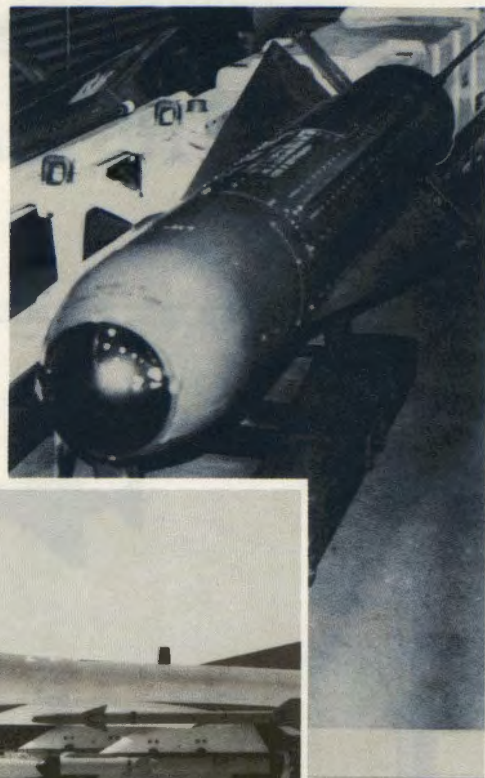
There's another aspect of a Red Flag deployment that's important to you. It can be considered a come-as-you-are ex-

So now the big day of the Red Flag deployment comes. You've prepared yourself men-

A RED FLAG preparation

tally, physically and professionally. You've brought all your tools, tech data and test equipment. And you arrive at Nellis ready to go to work. Right? Wrong! Your preparation is excellent, as far as it goes. Now you need to orient yourself to Nellis. You need to become familiar with the Nellis AFB regulations on munitions

been. So, don't waste all your preparations and all your hard work. Please use and follow the tech orders and checklists for



operations. Listen during the briefings and ask questions when there is the slightest doubt in your mind about anything. Make sure you understand not only your job, but also what's expected of you.

Now you're ready. Now you can get out there and show them you're the best. However, don't forget the most important items—the tech orders and checklists. Trying to do your job without them is like trying to navigate without a map. You might be able to reach your destination . . . but, neither you nor anyone else will know where you are or where you've

Remember, the mission of Red Flag is to train our combat team to fight and win.

all explosive operations.

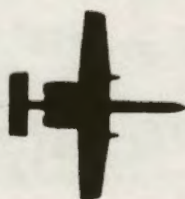
Remember, the mission of Red Flag is to train our combat team to fight and win. Your part of that mission is to get the aircrews off the ground with the weapons necessary to defeat the "enemy." Failure to do the job right, the first time, by the book, could keep aircraft on the ground and thus prevent the mission objective from be-

ing accomplished. Worse yet, a thoughtless shortcut could ruin somebody's day, maybe even yours, permanently. Or, to keep the combat perspective, the bombs could get a round trip to the target or dud on release because you didn't do your part.

After you return to your home base, how you answer the question, "How was your Red Flag deployment?" is up to you. Only you can ensure the answer will be, "Fantastic. I was prepared." ➤

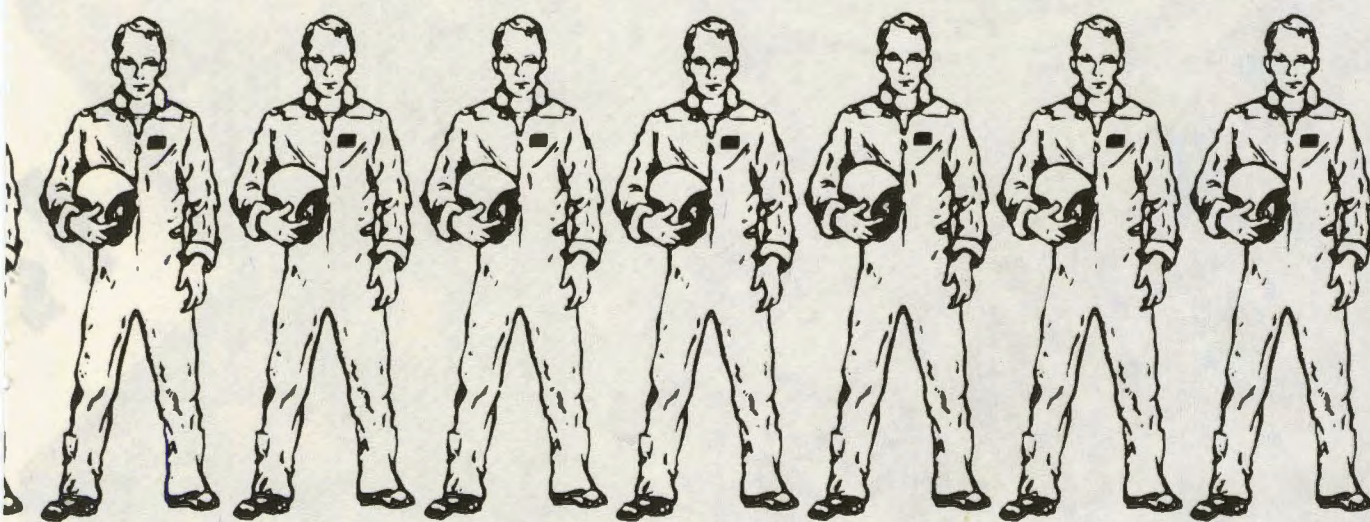
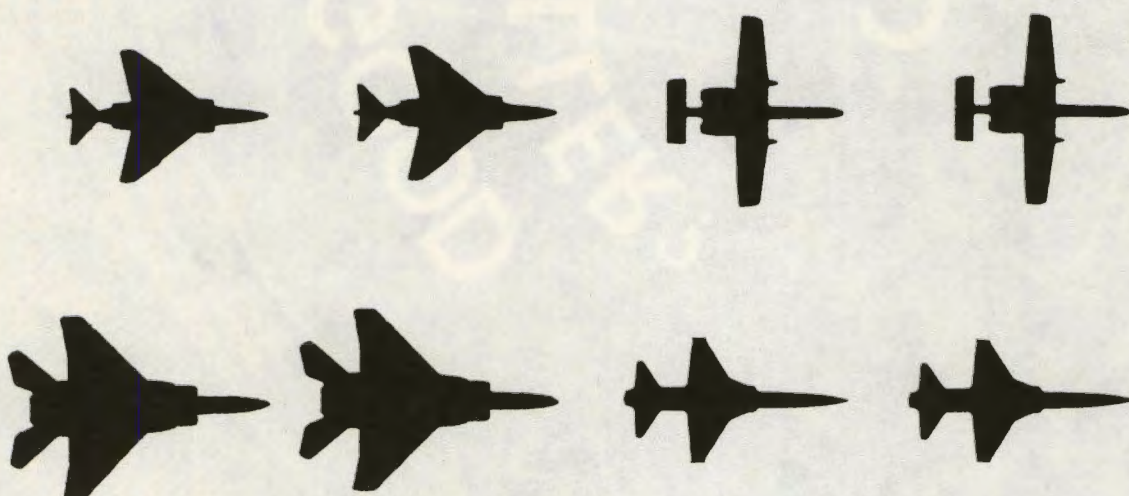
OUR TAC AND TAC-GAINED

JAN - J



UNITS' LOSSES IN THE AIR

UN 1987





WHAT MAKES A GOOD CONTROLLER?



Major Peter Travaline

Whether on a “canned” training mission or in a life-and-death dogfight with a real enemy, aircrew safety always was and will remain a critical consideration. One of the key factors that can provide an additional margin of safety in training missions and the winning edge during actual combat is a skilled weapons controller.

The safety and mission accomplishment of the aircrew are controllers’ primary concerns. Their responsibilities are service oriented, and in order to be effective, they must understand their role clearly. Both pilots and controllers can do things to enhance the effec-

Good controllers completely check out all of their equipment before each mission.

tiveness of the controller.

You can’t beat professional attitudes and performance, and good controllers are as professional in carrying out their responsibilities as pilots are in carrying out theirs. Good controllers completely check out all of their equipment before each mission. They do not make assumptions or yield to the temptation to take shortcuts, thus preventing heartburn, hard feelings and missed intercepts. Controllers who care

take mission briefings, even routine ones, seriously. They listen, ask the right questions, and make certain they have their facts straight.

Respected controllers have an in-depth knowledge of the aircraft they are controlling. They know the aircraft’s capabilities and limitations, strengths and weaknesses, armament and tactics. Knowledgeable controllers don’t ask the aircraft or the pilot to do something they can’t. In addition, they know enemy aircraft and tactics cold and can call out enemy formations and maneuvers alertly and accurately. These controllers are real members of the weapons systems team because they



WHAT MAKES A GOOD CONTROLLER?

What makes a good controller?

Respected controllers have an in-depth knowledge of the aircraft they are controlling.

earned it.

Informed controllers know their airspace including topography, prevailing winds, FAA sectors, radar coverage, airfields, targets and warning areas. They maintain situation awareness and know the players so they can respond instantly with target information to give their pilots every advantage. During practice missions they maximize training

Communications is at the heart of the matter and the best controllers are great communicators.

by utilizing the airspace to its best advantage. On training missions they extrapolate the air mass problem and know

when and where their aircraft will be at the end of each pass so they can efficiently set up the next pass.

Communications is at the heart of the matter and the best controllers are great communicators. They know when to talk and, more critically, when to listen. They don't step on important pilot-to-pilot transmissions. They anticipate pilots' needs and have the in-

Knowledge and experience are powerful allies, and true professionals take every edge they can get.

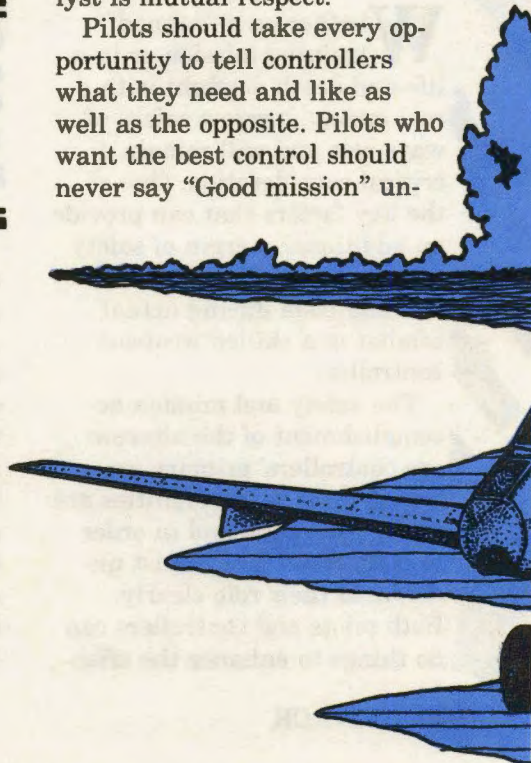
formation ready when needed. They work smoothly and efficiently with FAA. They use crisp, clear, standard R/T and never "uh" and "um" after keying the mike.

The best controllers have initiative and confidence; they take control and don't allow themselves to get behind the power curve. The best controllers love their job and do it with pride.

Knowledge and experience

are powerful allies, and true professionals take every edge they can get. Pilots should make maximum use of the eyes, ears, global view and extensive communications available to controllers. Pilots can help acceptable controllers become good, good controllers become better, and better controllers become "Tiger Team" ready. The crux of it all is communication, and the catalyst is mutual respect.

Pilots should take every opportunity to tell controllers what they need and like as well as the opposite. Pilots who want the best control should never say "Good mission" un-



less it was. They should also review with the controller those aspects of the mission which were particularly good or that needed work. This can be done in a formal debrief, informally on the way home, or even between passes. If they want the best service, pilots have to be teachers and take every opportunity to share with controllers information about

airplanes, missions and tactics.

We are playing on the same team, striving to achieve the same goals, and playing for the same high stakes. Working together for safe, successful missions is everybody's business.



CHOCK TALK

Incidents and Incidentals with a Maintenance Slant

For lack of a fastener

An F-111 went out on its low level mission to the range and returned without any problems. Later, during preparation for an engine run, damage was discovered in one of the engines. The marks on the fan blades indicated that a panel fastener had been the culprit; and, when the panels in front of the intake were inspected, one was missing a fastener that matched the damaged blades.

On the morning before the FOD occurred, the panel had been opened to complete the preflight circuit breaker check. The aircraft forms indicated that the panel had been closed, fastened and signed off properly. When the panel was put back in place, however, a fastener of improper length was used and it didn't torque down properly. During flight, the fastener vibrated loose and went down the intake.

When you put a panel back after maintenance, make sure it, along with all the fasteners, is on to stay until you're ready to open it up again. Let's keep the ramp and aircraft engines from serving double duty as spare part bins.

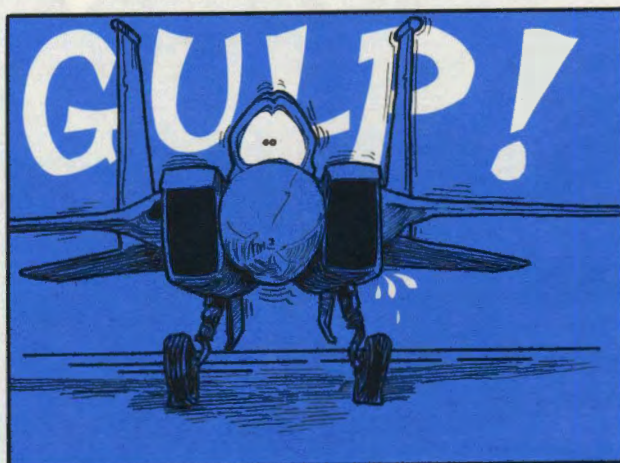
There's a reason

Sometimes a mishap is caused by an obvious disregard for the most basic principles of safety. At other times, what seems to be a very minor violation of the tech data can result in a very serious outcome. One example was an F-15

that experienced engine damage due to foreign objects that were sucked down the intake.

The FOD was caused by a nosewheel tie bolt nut and washer; but the parts hadn't been carelessly left lying around in front of, or thrown toward, the hungry F-100 engines. This particular mishap began during a change of the nosewheel when an improper antiseize compound was used. That mistake allowed an over torque of the tie bolt, and eventually stress and fatigue caused the tie bolt to fail during a landing. The washer and tie bolt were then sucked into the engine, causing extensive damage to several fan core sections.

You may not understand why every step in the tech data is required, but you can bet there are a lot of possible costly consequences for each deviation. If you don't know the reason, ask somebody; but don't decide to just ignore the TO until you find out.



Leadership by example

The number two pilot in a flight of F-16s had just raised his gear handle on takeoff when he noticed an unusual thump. A warning light in the gear handle confirmed a gear problem, and a chase aircraft reported that the nosewheel was missing. The pilot brought his aircraft in for a smooth landing, resulting in minor damage to the nose strut.

Another possible horror story that ended well. All of the missing nosewheel parts except the outboard bearing spacer were found off the departure end of the runway. The spacer was missing because it was never installed during a nosewheel change two days before. The job procedures required an in-process inspection between two steps of the Job Guide, but the supervisor signed the inspection off at an earlier point prior to the spacer installation. After the wheel assembly was complete, it was impossible to determine visually if everything was in place. The concrete evidence came on the jet's next flight.

We are continually reminded of the need to take our jobs seriously and to do our work by the book. There's a lot to be said for leadership by example. If, as a supervisor, you decide to sign off an inspection at other than the prescribed time, you also send a clear message to the troops that it's OK to do things when it's convenient, not when you're supposed to.

A fitting result

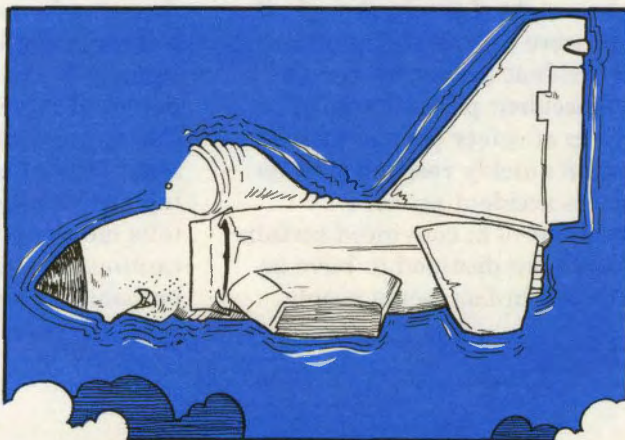
A pair of Phantom flyers were nearly home from a cross-country when an unusual vi-

TAC ATTACK

bration began to shake the entire aircraft. The Master Caution light came on with a couple of associated warning lights, and the crew noticed that their utility hydraulic pressure had dropped to zero. They declared an emergency and headed for the nearest en route airfield to get the jet on the ground.

After landing, the vibrations were traced down to a pneumatic pump that had failed in flight. A review of the records turned up a history of pneumatic pump problems including similar vibrations and pneumatic pressure line failure. After this sortie, a hydraulics technician discovered that the pressure and return lines to the pneumatic pump had been connected in reverse. Both fittings were the same size and had been marked incorrectly. The reversed lines caused the pneumatic compressor to run backwards and resulted in reduced pump efficiency, aircraft vibrations and eventual pump failure.

When an aircraft has a history of continuing problems, look deeper to see if there's a root problem you're not noticing. Whether you call it Murphy's Law or something else, watch out for the areas where the potential for error is high.





DOES IT HAVE TO HAPPEN?

SSgt Steven J. Schultz
TAC Ground Safety

Have you ever met someone you would describe as accident prone? You know the sort—the person who just never seems to be able to do anything without hurting themselves or wrecking their car? It brings up an interesting point: Are there some people who are accident prone and others who aren't? Ask that question in your workplace and you'll get as many different answers as there are people present. And no one will know for certain who's right. I think, though, if you were to pose the question of accident proneness versus nonaccident proneness to a group of safety people, most would quickly respond that no one is accident prone. I disagree—I'm convinced certain people are destined to have accidents. In fact, some people

even go out of their way to prove they are accident prone.

Each day as I drive around the base, I see people who are accidents just waiting to happen. They don't simply do things singularly wrong, they do them in combination. While I'm driving at the speed limit, I can almost guarantee you the person who passes me—obviously exceeding the speed limit—will not be wearing their seat belt. And often their auto has some noticeable safety defect. Chances are they will violate other laws, such as changing lanes in an intersection or not using their turn signals. These may be pet peeves of mine, but I believe they are indicative of an *attitude*. When I see someone doing any or all of those things, it tells me the person is not very cautious and there is a good probability their name will one

day cross my desk on an accident report.

You see, safety is an attitude. If you have the proper attitude, it's likely you will display it at all times. The person who doesn't act safely is only telling the world he or she doesn't care if they damage property and hurt themselves or someone else. With the great number of other people that are also out there committing unsafe acts, the situation is compounded and an accident is sure to occur. It's just a matter of time.

The point is, each of us has the power to control our fate. We relinquish that control when we act with anything less than the proper attitude. What it comes down to is deciding whether we want to control our lives or let the odds (which are against us) ruin our lives for us. Are *you* accident-prone? ➤

OUTSTANDING ACHIEVEMENT IN SAFETY AWARD

Sgt Rose was performing a periodic inspection on a gas turbine compressor when he noticed that the main inlet oil hose appeared to be chafing on the floor of the unit. Closer examination confirmed that the hose had been manufactured too short and the inlet elbow was installed incorrectly.

SSgt Rose initiated an inspection of the unit's other compressors and discovered the same problem on five other

units. He repaired the problems promptly and returned these critical units to the flightline with minimum downtime.

Sergeant Rose's persistence in pursuing this compressor problem prevented a major safety hazard and possibly a catastrophic failure of the engine on this aircraft support equipment. His diligence and professionalism have earned him the TAC Outstanding Achievement in Safety Award.

SSgt Brian J. Rose
27 EMS, 27 TFW
Cannon AFB, NM



TSgt John Cruz
58 TFS, 33 TFW
Eglin AFB, FL



TSgt John Cruz recognized that a severe flaw in the aircrew personnel lowering device (PLD) resulted in it protruding from its protective container during normal use of the aircrew harness. This created a potential for the lowering device to become entangled during aircrew emergency ground egress or ejection, causing damaged equipment or personal injury.

Sergeant Cruz's solution to the problem consisted of tacking the protective container to prevent the lowering

line from "bunching" out through the container opening. At the same time, the performance of the PLD would not be hampered. TSgt Cruz submitted an AFTO Form 22 to change the existing technical orders which was approved as submitted.

TSgt Cruz's efforts in pointing out a serious defect in critical survival equipment and bringing it to the attention of the proper authorities has earned him the TAC Outstanding Achievement in Safety Award.



DOWN TO EARTH

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

Checklists are lifesavers

When a safety checklist is provided, it should be understood that some of the items are more important than others. For example, a safe boating checklist. Probably the three most important items would be to wear your personal flotation device at all times, don't drink and don't overload your boat. Unfortunately, not everyone believes in the value of checklist items.

Three of our young airmen decided to go fishing. One of them went to recreation supply

and rented a 3-man john boat. The boat was equipped with a gas tank, which was later filled with 6 gallons of gas; a mushroom anchor; 2 oars; 3 Type-II personal flotation devices (PFDs); 3 Type-IV cushions, 1 gas line and 1 spare tire. Before receiving the boat, the operator was given instructions on boat operation and signed a checklist that outlined 9 safety items which included wear of PFDs, nonuse of alcohol and adherence to the boat's rated capacity that was conspicuously stenciled on the boat.

About noon, the group went fishing at a nearby river where they stayed for about 3 hours. At this time, they decided to go home, get some camping gear and return to the river where they would camp out for the night.

When they returned to the river, they loaded their camping gear onto the boat and positioned themselves evenly: one at the front, one center and one at the rear. With persons, motor and gear on board, the boat's rated capacity of 590 pounds was exceeded by about 75 pounds. As they headed upstream, none of them were wearing their PFDs and all of them had been drinking beer.

After traveling a half mile upstream, they were unable to find a suitable place to camp. One of the men turned the boat around and headed back downstream where they decided to stop at a familiar fishing site. When the motor was turned off, one of the guys threw the anchor, which was attached to the side of the boat, into the water. The river was filled with debris and swift currents, causing the anchor line to get caught on an unknown object. The overloaded boat filled with water and capsized.

Two of the three men made it to safety, one is presumed dead. Need we say more about the value of the items on a checklist?

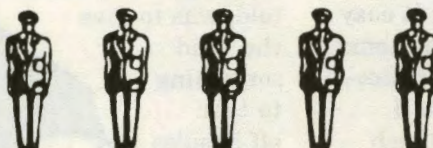
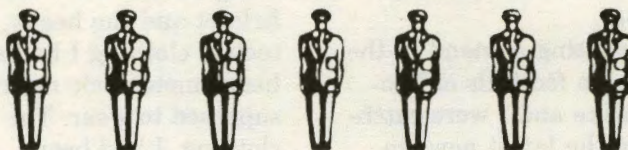


TAC LOSSES ON THE GROUND

JAN - JUN 1987

OFF-DUTY MISHAPS

Automobiles:



Motorcycles:



Drowning:



Pedestrian:



ON-DUTY MISHAPS

Industrial:



SSgt Paul A. Lamon
1912 CSGP
Langley AFB, VA

Let me tell you about the time I tried to kill myself. I didn't really intend to do it, but that's the way it nearly turned out.

I was visiting a friend in the Appalachian foothills of Tennessee. Mike and I were catching up on the latest news in each of our lives, taking it easy for a few days and having some fun. I had just bought a motorcycle, a Yamaha 650, and I took the opportunity to teach myself to ride. I had been on motorcycles before but had never driven one, so I was excited about getting it out on the road.

Mike is an experienced rider, so I trusted his judgment and paid close attention to everything he told me. I wore my helmet and the heavy, protective clothing I had always heard motorcycle riders were supposed to wear. The clothing, I had been told, was to give the road something to tear off besides my skin

in case I "crashed and burned."

We took the bike to a large parking lot and Mike told me to get on and just putt around to get comfortable. With all that asphalt to play on, I was pretty relaxed. I figured I'd have to be an idiot to run into something out there. Fortunately, my self appraisal was accurate and I got through the day without a mishap. Riding the bike was a totally different

THE BIKE THAT BIT ME

The bike that bit me



sensation; 30 mph on a motorcycle feels like 60 mph in a car. I played around for a couple of hours and then rode the bike back to my friend's house and called it a day. I was really confident.

The next morning, Mike borrowed a motorcycle and we took off for a ride in the hills. He was leading and I was trying to keep up. We headed into the hills where the roads are curvy, steep and sometimes unpredictable. We slowed down a little, but I still wasn't comfortable with my ability to ride these roads. I was trying to use the situation to learn the bike a little better and improve my skills, but it was hard to concentrate with a hairpin turn thrown at me every few seconds.

We pulled out of a turn and got a breather on a little straightaway. I relaxed a little and loosened my death grip on the handlebars. At the end of the straight part was another curve, but this one was hidden because the road gave a little rise just before the turn. We went into it doing about 35 (feeling like 90), and there, on the other side of the rise, was my nightmare. I guess some sadistic civil engineer had a bad day when he laid that stretch of

road, because on the other side of the rise the road dropped sharply, banked to the right and hairpinned, all at the same time. Before I knew it, I was across the double yellow, across the other half of the road, flying over a four foot ditch and getting slapped onto the side of the mountain. Mike was clear out of sight by the time I regained enough wits to take inventory. I was lucky, REALLY lucky. I got away with the loss of a few square inches of skin on my right shin and forehead, and a sprained ankle that took three weeks to work out. The only casualty on my bike was the decapitated left mirror.

As you'll recall, I started my story by saying I tried to kill myself and all I got was a

couple of bumps and bruises.

It's what didn't happen that counts. On the side of that mountain was an old, battered stump with bunches of branches sticking out that looked perfect for puncturing my skin. My bike landed just high enough to straddle that stump, instead of landing just high enough to impale me on it.

I share all of this with you to make a point. I almost killed myself because I was dumb. I climbed onto a machine I had spent only two hours on and tried to keep up with a guy who had years of riding experience. To make matters worse, I was trying to drive on roads that would have been a challenge in a car. The protective clothing worked fine; without it I would have been cut and scraped badly. The helmet worked great; without it I could have cracked my skull on the side of the mountain. It was the thing inside the helmet that malfunctioned. I put myself in jeopardy because I overreached my experience and my abilities. There's nothing wrong with stretching your limits, but you don't have to break your neck in the process. ➤



Sort it out before you start

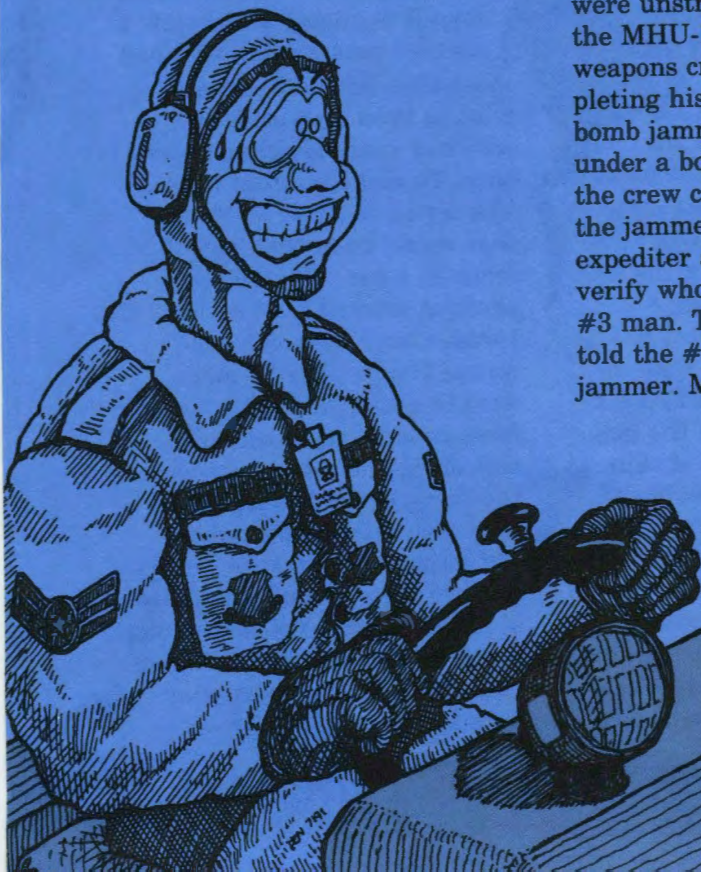
Accomplishing the TAC mission requires teamwork on a daily basis. Sometimes a team has specific, assigned duties and every member on that team needs to know his or her responsibilities be-

fore the task starts. When you allow roles to get confused, then you're in for trouble.

A weapons load crew had been sent out to load a couple of A-10s with six MK-82s each. The #2 and #3 crewmembers were unstrapping the bombs on the MHU-110 trailer and the weapons crew chief, after completing his duties, got on the bomb jammer and positioned it under a bomb on the trailer. As the crew chief started raising the jammer table, the weapons expediter asked the #2 man to verify who was acting as the #3 man. The expediter then told the #3 man to get on the jammer. Meanwhile, the driver

had turned his head to listen to the conversation as he raised the bomb. As he did so, the bomb slid out of the steel rollers and struck the ground nose first, damaging the nose fuze. All loading operations were stopped immediately and EOD was notified.

If everyone, especially the crew chief, had known what they were supposed to do and done it properly, this incident would never have happened.





TAC TALLY

CLASS A MISHAPS
AIRCREW FATALITIES
TOTAL EJECTIONS
SUCCESSFUL EJECTIONS

TAC		
JUN	thru Jun	
	1987	1986
2	7	14
1	7	6
1	5	11
1	5	11

ANG		
JUN	thru Jun	
	1987	1986
1	4	4
2	5	0
0	2	6
0	2	6

AFR		
JUN	thru Jun	
	1987	1986
0	3	0
0	4	0
0	1	0
0	0	0

TAC'S TOP 5 thru JUN 1987

1st AF	
class A mishap-free months	
82	318 FIS
28	325 TTW
17	57 FIS
17	5 FIS
8	4 FIS

9th AF	
class A mishap-free months	
52	33 TFW
25	507 TAIRCW
16	31 TFW
11	354 TFW
9	4 TFW

12th AF	
class A mishap-free months	
74	USAFSO
50	366 TFW
34	355 TTW
32	27 TFW
28	58 TTW

ANG	
class A mishap-free months	
215	182 TASG
199	110 TASG
174	138 TFG
156	177 FIG
151	114 TFG

AFR	
class A mishap-free months	
82	482 TFW
72	924 TFG
60	906 TFG
34	507 TFG
21	917 TFG

DRU's	
class A mishap-free months	
195	USAF TAWC
129	28 AD
8	USAF TFWC

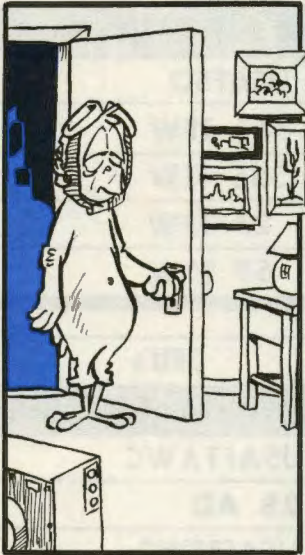
CLASS A MISHAP COMPARISON RATE

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

TAC	1987	3.5	2.7	2.2	2.0	1.6	1.9						
	1986	4.8	6.8	5.4	4.4	4.1	3.7	3.6	3.2	3.4	3.9	3.9	3.8
ANG	1987	0.0	0.0	4.4	3.2	2.6	2.8						
	1986	4.3	2.4	3.1	2.3	2.7	3.0	2.5	2.2	2.4	2.6	3.2	3.0
AFR	1987	23.1	12.7	8.1	6.0	14.2	11.9						
	1986	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	4.6	4.2	3.9

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

FLEAGLE



IT TAKES SO LITTLE TO CHEER UP A FRIEND.

THINK ABOUT IT.