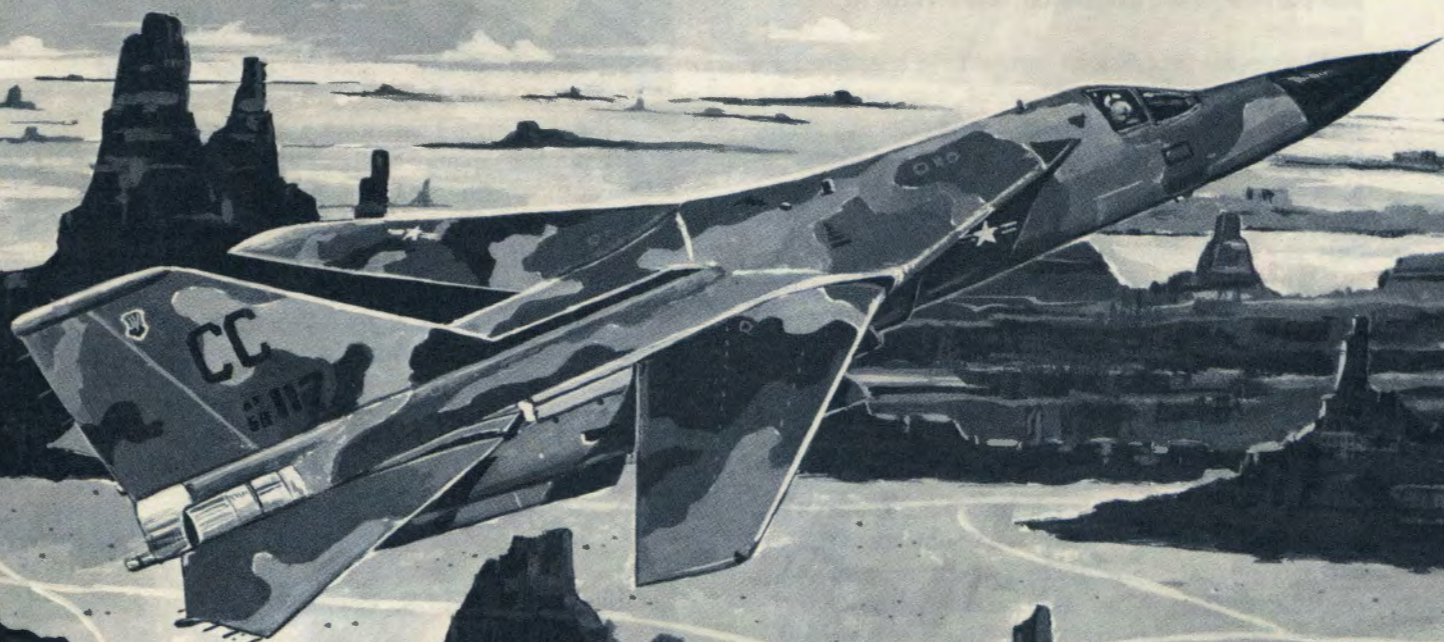


TAC ATTACK

AUGUST 1986



General Russ' open letter to flight commanders... Pg.4

ANGLE OF ATTACK

Every profession requires commitment and self-sacrifice if it is to endure and remain strong. Without creative leadership dedicated to the goals and purpose of the profession, it is certain to flounder.

While some professions can be held together by a small handful of top level leaders, ours cannot. We have key positions of leadership, as does any team; but winning requires a certain amount of leadership from every team member. In TAC (the best team in the Air Force), we are all winners. I not only say that proudly, I see it daily.

Being a leader means we must formulate a strong basic philosophy of how we go about meeting our responsibilities—doing what the Boss is counting on us to do. Whether at war or at peace, we need leaders with a balanced perspective and sense of urgency.

We have more than our share of tough jobs—and for over 200 years we have defended our freedom. No one said it would be easy. We've answered the call of our country proudly in the past and will continue to do so. Why? Because when asked, someone is always ready and willing to step up and



meet the challenge. They never ask how easy or difficult the job may be. They do it proudly.

One of the toughest, yet most rewarding, jobs in our profession is Flight Commander. If you ever wondered what our #1 Flight Lead thinks about his Flight Commanders and what they mean to him, the article in the following pages leaves no doubt—in fact, we can ALL gain from his “angle of attack” on leadership.

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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TAC ATTACK

AUGUST 1986



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OF THE AIR FORCE*

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TAC ATTACK
DEPARTMENT OF THE AIR FORCE

SHAKE THE STICK



AUGUST 1986

— you've got it

General Robert D. Russ
Commander
Tactical Air Command

Congratulations! You're a flight commander! You have accepted an extremely important position—important to me and important to your people. You have also inherited all the responsibility that comes with the work, headaches and rewards of command. You have probably never been a commander and may have questions about how to be a good one. You need to get your arms around the job and understand its real purpose, scope and what is expected of you. I would like to share my thoughts with you on being an effective commander—to help you be your best.

First, you need to understand the responsibilities and where and how you fit in the big picture. A flight commander is much more than an OER writer. You are a leader, builder, developer, challenger, teacher, counselor. . .and most of all, a commander. COMMANDER, that's your title and that gives you a great deal of responsibility. Remember that—COMMANDER.

You are now a part of the man of command, an integral

part. You are the first level of command in our flying business. As a commander, you need to adjust your perspective; you are no longer just "one of the boys"; you cannot be "one of the gang." You are now part of the establishment, the institution—you are "THEY." And as such, you now are a brick "layer," not a brick "thrower." You are an Air Force team player and you need to make positive contributions to gradually build a better Air Force. You must guard against destructive criticism and refrain from disparaging your Air Force, your unit or your fellow leaders. Instead, provide constructive inputs geared to improvement. Use the system. Be a part of the solution—not part of the problem.

As a flight commander, you should support your squadron commander and all his goals. He

The most basic of Air Force goals is to be ready to fly and fight.

supports the wing's goals and that support continues up to the Chief of Staff who is responsible for achieving the goals of the Air Force. Ultimately, you are supporting Air Force goals. The most basic of Air Force goals is to be ready to fly and fight. To that end, your first responsibility is the preparation of your flight for combat. You direct their training and guide their development. You fly with them, learn their strengths and weaknesses, and judge their capabilities. You control their flying schedule and know if they are ready to fly a certain mission or even ready to fly at all. Don't let someone else schedule them for a mission they are not ready to fly.

It's that simple. Take care of them. Train them and guide their development. You are responsible for their well-being. You are their flight commander. Your goal is to build professional, competent aviators who are ready for war and have the judgment to employ effectively in combat and to fly safely in peacetime.



Shake

SHAKE THE STICK—YOU'VE

How do you teach that judgment? The short answer is, you don't. Judgment is something to be acquired or developed over time. As a flight commander, you contribute to this development, probably more than anyone else. You do that by teaching your philosophy on employing the aircraft, on accomplishing the mission, relating your past experiences, and drawing from the experiences of others.

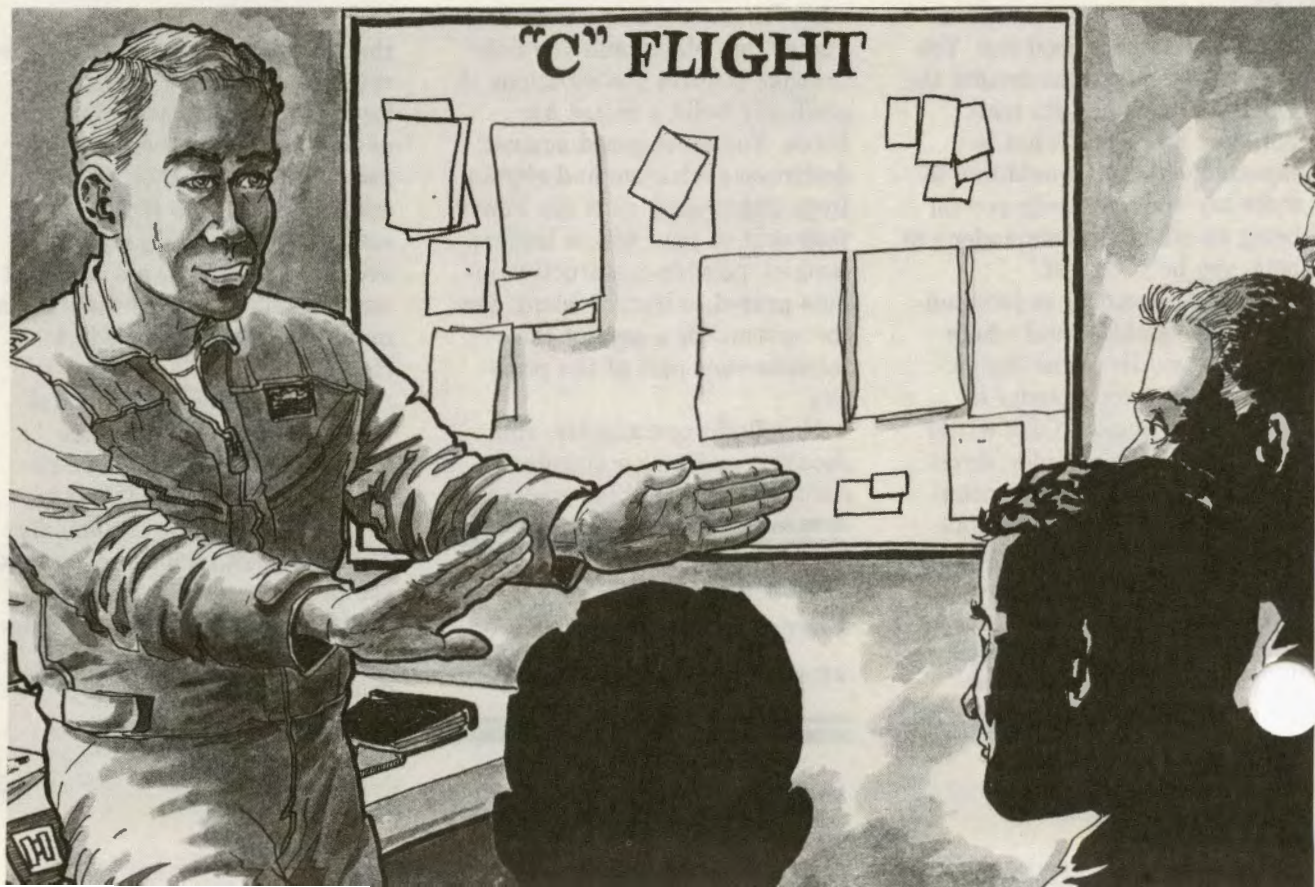
You must teach them all you know about how to fly safely. Teach them what the really important things are, like living through the first combat mis-

sion, protecting our resources, and ensuring safe conduct of a normal day-to-day peacetime training mission. Help them realize they have limits to their capabilities and that people who exceed their limits demonstrate a lack of maturity—and frequently pay a steep price. Emphasize that different people have different limits and not to assume they will be able to do everything you can. But also, teach them how to challenge themselves safely and effectively to improve their skills and thus reduce their limitations. Help them grow so the best of them

will be ready to take responsibility for your people when you move on.

I want you to recognize how much responsibility you have. You are key to the success of our business. You also need to know you must be accountable for your flight. When I look at an individual who has made a mistake and consider what may have been in his head, I realize that much of that came from his teachers and leaders. Bad training and bad leadership are the reasons for bad judgment.

This is where the importance of a flight commander is diffi-



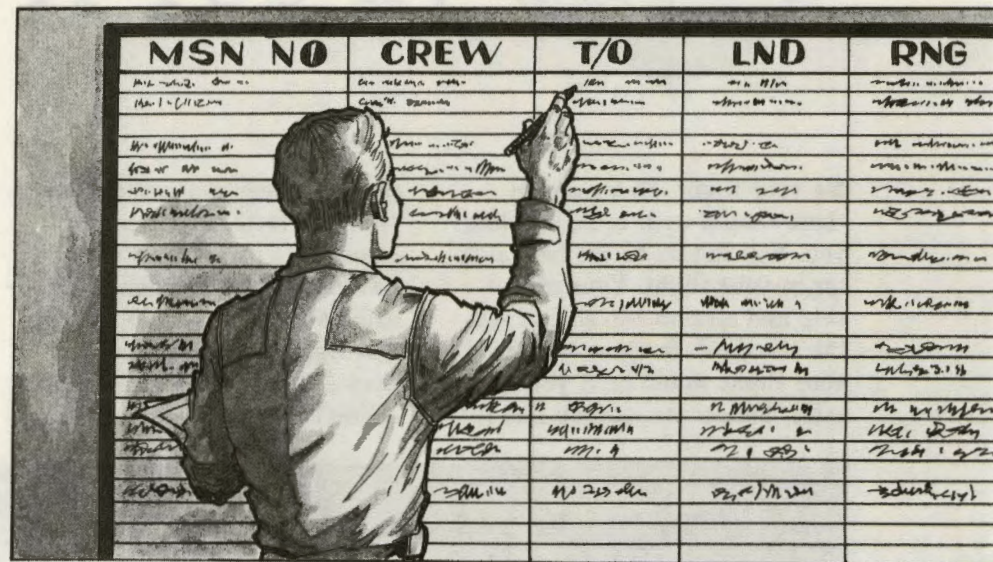
GOT IT

Bad training and bad leadership are usually the reasons for bad judgment.

cult to overstate. Your experience and leadership are indispensable. You may very well be the most important leader in the squadron. Your position is such that you can have a relationship with your subordinates not available to anyone else in the chain of command. It's the kind of relationship that permits clear communication and has a lasting impact on their view of the Air Force.

Unfortunately, good leadership is a very difficult concept to accurately describe. Even so, you can certainly recognize it when you see it. You know it by the results achieved and the morale of the unit. I believe there are four tenets of leadership. They have served me well over the years. These tenets are integrity, discipline, dedication and sensitivity.

Your integrity is your most important personal asset.



Your integrity is your most important personal asset. It is the beginning of your self-esteem, of liking yourself. It arms you for those tough decisions leaders must make. It is your greatest strength.

Your personal discipline should be beyond reproach. Your officership and airmanship must be of the highest caliber. Use your discipline to set high, but attainable flight standards—then insist on compliance.

My third tenet, dedication, is based on loyalty to your unit, your mission and your country. You should support your commander and, at the same time, dedicate yourself to your flight members and their well-being. Your commitment to them and the mission is the root of your motivation to accomplish the job even under adverse circumstances.

The last element, sensitivity, recognizes the need to be aware of all the outside influences affecting your leadership task.

Peers, subordinates and superiors all have things happening to them and around them. You must be sensitive to them. Listen to them. Try to understand them. Be approachable and care about them.

A complete "How To" on leadership is beyond the scope of this article. Hopefully, these few pointers will help. Becoming a good leader is a learning process, and the school of hard knocks is a requirement. There will be times when you will not know how to approach a given situation. Use your good judgment and try to do what you think is right. The real "How To" is a very individual thing and you shouldn't try to be a Patton when you're not. Be yourself, have confidence and use your time as flight commander to find what works and doesn't work for you. One thing that always contributes to success is to meet or exceed the standards yourself. Show them how it's done.

You should be the role model



SHAKE THE STICK — YOU'VE GOT IT

for your flight. Every one of them should wish to be just like you. You should be the best aviator in your flight. Your officer-ship and airmanship should set the standard. Imagine how good your flight would be if you just said, "Follow me, and do like I

do," and then you just did everything perfect. Leadership by example is *real*. That's why we have such high standards for our commanders. If you do nothing else right in the leadership game, at least lead by example.

You can see the important rea-

sons for the significance and responsibilities of flight commanders. Now you know what I think of your position. Your impact on our aircrews and our capabilities warrants your best performance. So, shake the stick—you've got it.



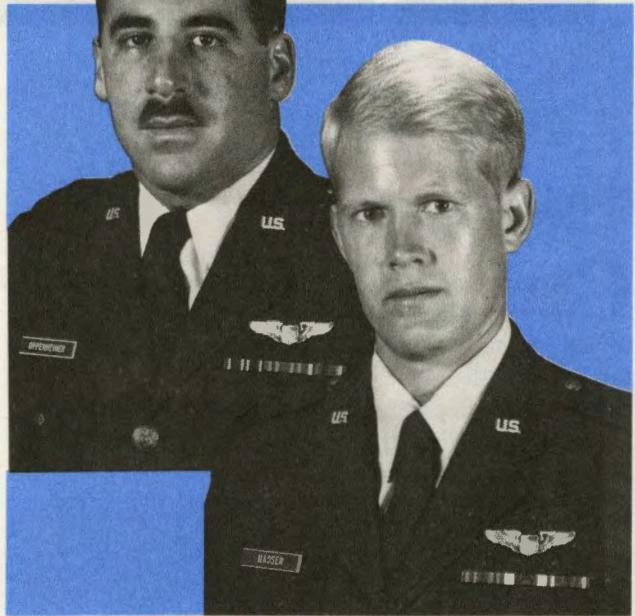
AIRCREW OF DISTINCTION



Captain Philip Oppenheimer and First Lieutenant Paul Madsen were flying at 500 feet on a close air support training mission when their OA-37B was struck on the right wing leading edge by a six-pound turkey vulture. As Captain Oppenheimer started an immediate climb, he noticed a moderate buffet due to heavy wing damage and the large carcass which remained on the wing, interrupting air-flow over the aileron. After reaching 7000 feet

U, he dumped fuel and performed a controllability check. Finding that the minimum controllable airspeed was 190 knots with severe buffet and an uncommanded right roll, the crew climbed further to 17,000 feet since uncontrolled ejection seemed a very real possibility.

Efforts to dislodge the dead bird were unsuccessful and the aircraft continued to have severe airframe buffet and a right roll as airspeed decreased. The aircrew did not know that the bird impact had crushed the fuel line from the right wing tank, causing an imbalance of over 1200 pounds which could not be detected. Captain Oppenheimer de-



Capt Philip A. Oppenheimer
24th Composite Wing
Howard AFB, Panama

1st Lt Paul A. Madsen
602d Tactical Air Control Wing
Davis-Monthan AFB, Arizona



ecided to selectively jettison stores in order to increase aircraft control. After jettisoning was completed, aircraft control improved. The crew performed another controllability check and found that their minimum control speed was 110 knots with moderate buffet. They flew a straight-in approach at 130 knots to a successful landing. The outstanding airmanship and professional flying skills of Captain Oppenheimer and Lieutenant Madsen resulted in saving a valuable aircraft and crew.

TAG

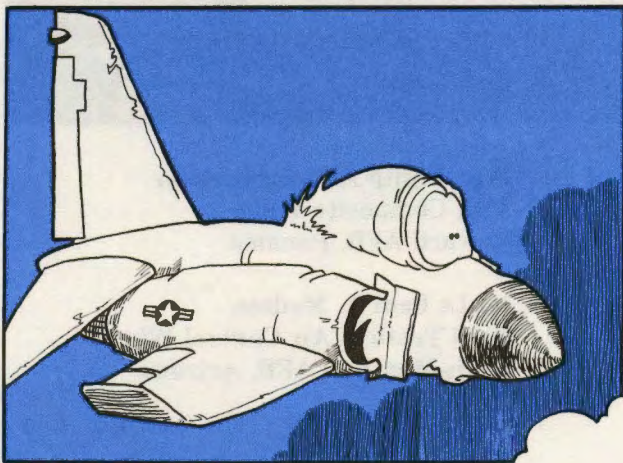
Tac tips

tips

INTERESTING ITEMS

Think about it

Clearance delivery gave an F-4 crew departure instructions for a right turn to 090 after takeoff and climb to an initial altitude of 4000 feet. After takeoff, the crew performed their climbout as directed; but departure control directed an immediate maximum climb to avoid conflicting traffic inbound to a nearby municipal airport.



Later investigation found that an incorrect clearance had been issued to the crew. According to a letter of agreement, the departure should have been a left turn to 190 degrees. The controller working clearance delivery had realized he had made a mistake and had passed the correct instructions to the ground controller. Unfortunately, that individual failed to pass the information along to the aircrew.

Never accept a flight clearance without asking

yourself if it passes the common sense test. How does it match what you requested or expected to be given? Are you being directed to fly a heading or altitude that conflicts with other air operations or a physical obstacle such as mountains or surrounding high terrain? Make sure you're thoroughly familiar with existing standard departures and ask the question if you're given something that doesn't make sense.

Where are your hands?

An F-16 pilot was sitting in the end-of-runway (EOR) area getting his last chance inspection and arming prior to takeoff. The EOR crew had removed all safety pins and one ground crew member was stowing them in the left main gear well. Suddenly, six flares fired from the right side dispenser. Fortunately, a crosswind blew the flares clear of the aircraft without damage; but one of them came very close to the fellow in the wheel well.

The pilot thought his quick check and arming were complete, so he had decided to check his chaff/flare system in the test mode. Besides not ensuring that his aircraft was clear of ground personnel, the pilot had also failed to notice that the flare jettison switch was in the jettison position. When he moved the test/arm switch to the off position, he inadvertently moved it momentarily into the

MS, MISHAPS WITH MORALS, FOR THE TAC AIRCREWMAN

arm position, firing off the flares.

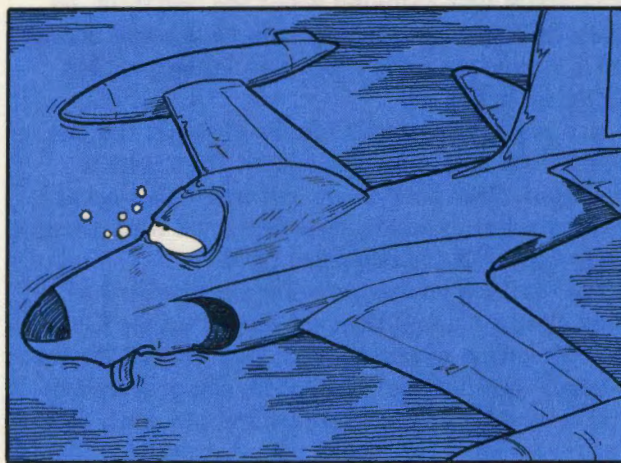
While you're still under the control of the EOR crew marshaller, keep your hands in a position visible to the marshaller and watch for any signals he might give you. This is for the safety of the ground crew but also in case of a sudden emergency or any other need for action from you. "Hands clear" means show them and keep them there.

When you need to check armed systems such as chaff and flare dispensers, make sure the switches aren't going to get you in trouble. Other than pins, those systems usually don't have safeguards to prevent them from operating on the ground so they require an extra measure of caution.

Breathing rarefied air

Two captains were cruising at FL270 in their T-33 when the front seater realized that he felt light headed, nauseated and had blurred peripheral vision. He selected 100-percent oxygen and the symptoms disappeared immediately. When he returned to normal oxygen, the symptoms came back; so he reselected 100 percent and the symptoms once again went away.

After all that, the front seater finally decided to mention his problem to the fellow in the rear cockpit and ask how he felt. The back seater said he had been on 100 percent for quite some time but



only thought his symptoms were due to his inexperience in the T-33. The rear cockpit pilot's symptoms also disappeared after he used 100-percent oxygen. They declared an emergency and immediately descended below 10,000 feet. The aircraft was landed without any further problems.

Here was a mishap just waiting to happen. Two pilots, both experiencing their hypoxia symptoms, but not communicating that information to the other crew member. If you notice anything unusual about the way you feel or strange odors in your aircraft, "knock it off", get on 100-percent oxygen and *let somebody know you have a problem*. In a single-seater, tell someone else in your flight or on the ground. If you've got somebody else up there with you, let him know. You may both be messed up or it may only be your equipment that's malfunctioning. There's nothing heroic about handling an aircraft emergency or physiological incident in silence, so get the word out.

Capt Rick Dahlstrom
104 TFG (ANG)
Westfield, Mass.

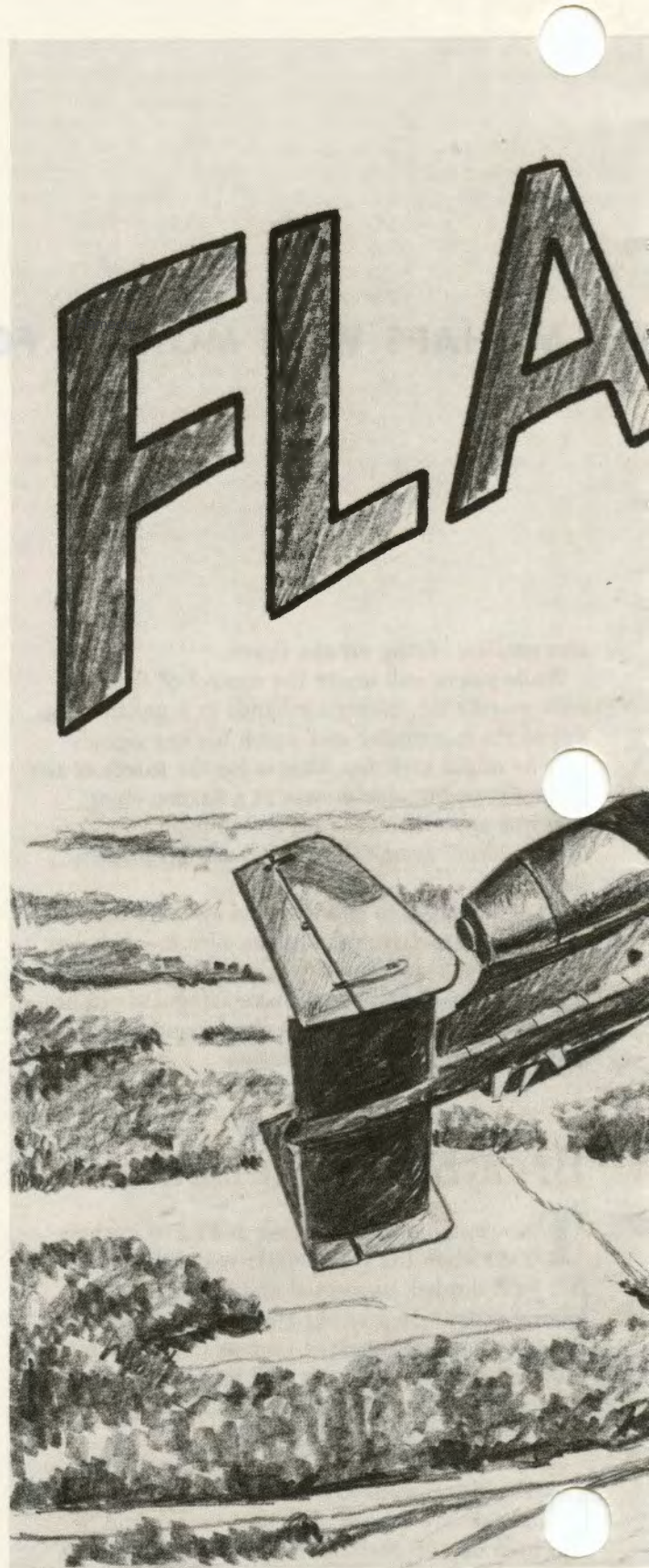
It was one of those things that happens to the other guy. Beside that, it was a boldface procedure that you practice (in writing) every week. So why waste time thinking about the “what-ifs” on those million-to-one shots? Strike a familiar chord? Well, here’s one more about the “other guy” but this time it was me.

It was my third sortie for the day, and the last one for the half. Nice day, clouds from 9 to 10 thousand, clear both above and below. We briefed as a two-ship to do low level Maverick work then up to the MOA for defensive BFM.

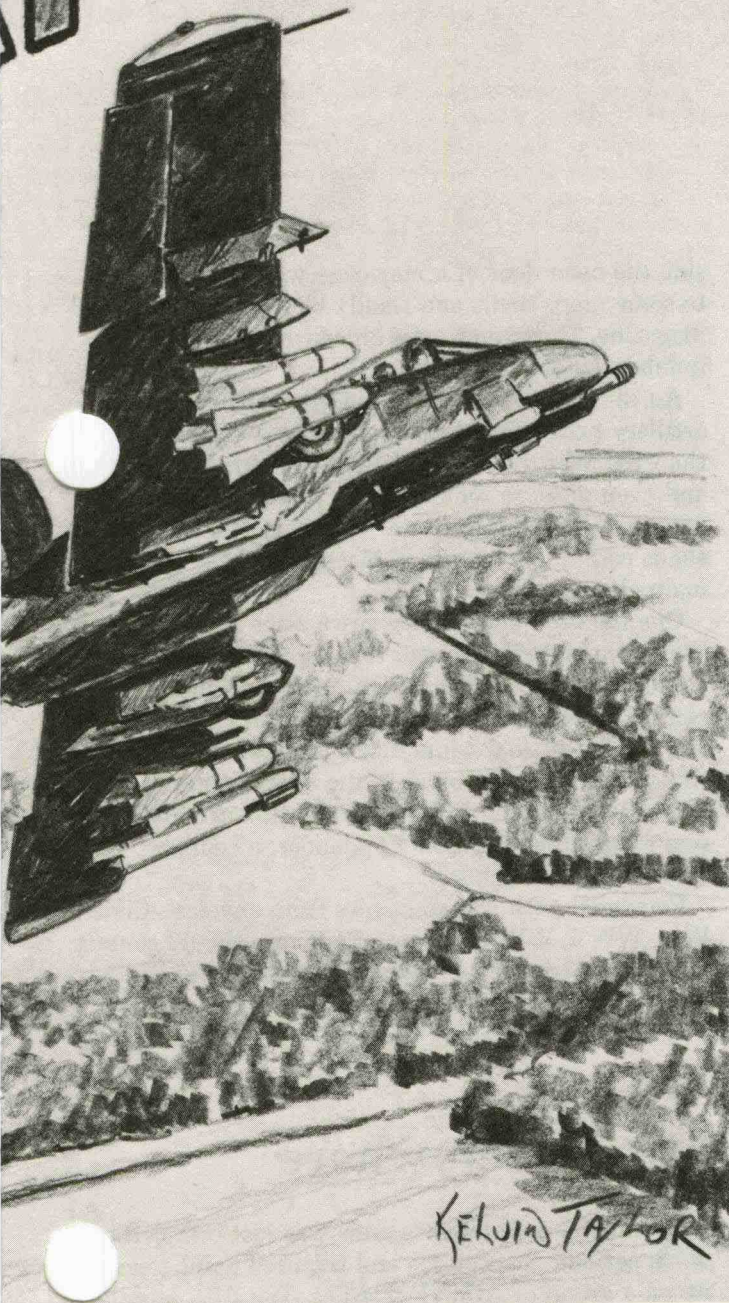
My Warthog enjoyed groveling in the dirt, as they always do; and then we headed up for the DBFM portion of our mission. The first attack was a simple perch setup—cleared in, slight overshoot and reversal. I’ve been here before; but wait, now I’m flying sideways. That’s odd. A quick look inside and my left generator light is on. *Okay.* “Knock it off.”

Clear of the other hog and flying straight again, I focus my attention on the telelight panel that is now blinking incessantly. What seemed like three days later, I finally pushed the Master Caution. The last time I saw so many lights on was before engine start on the ground. No wonder, both engines are winding down. Great! Here I am, 16,000 feet over New Hampshire’s winter wonderland with terrain up to 6000 feet MSL, and I decide to take up gliding.

Remember the first thing to do when faced with an emergency situation? That’s right—wind the clock. Being totally confused, I couldn’t even find the clock; so I just let go of everything. After going through the various stages of reaction—confusion, denial, acceptance—I realized my faithful hog was gliding toward more familiar territory, *terra firma*. Now a sense of urgency set in: flying an A-10



TIME OUT



without engines was not my idea of a good time. I wanted everything done yesterday.

We all enjoy those weekly boldface tests, right? I mean, why waste time writing it each week? Well, here's my nickel—you're teaching that other (sub-conscious) self what to do when you're preoccupied. Someone in the jet has to know what to do.

So my other self reacts—throttles off, APU start. As the APU red-lined, my hog nosed over (hydraulics had bled off) and I went to step three—flight controls-manual reversion. (To the genius who thought to put that rubber piece on the switch, may you be wealthy beyond your dreams.) It was all rote. Left engine started normally (sigh) but the right ITT went out of sight. Okay, a single-engine approach and landing at our divert base was better than a no-engine approach to the New Hampshire winter woods.

End of story? Not quite. Here are a few more "what-ifs" that you might consider before they add to the confusion of a major problem. What if you accidentally turn off your UHF radio while you are flipping switches? (NORDO-UHF button on intercom panel.) What if you lose those engines in VMC but have to descend into the clouds before you get them restarted? (I did, but I knew the terrain height.)

It's always the unexpected things that complicate a situation, so plan for the worst. Ask "what-if" and maybe you'll avoid a dreaded silk letdown.

Capt Dahlstrom's incident was caused by a corrosion malfunction, known in the A-10 world as "green disease." ➤

Captain Rick Dahlstrom, a Massachusetts Air National Guard A-10 pilot, has over 250 hours in the A-10 and 1200 hours in both the F-4 and AT-38.

WEAPONS WORDS

Souvenirs: Watch out

On June 9, 1863, Union troops manning Fort Lyons outside Washington, D.C., were busily inspecting artillery rounds in anticipation of a Confederate sneak attack. One round exploded out-



side the open door of a magazine which propagated to some more shells and finally blew up the entire magazine. Thirty men were killed with an equal number wounded.

An estimated 10,000,000 cannon balls and other artillery projectiles were fired by both sides during the Civil War. Such ordnance was hazardous then and even more so today. Due to imperfections in fuzing, a high dud rate was common. Most of these shells contained dangerous black powder as the main charge.

One hundred and twenty years after the Civil War, cannon balls are still turning up. Recently a young airman received a briefing at a commander's call on the hazards of collecting military explosives. He thought of that cannon ball purchased at an antique store rolling around in the trunk of his car. When examined by EOD personnel, the cannon ball was found to be a Union 12-pounder, a common smooth bore projectile.

Personnel with war souvenirs from any era—Civil War, WW I, WW II, Korea, Vietnam—should contact Explosive Ordnance Disposal personnel for an inspection to insure that their mementos are inert.

Courtesy ATC

Lines everywhere

A missile maintenance crew was just completing periodic inspections and required paint touch-up on a group of AIM-7F missiles. The fifth missile



was finished, and the crew was placing it back into the CNU-305/E container with the assistance of a 2½-ton hoist. While they took the missile across the bay, the crew didn't notice a grounding cable that was attached to a warhead lying some distance away. The warhead was drying after being painted and the grounding wire was strung across the bay in the path of the hoist.

As the maintenance crew concentrated on aligning the missile into its container, they didn't notice the cable as it snagged the warhead and dragged it off onto the floor.

The folks performing the missile maintenance were the same ones that had laid the grounding cables for their painting work. Unfortunately, they

didn't properly preplan their grounding cable positions, placing them in direct conflict with the movement of the hoist. The workbench for drying the warheads should also have been placed well clear of any missile movements, particularly away from the path of the hoist.

Do you have any obvious hazards in your workplace that you put there? Don't be in such a hurry to get the job done that you set yourself up for a mishap. These folks may have maneuvered around that grounding cable successfully on the first four missiles but on the last one just forgot that it was in their way. Then, instead of the job being finished, they had a dinged warhead to send back for repairs.

HEADS UP

Next month, in the
SEPTEMBER
issue of *TAC Attack*,
you will see SrA Kelvin
Taylor's stipple rendition
of the EF-111 Raven
IN THE CENTER.

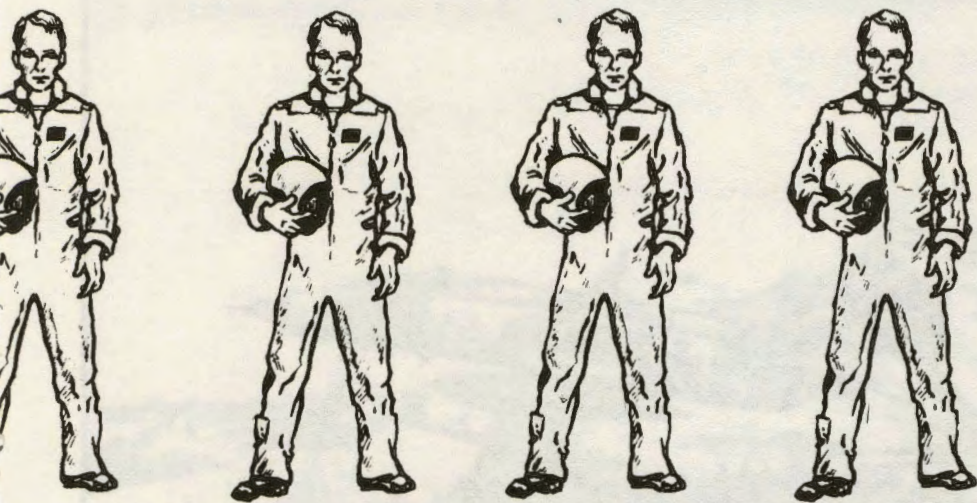
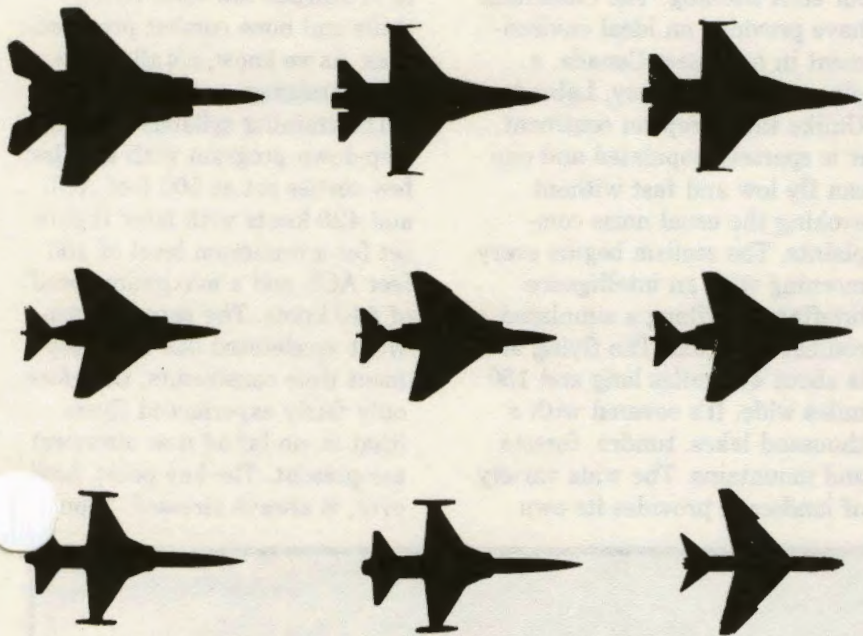


OUR TAC AND TAC-GAINED

JAN-JUN 1986



UNITS' LOSSES IN THE AIR



LOW LEVEL with

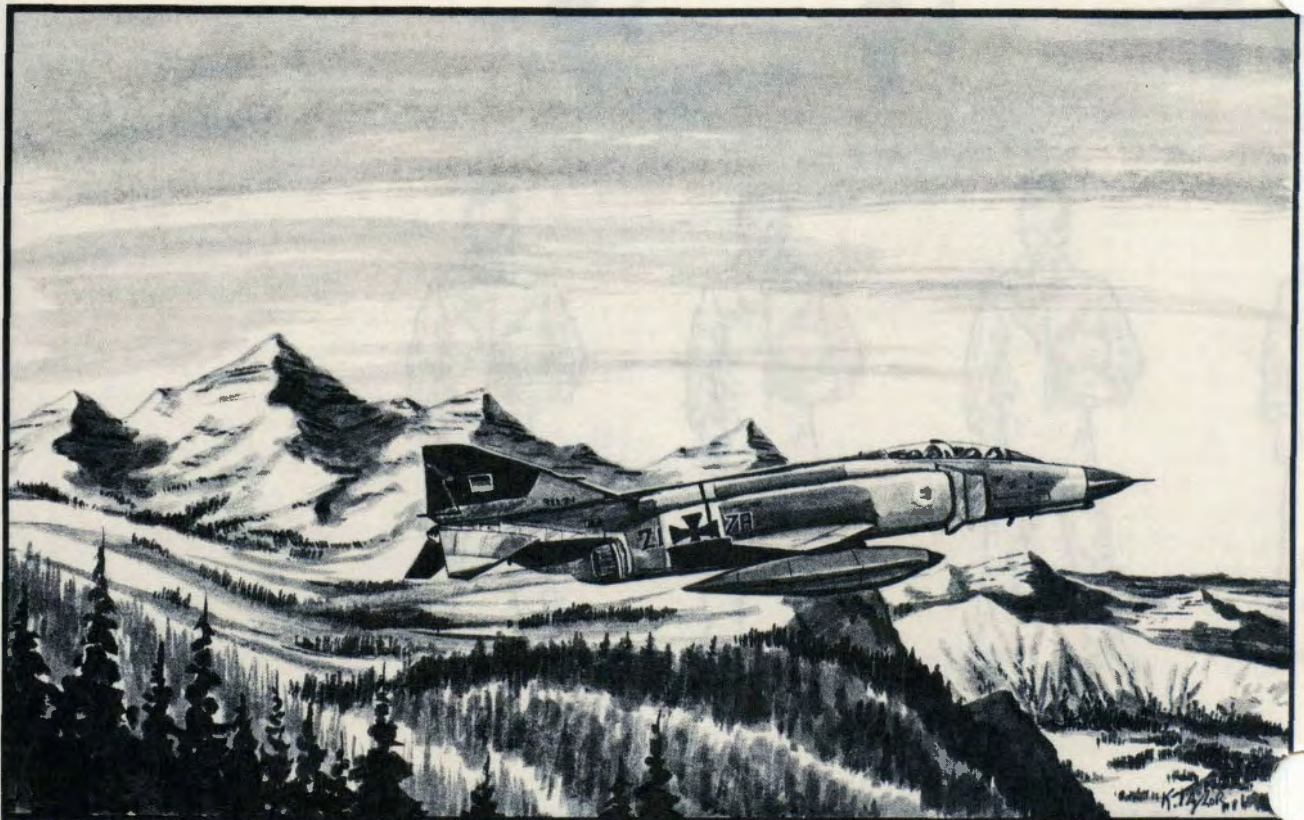
Capt Bill Wright
USAF/GAF Exchange Program
Hopsten AB, Germany

The Germans have landed! In Goosebay, Canada, the German Air Force conducts a rigorous low-level training exercise named GAFTIC (German Air Force Training in Canada). GAFTIC began in the spring of 1980. Its purpose is to provide a flying environment where realistic low-level combat training can be done. Europe, because of its

dense population, is not suitable for such training. The Canadians have provided an ideal environment in northeast Canada, a place called Goosebay, Labrador. Unlike the European continent, it is sparsely populated and one can fly low and fast without evoking the usual noise complaints. The realism begins every morning with an intelligence briefing describing a simulated combat situation. The flying area is about 400 miles long and 150 miles wide. It's covered with a thousand lakes, tundra, forests and mountains. The wide variety of landscape provides its own

realism. The goal of the exercise is to sharpen low-level flying skills and hone combat preparedness. As we know, it's all a matter of training.

The training syllabus is a basic step-down program with the first few sorties set at 500 feet AGL and 420 knots with later flights set for a minimum level of 100 feet AGL and a maximum speed of 540 knots. The pace is somewhat accelerated due to deployment time constraints; therefore, only fairly experienced flyers (that is, no brand new aircrews) are present. The key point, however, is always stressed: "Don't



the GERMANS

go below your comfort level." One's comfort level isn't necessarily a static thing. You might be flying at 100 feet one day and feel good, but the next day you find yourself climbing in the turns—a sure sign of low-altitude uneasiness. So climb up! There are enough other preoccupations to demand your attention; so at least be comfortable with your altitude.

There are enough other preoccupations to demand your attention; so at least be comfortable with your altitude.

What are some of those preoccupations? Flying in the north country entails quite a lot regarding life support. In the winter and spring months, an anti-exposure flying suit (poopie suit) is obviously needed since temperatures seldom go above freezing. Flying with the poopie suit or Frankenstein (the name the Germans use) is another experience. It's not easily donned nor removed. It also isn't the most comfortable thing to wear when one flies. It restricts movement and you sweat a lot. It is, however, the latest in vulcanized technology and does what it's intended to do—save your life in cold conditions.

One significant winged threat is birds. According to a Luft-

waffe study which describes in detail the danger of birdstrikes in Labrador, bird formations are common in the spring and summer months normally flying at altitudes up to 3000 feet AGL. The Canadian Goose which can weigh up to 8 pounds can, however, be found up to 10,000 feet AGL. Large formations can normally be seen and avoided, but when they fly in single or two-ship formations, it gets tricky.

Another tricky situation when flying low is the visual cues. The classic example is the ridgeline prior to the mountain on the horizon. Because of lighting, cloud cover or differential foliage coloring, the ridge doesn't stand out, isn't observed and isn't avoided when mountain crossing is attempted. The F-4F is equipped with a radar altimeter with an audio low-altitude warning capability. This helps in avoiding the rocks. However, if it's inoperative or the crew is otherwise not aware of the closeness of the trees, the result could quite possibly be—CRUNCH.

This brings the search and rescue (SAR) people into play. Before stepping to the aircraft, a map of the planned route is left with the SAR. The flights are

One needn't be paranoid to see that as aviators there are a number of things out to get us.

always planned for at least a two-ship. If a crew happens to take off single-ship, they must fly the planned ground track. This narrows the possible search territory and expedites the rescue should it be necessary.

One needn't be paranoid to see that as aviators there are a number of things out to get us. These natural and manmade threats when flying low must be avoided to accomplish our missions. The threats are certainly superior in number. For this reason, the aircrew must divide their responsibilities in order to give each threat adequate consideration. I'll describe the system the Germans use during GAFTIC.

A basic contract between the pilot and the weapon systems officer (WSO) is made. The basis of this contract is trust. For months prior to the deployment, crews are chosen to fly together in order to build a foundation of trust. An experienced aircrew is paired with a less experienced aircrew. This, of course, is an attempt to overcome the perennial problem of most teams—you are only as strong as your weakest link. The contract goes further in designating aircrew responsibilities.

The pilot has one primary job: fly the jet to the mission objective. To do this, he first has to keep out of the rocks by constantly looking forward between 11 o'clock and 1 o'clock. For the most part, he won't see his wingman or lead. Thus, he has to listen to the WSO who is giving a



LOW LEVEL WITH THE GERMANS

running commentary on formation, topography, navigation-al/speed corrections, and threat reactions. The only time during the low level the pilot sees the other aircraft in the formation is when there's a change in the terrain (for example, a valley) and a trail formation is required. In this case, he takes intercockpit control of the formation. When all goes well, the pilot is then able to ensure that weapons are ready for delivery and hence fulfill the mission objective.

In the meantime, the WSO is busy with navigation, timing, formation, checking six and threat reaction. The WSO performs as a talking map, trying to talk the pilot's eyes onto a prominent geographical feature (a lake with an island, a mountain with a sheer drop on one side, a tree hammock, a last chance gas station, etc.). He does this as

quickly as possible so he can shut up and do other things. The en-route timing corrections are standard (whatever you use—10 percent, incremental or TLAR methods). Speed adjustments, however, are given as power adjustments (that is, throttle up/back 4 percent). This is done since the pilot can't look inside the cockpit to monitor the air-speed, but he can feel approximately what 1 percent of power is on the throttle. The WSO is also responsible for the formation. If a heading correction is needed to maintain formation integrity, again since the pilot must keep his eyes out of the cockpit, instead of degrees of turn the WSO gives the command in seconds to turn (that is, we're slightly left of track, come right 3 seconds . . . rollout). Because the WSO has the handle on the formation, he must fre-

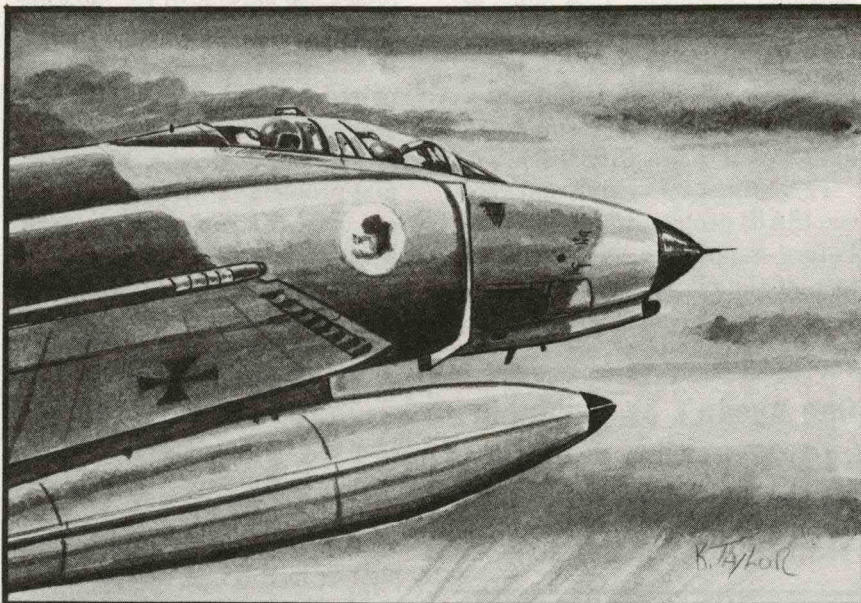
quently inform the pilot of the status: "The formation is left line abreast, 6000 feet, 10 degrees swept." The WSO also directs the comm-out turns. And, not forgetting probably the most important measure for self-preservation, he is constantly checking 6 o'clock for bandits. If a threat is spotted, a defensive/offensive reaction may be required depending on the situation and the mission.

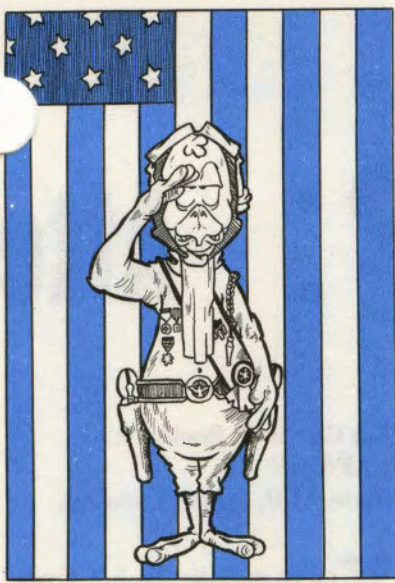
The mission is what it's all about. There are many factors weighed against us. Natural threats such as weather, terrain and birds are ever present. Man-made threats evidence themselves as enemy aircraft, missile, or even power lines. It takes teamwork to be safe and survive.

It takes teamwork to be safe and survive.

As a USAF representative with the Luftwaffe, I've had the unique opportunity to see how our NATO teammates conduct fighter operations. GAFTIC exemplifies how low-level combat training can be thorough and safe. The German Air Force puts theory to use. GAFTIC pushes combat training to the limits, safely. I'm glad I was a player. >

As the USAF Exchange Officer at Hopsten AB, Germany, and the only American stationed with the GAF 36th Tactical Fighter Wing, Captain Wright has flown the F-4F in two weapons training deployments (WTD).





FLEAGLE SALUTES

Lt Col Dan Robar, 114 TFG, Sioux Falls, S. Dak., had just completed a 20-degree bomb delivery when his A-7 began a severe vibration. Although all cockpit indications were normal, he decided to land at a divert field. As he turned toward the airport, the master caution and engine oil lights came on. Throttle movement past 80 percent rpm produced immediate violent vibrations, so he left the power at 80 percent and set up for a straight-in approach. Partial closure of the runway and the lack of barriers at the civilian airport complicated his approach and made landing speed and touch-down point more critical. Using variable trailing edge flaps to adjust his airspeed, Lt Col Robar delayed lowering wheels and flaps until short final then completed a successful landing. Later it was discovered that engine failure had been imminent due to loss of oil pressure and a failed engine bearing. Lt Col Robar's systems knowledge and decisive action saved a valuable aircraft.

SSgt John C. Mullen, 405 TTW, Luke AFB, Ariz., prevented the destruction of his aircraft, damage to adjacent aircraft and injuries to ground personnel. He was preparing his aircraft for a routine training mission. The preflight was uneventful up to engine start. The right engine started normally; but as the left engine started and accelerated to 45 percent rpm, SSgt Mullen heard an explosion. He immediately realized that the jet fuel starter had failed and notified the pilot to shut down the engines and evacuate the aircraft. He then motioned to the pilots of two adjacent aircraft to taxi out of the area to prevent damage to the jets. He immediately grabbed a fire bottle and directed the fire extinguisher nozzle directly into the JFS intake area and extinguished the fire.

The quick thinking and actions of **TSgt Benjamin Miller**, **TSgt Jose Lugan**, **SSgt Robert L. Ferguson** and **SSgt Darius W. Stevenson**, 150 CAMS, New Mexico ANG, were instrumental in preventing the loss of the TF-41 engine and an A-7D aircraft when they extinguished a fire during an engine test run. Their coordinated efforts saved a valuable TAC asset.

SSgt Donna C. Farley, SrA Joseph A. Cardea, SrA Keven E. McGagin and **A1C Christopher D. Lough**, 405 TTW, Luke AFB, Ariz., saved a valuable aircraft and possibly prevented loss of life by extinguishing a fire during a maintenance engine run. The quick, professional action of these four technicians resulted in minimum damage to the aircraft.

TSgt Thomas W. Wharton, 58 TTW, Luke AFB, Ariz., was manning the Halon fire suppressant bottle during the launch of an aircraft for a functional check flight. After the engine started and the jet fuel starter (JFS) was disengaging, TSgt Wharton smelled smoke. He quickly inspected the area and saw smoke and flames coming from the JFS area. He signaled the pilot to immediately shut down the aircraft and then directed two airmen, from another aircraft, to assist him in maneuvering the Halon bottle into place. They inserted the nozzle in the access door and sprayed the area with Halon, extinguishing the fire. TSgt Wharton reacted so quickly to the fire that the only damage was a burned wire bundle cannon plug cover that was easily replaced.

Comprehensive training, quick thinking and correct response are the best deterrents under emergency conditions, and the actions of **Sgt Edward M. Reid** and **Amn Timothy A. Fink**, 549 TASTG, Patrick AFB, Fl., were flawless when they extinguished a fire while performing a 72-hour engine run on an OV-10A Bronco. Thorough knowledge of operating procedures and carefully coordinated efforts enabled this engine run crew to prevent further damage or total destruction of the aircraft.

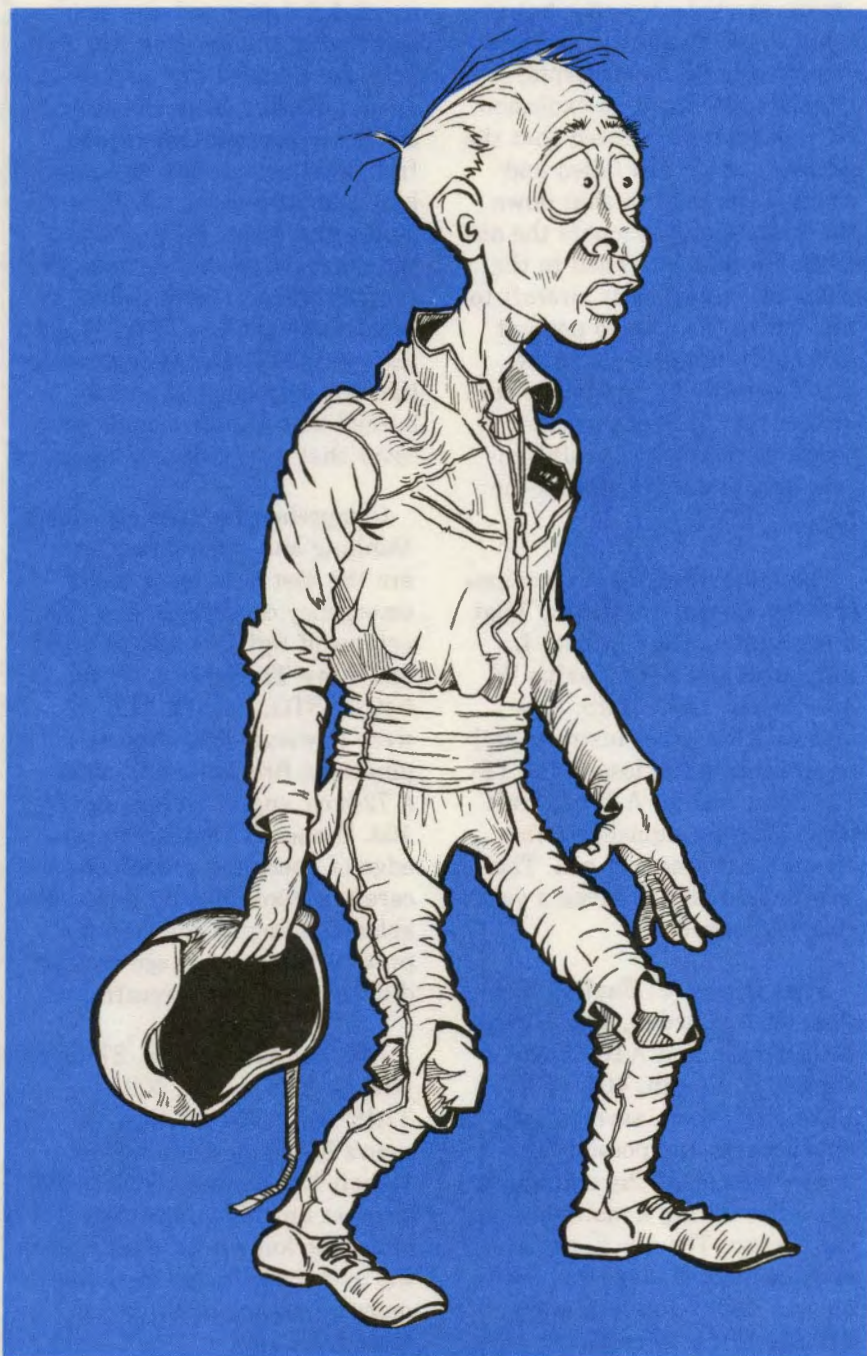
A1C Rayard Vining, 27 TASS, George AFB, Calif., 602 TAIRCW, saved a fellow airman's life by performing the Heimlich maneuver. He was able to react quickly and confidently using the knowledge and training he learned in his cardiopulmonary resuscitation class in basic training.

DE-GAP: After

Maj Curtis S. Seebaldt
9 AF/DOV
Shaw AFB, South Carolina

You've been in the full grunt, funky chicken for what seems like an eternity. Your neck aches, your eyes are bulging and you're just about ready to . . . "Rex One, knock-it-off." Quickly you muster the strength for a cool and collected "Rex Two, knock-it-off." Sweet Buddha—finally a rest—NOT NOW. Now is the time to execute some critical post knock-it-off (KIO) procedures, not just roll out and rest until the world is ready for your air-to-air prowess again. TAC has suffered recent fatal consequences due to just that mode of thinking. We need to develop some post KIO habit patterns that keep us alert during those critical moments following the termination of an engagement. Let's use the acronym DE-GAP and see if it helps organize and prioritize what should be happening after the KIO call is made.

DE—Deconflict. The Biggie. Clear your flight path and where you are with respect to other players and area boundaries. Don't take your eyes off people or if engagement geometry has left you without a tally/visual—get it. Also, many times you find the fight has gravitated toward the "floor" for energy and defensive purposes.

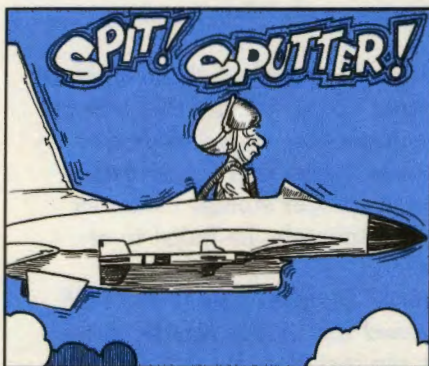


the Knock-It-Off

Don't bust area floors. In peacetime, it will get you sent home. In wartime, it will get you killed. There've been a few who confused peacetime training with wartime necessity and mortared themselves in the process. The ground has a P_k of 1. Nobody is shooting real bullets and/or squeezing off missiles, so keep training in perspective. There's a fine line between "fight like you train" and taking the engagement toward ROE conflicts. The bottom line is when the KIO occurs, clear your jet from others and the area's edges. If you're the flight lead, ensure this is being done and use the radios to confirm it.

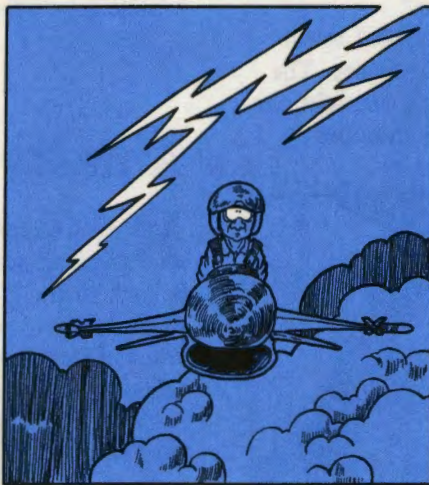
G—GAS and instruments.

Take a look at how the machine is doing. JP-4 has a funny habit of going away quickly after the "fight's on" call. Needless to say,



the airframe also gets a pretty good workout during an engagement; so sneak a glance at the telelight panel, G-meter and gine instruments to confirm the jet is 100 percent.

A—Area. Now, let's get the flight moving toward the "fat" part of the area and back to the altitude where you want to start the next fight. Make a quick visual update on the area weather as well. As a flight lead, you *direct* the flight at this point—don't expect them to head where you want or you'll have "beamers" to contend with. Every player will surely know the



best method to get the flight in position to continue. The problem is there are as many methods as there are players. *Direct* the flight so the beam riders don't get a chance to try their plan and waste gas in the process.

The first three steps should all take place fairly quickly after the KIO. Deconflict, check gas and instruments and move the herd toward the piece of sky you want to begin the next fight. Now, it's time for the last step.

P—Performance. How did the flight perform with respect to the objectives outlined in the brief? Does the setup need to be



repeated or can we press on? Assess each member's performance and make the decision to repeat or continue. This is where you make your money as a flight lead/instructor. Good flight leads take this time to tape pertinent comments about the engagement for reconstruction in the debrief. Now you've got something to recreate the fight and move everyone's learning curve in the right direction.

I've probably missed an item or two, but I believe that the basics are in DE-GAP. The bottom line is that knock-it-off does not mean relax. Have a post KIO plan, brief it and enforce it in the air. ➤

CHOCK TALK

Incident and

INCIDENTS AND

Cleared to cross

The Eagle maintenance van was parked on a taxiway near the approach end of the active runway waiting for clearance to cross. Meanwhile, some workers from barrier maintenance pulled their pickup truck up short of the departure end of the runway and called for clearance. They too were told to "Hold short for landing traffic."

A few minutes later, an F-15 landed, and tower cleared Eagle maintenance across the runway. The driver in the barrier maintenance truck thought the clearance to cross the runway was for him and



pulled out onto the runway.

As soon as the driver and his wide-eyed passenger saw the aircraft rolling towards them, the barrier maintenance truck scampered off the runway. No harm done this time, but look at the potential.

We don't know the subject of the conversation in the front seat of the truck, but it was apparently interesting enough to make the driver miss the first word of tower's transmission. That's a liability when two trucks sharing part of the same callsign

and sitting on opposite ends of the runway are both waiting to cross. Barrier maintenance, Falcon or Warthog maintenance, even fire extinguisher maintenance all sound a lot alike if you don't catch the first word. The same mix up could happen if a tower controller accidentally keyed the microphone a little late. When in doubt, ask.

A nasty blow

Egress technicians pulled an F-4 ejection seat from an aircraft on the flight line and brought it back to the shop for repair. After removing a stuck screw on the seat, they discovered several cracked nut plates. The second technician was directed to disassemble the seat so that the bucket could be taken to the sheet metal shop for necessary repairs.

As technician #2 dismantled the seat, he noticed that the sear was bent. The shop chief told him to remove the sear for inspection, so the technician reinserted an explosive cartridge into the guillotine since he didn't have the proper storage container readily available. Unfortunately, he failed to replace the safety pin.

Technician #2 handed the guillotine to the first technician who *assumed* that it was safe because there was no safety pin installed. He pulled the sear which fired the cartridge, injuring the man's right hand and stomach. The guillotine flew up through the suspended ceiling and hit the roof of the building.

The maintenance business is no place for assumptions. In this incident, both fellows made assump-

INCIDENTALS WITH A MAINTENANCE SLANT

tions that resulted in injury and damage to equipment. One fellow essentially handed a loaded gun to the other who pulled the trigger without even checking to see if it was loaded. That's a good way to lose friends.

The spring in this thing

After power was applied to their F-4, the crew asked the crew chief to pull the protective cover from the AIM-9 captive missile to check for gyro erection. The cover, still secured by two bungee cords, slipped out of the crew chief's hands as he pulled it back, shattering the IR dome.

If you're trying to take something off of an aircraft, make sure it's properly unfastened first.

I assumed wrong

A crew of three men was assigned to do phase maintenance on an A-10, including gear retraction as well as the emergency brake and auxiliary landing gear extension checks. After the aircraft had been jacked up, the trio began to perform the emergency brake check with the appropriate job guide. The first crew chief operated the hydraulic mule while the second one sat in the cockpit. The third individual, a hydraulic specialist, stood beside the aircraft to observe the operation. When crew chief number 2 entered the cockpit, he assumed, incorrectly, that the canopy jettison

safing pin was installed because he saw the streamer resting on the right console. When the crew chief on the ground directed him to pull the emergency brake lever, the second individual pulled the canopy jettison lever by mistake and fired the canopy actuator. The canopy did not jettison because it was already raised; but considerable damage was done to the canopy, the aircraft and the hangar ceiling.

The job guide being used by the phase crew contained specific warnings on the first page of the section for brake system checkout which dealt with the egress system. Instead of reviewing those warnings, the team chief on the ground opened the job guide straight to the subtask to be performed and missed all of that information. Both he and the man in the cockpit failed to insure that the canopy jettison handle was properly safed.

The individual inside the cockpit said he pulled the wrong lever simply because he wasn't paying attention to what he was doing. The canopy jettison handle was clearly marked and had a warning decal beside it.

Don't just dive into the middle of a checklist or job guide. Take the time to ensure that you've properly reviewed all of the warnings, cautions and other guidelines provided throughout the tech data (many of these items document what others have experienced). When you finally get ready to pull a handle, throw a switch or turn a knob, make sure it's the proper one and don't touch it if you're in doubt. There's a good reason why we mark and label emergency handles like we do. Those markings are a handy reminder that extra caution is necessary to ensure that we don't accidentally pull the wrong one. But, you've got to pay attention to them before the warnings do you any good.

USAF Awards



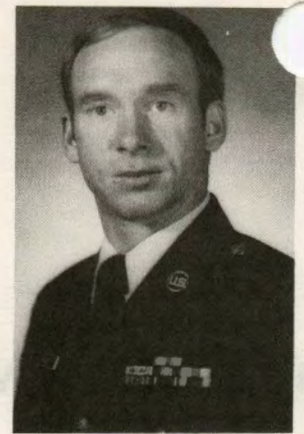
355th TTW
Davis-Monthan AFB



4th TFW
Seymour Johnson AFB



Air Forces Iceland
Keflavik, Iceland



TSgt Dwight G. Royal
57th FWW, Nellis AFB

By now you know that 1985 was one of the safest years TAC has had; our selection of USAF Safety Awards bears that out.

Tactical Air Command won the 1985 Major General Benjamin D. Foulois Memorial Award for lowering its Class A aircraft mishap rate for the seventh consecutive year and for bettering its previous record by 35 percent.

The 355th Tactical Training Wing at Davis-Monthan Air Force Base, Arizona, won the System of Cooperation Among the Air Forces of the Americas (SICOFAA) Flight Safety Award for flying 35,700 hours in the A-10 without a Class A or B mishap. The wing logged more than 17,650 sorties in early model A-10As while training 206 pilots. All missions were flown single-seat, and over 79 percent of the missions flown involved demanding low-altitude operations and weapons employment. The last time TAC won this award was in 1979.

For the first time, TAC won both the SICOFAA Flight Safety Award and the Colombian Trophy. The 4th Tactical Fighter Wing, Seymour Johnson Air Force Base, North Carolina, won the Colombian Trophy for flying 26,000 hours and 21,000 sorties in the F-4E without a Class A or B mishap. They sustained this record while holding a dual-base commitment in Europe for two of their three squadrons. The other squadron at Seymour Johnson was committed to rapid deployment throughout the world. The Wing also won the Colombian Trophy for calendar year 1983.

Air Forces Iceland, Keflavik, Iceland, and Technical Sergeant Dwight G. Royal, 57th Fighter Weapons Wing, Nellis Air Force Base, Nevada, were selected to receive the Director of Aerospace Safety Special Achievement Award. Air Forces Iceland won the award for their history of flight,

ground and weapons safety. They had 40,000 hours of mishap-free flying in 7 different types of aircraft over a period of nearly 13 years.

Sergeant Royal's accomplishments as NCOIC of the End-of-Runway section exemplify the quality of performance that TAC's accomplishments are built on. His training programs helped personnel recognize and correct all job-related hazards. Sergeant Royal also received the TAC Individual Safety Award in December 1984 and the TAC Ground Safety Award of the Quarter in December 1985 his outstanding accomplishments and dedication.

TAC received 12 of the 50 USAF Flight Safety Plaques. The recipients were: 4 TFW, 33 TFW, 37 TFW, 48 FIS, 318 FIS, 347 TFW, 355 TTW, 366 TFW, 405 TTW, 474 TFW, 602 TAIRCW and USAFTAWC. One Missile Safety Plaque was given to the 318 FIS and three Explosives Safety Plaques went to the 57 EMS, 836 AD and Air Forces Iceland.

Holloman Air Force Base won a Motorcycle Safety Award and 34 of our 35 nominees were selected for National Safety Council Awards. Award of Honor: Tactical Air Command, 25 AD, 31 TFW, 67 TRW, Air Forces Iceland, 56 TTW, 23 TFW, HQ 9 AF, 347 TFW and 388 TFW. Award of Merit: 836 AD and 831 AD. Award of Commendation: HQ 12 AF, 25 ADS, HQ 24 AD, 318 FIS, 758 Radar Sq, 932 ACWS, 667 ACWS, HQ 1 AF, 5 FIS, 48 FIS, 49 FIS, 23 ADS, HQ 26 AD and the 84 FITS. President's Letter: 4702 Computer Spt Sq; 4700 ADS; Det 1, 48 FIS; Det 1, 23 ADS; Det 3, 23 ADS; Det 1, 49 FIS; Det 1, FIS; and Det 1, 318 FIS.

Every individual working in our command contributed to these accomplishments. Congratulate for a job superbly done.

TAC Special Achievement in Safety Award

The 73d Tactical Control Flight deployed to the field on three separate occasions during September 1985, accumulating over 2100 road miles on 60 prime movers and tows without a single incident.

During the first deployment to Moody AFB, Georgia, the unit deployed 2 comm-maintenance teams to establish a tropo-scatter radio link between Moody and a remote location, 50 miles away. Both teams convoyed 600 miles and operated 5 days in the field between the 2 sites without any safety violations.

The 73d then generated for a full-scale mobility exercise. All personnel were recalled and, for the next 24-36 hours, readied 32 M-series vehicles and 19 equipment tows for air deployment. During the exercise, personnel worked around the clock (12-hour shifts) moving equipment and processing for mobility.

Following the mobility exercise, the unit reconfigured all equipment for road convoy. Convoys were separated by approximately 30 minutes. Two drivers were assigned to each vehicle and were switched out at every rest stop, approximately every two hours. Both convoys went to and from Moody without any mishaps.

After a 12-hour convoy and a night's rest, unit personnel reconfigured all equipment and operated



73 TCF, 507 TAIRCW
Myrtle Beach AFB, South Carolina

in the field for 5 days in support of the exercise. Operations controlled over 90 sorties without incident. Upon completion of the exercise all equipment was torn down and readied for the return trip. Once in garrison, all equipment was reconfigured for day-to-day operation.

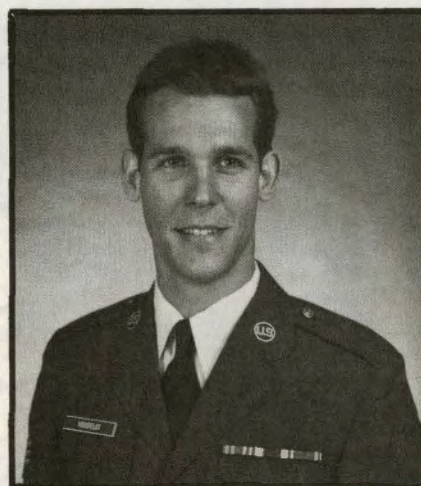
In the wake of Hurricane Gloria, the unit recalled all personnel. Equipment was immediately torn down and readied for road convoy. Thirty-two M-series vehicles and 19 tows, plus personnel and dependents, were evacuated out of the storm's path. After the storm had passed, equipment was once again reconfigured for day-to-day operation.

Crew Chief Safety Award

As Sergeant Rolf B. Vossfeldt was performing end-of-runway inspections on a flight of aircraft prior to their departure, he heard an unusual noise coming from underneath an F-4E. As he ventured closer to the bottom side of the number one engine, the noise became more distinct. The sound was a high-pitched hiss; very unusual for the J79 engine which generally creates a dull roaring sound.

Sergeant Vossfeldt immediately alerted a red-ball crew to the scene. The red-ball crew confirmed that there was a problem; so the pilot shut down the number one engine and taxied back to the parking area.

Further maintenance on the suspect engine discovered that the turbine frame was cracked. Had this problem gone undetected by Sergeant Vossfeldt, the turbine blades would have disintegrated, causing the possible loss of an aircraft and aircrew.



Sgt Rolf B. Vossfeldt
347 AGS, 347 TFW
Moody AFB, Georgia

DOWN TO EARTH

ITEMS THAT CAN AFFECT YOU AND YOUR FAMILY

Self-help doesn't mean forget safety

You've decided to put up a new wall and you're going to do it through self-help.

You've planned and requested the materials and the day has been set—wear your grubbies, everyone will chip in and help.

Several months ago, an NCO was part of a self-help team that was pouring a concrete pad. He worked about three hours in the wet cement, protected only by tennis shoes and socks.

Now his feet require skin grafts because he received first, second and third degree chemical burns: cement contains lime and is a very caustic material.



Was the injury preventable? Yes. There's an AFOSH Standard (127-21, paras. 28, 29 and 31) that requires impermeable foot protection when working in cement.

So, if you're a supervisor or just the head planner for a self-help project, check in with your local safety office. Find out if there are any hidden hazards or a need for personal protective equipment.

Home free

SSgt Al Taylor
1 AF/SEG

It has been stated that people don't get hurt while it's storming, they get hurt after the sun comes out, when they think the danger has passed. This kind of "I'm home free" attitude has accounted for a high number of mishaps in the workplace and at home.

The "home free" attitude can be recognized. Do any of these sound familiar? *I've seen my supervisor and peers do it this way a thousand times. My supervisor isn't around—now I can do this the easy way. The parts department failed me again. . . this screw looks just like the one I need. I'm only going to the store on the corner so I don't need my seat belt. He's my best worker. . . no need to supervise him. I read the TO yesterday. . . don't need to get the checklist. The next person will fix*



HERE ON THE GROUND

The point to be made is that human rationale can become distorted, thus unsafe. A rational response to a situation is made when all the facts are known and personal integrity and a high degree of professionalism dominate the final decision. Only then are you home free.

What's your backing up plan?

Backing up a vehicle is a problem. Blind spots make it hard for you to see, and the number and location of blind spots vary depending on the type vehicle and the load being carried.

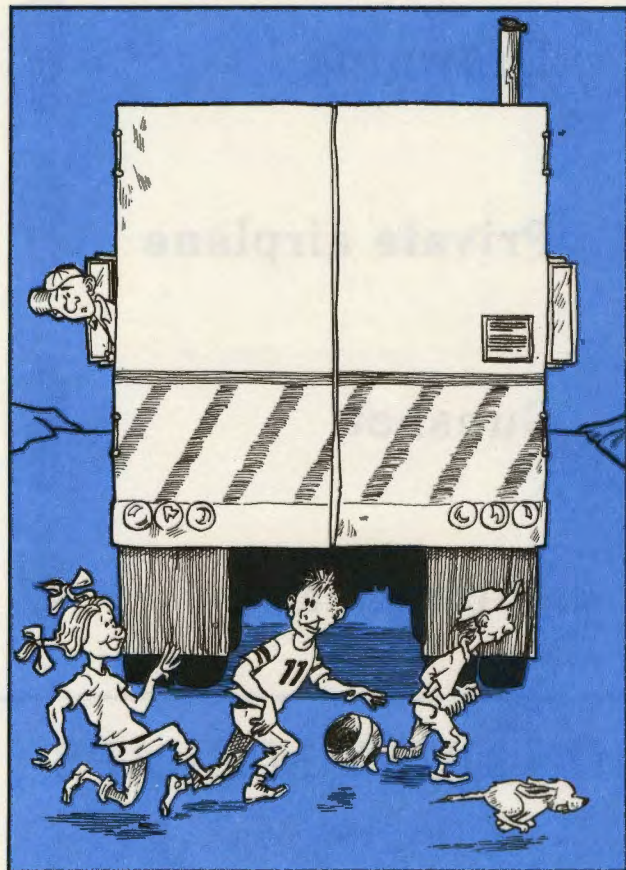
Mirrors help; but, no matter how well equipped the vehicle is with mirrors, there are still blind spots that can cause a problem if the driver doesn't get out and check or use a reliable person to help guide his backing operation.

When you back up, plan ahead—

- Avoid backing up whenever possible. Plan the route in advance to eliminate the necessity to back up.
- Never back up around a corner.
- Whenever necessary (and possible) use spotters to help guide the backing operations.
- Don't back up immediately after stopping.

Someone may have been following you in a blind spot, especially if you're driving a truck, bus or

Whenever the vehicle is parked near buildings,



crosswalks or where children may be found, always get out and check before backing up.

- Ask for help whenever clearances are tight or whenever backing up for a considerable distance.

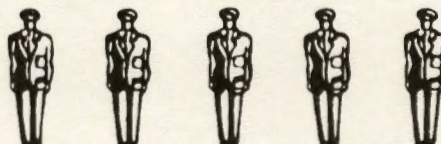
Courtesy ATC

OFF-DUTY MISHAPS

Motorcycles



Automobiles



Drowning



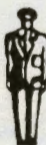
Private airplane



Gunshot



Asphyxiation



ON-DUTY MISHAPS

Industrial



Traffic





TAC TALLY

CLASS A MISHAPS
AIRCREW FATALITIES
TOTAL EJECTIONS
SUCCESSFUL EJECTIONS

TAC		
JUN	THRU	JUN
	1986	1985
1	14	10
0	6	6
0	11	8
0	11	7

ANG		
JUN	THRU	JUN
	1986	1985
1	4	7
0	0	4
2	6	5
2	6	5

AFR		
JUN	THRU	JUN
	1986	1985
0	0	0
0	0	0
0	0	0
0	0	0

TAC'S TOP 5 thru JUN 1986

1st AF	
class A mishap-free months	
175	84 FITS
111	48 FIS
70	318 FIS
20	49 FIS
	USAFADWC

9th AF	
class A mishap-free months	
40	33 TFW
22	507 TAIRCW
19	4 TFW
16	354 TFW
12	23 TFW

12th AF	
class A mishap-free months	
52	602 TAIRCW
38	366 TFW
22	355 TTW
20	479 TTW
20	27 TFW

ANG	
class A mishap-free months	
203	182 TASG
187	110 TASG
162	138 TFG
144	177 FIG
139	114 TFG

AFR	
class A mishap-free months	
100	926 TFG
70	482 TFW
69	301 TFW
60	924 TFG
58	419 TFG

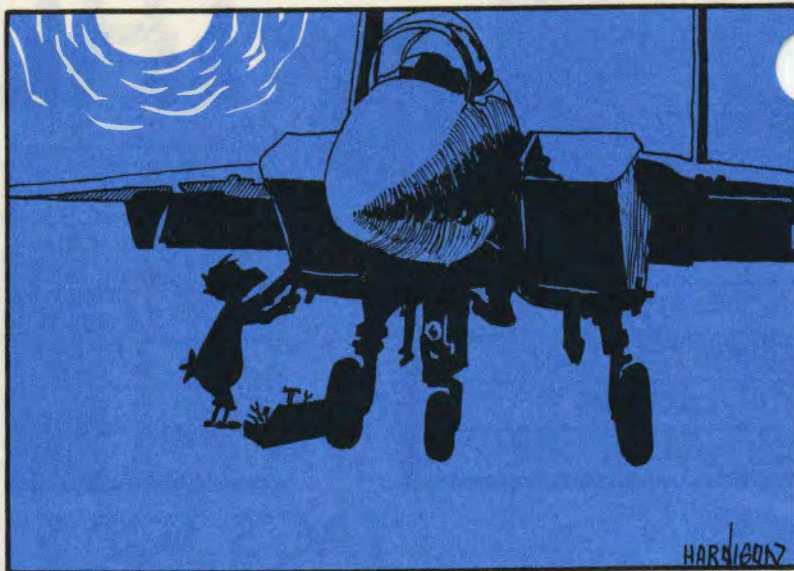
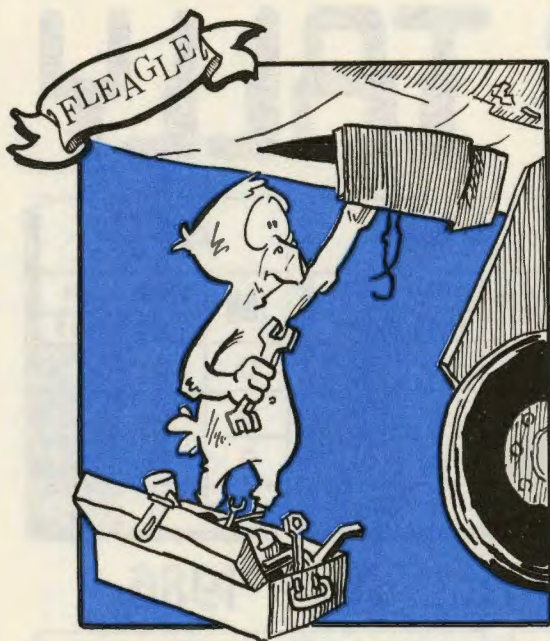
DRU's	
class A mishap-free months	
183	USAFTAWC
117	28 AD
62	24 COMPW
4	USAFTFWC

CLASS A MISHAP COMPARISON RATE

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

	1986	1985	1984	1983	1982	1981	1980						
TAC	4.8	3.2	6.8	2.7	5.4	2.4	4.1	3.7					
	6.8	3.4	2.7	2.4	4.4	2.9	2.7						
ANG	4.3	4.8	2.4	4.8	3.1	4.3	2.7	3.0					
	4.8	4.8	3.0	4.3	4.2	4.9							
AFR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0					
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0					

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



HARRISON



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