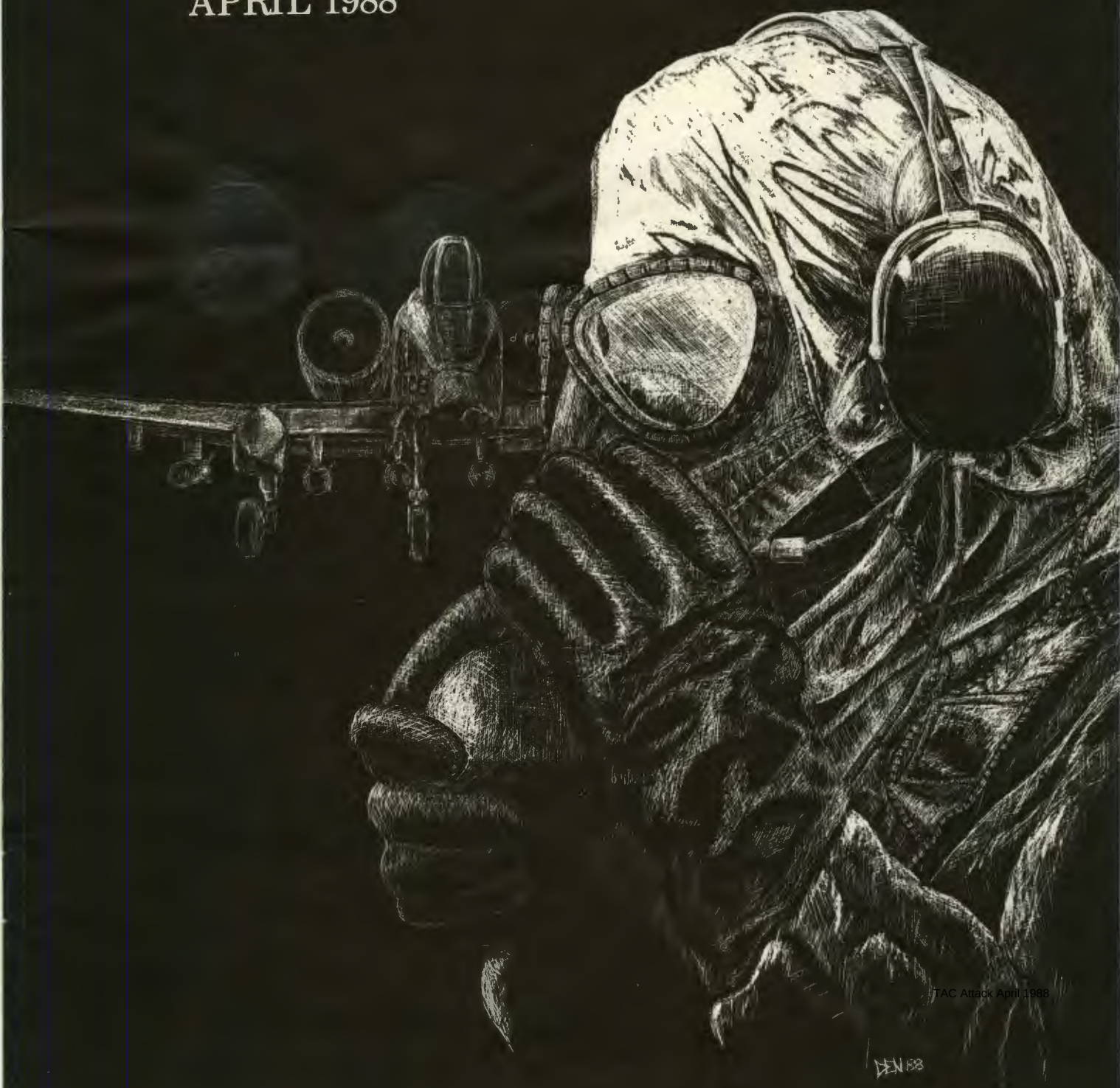
TAC ATTACK

APRIL 1988



TAC Attack April 1988

ANGLE OF ATTACK

"Nothing bad can happen to me 'cause I'm sooooo good."

Have you ever thought that? Know someone else in your unit that has that attitude? The truth is, if the members of an average group of people are asked where they stand relative to the rest of the group, 75% will say they are in the top 25%. In an average Air Force fighter squadron, 25% of the folks think they're in the top 1%. There's certainly nothing wrong with having a good opinion of yourself and your professional abilities, but we can't all be that good each and every day.

It's like a golfer who bases his self-assessment of his golfing abilities on a one-time experience. The normal golfer should be able to smack the ball about 135 yards with an eight-iron. But, on one special day when *everything* is just right (tailwind, perfect stroke, maximum concentration), this guy hits it 160 yards. If he fools himself, he may think he can drive a ball that far from then on, based on that single incident.

You may laugh at my example, but aren't we all tempted to do the same thing? It's important to remember that there are a myriad of factors that affect how we can perform on any given day: personal life, training proficiency, weather, aircraft condition, distractions, wingmen and recent flying record. The same types of everyday factors apply to crew chiefs, maintenance specialists, security police, supply/POL folks, administrative personnel and everyone else that makes the TAC mission happen. How well you can perform today may be different from your ability last week or last month. Keep that in mind as you decide what you can hack today.

Springtime means the beginning of serious boating again. This is another area where complacency plays far too big a role. If you think back to how well you were doing out on the water at the end of last season, you're in for a big surprise. Do you have a checklist for getting your boat back into the water? Are you *prepared* for the boating season this year, or *complacent?*

Speaking of the top 1%, have any of you met "the Barbarian?"

Jack Gawelko

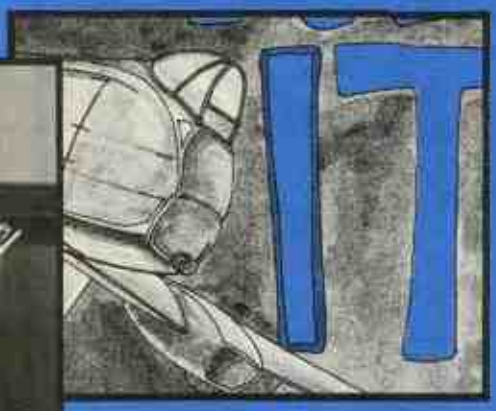
JACK GAWELKO, Colonel, USAF
Chief of Safety

TAC ATTACK

DEPARTMENT OF THE AIR FORCE

10

4



18

features

4 Lose Sight, Lose Fight
Major General Marcus A. Anderson, the TAC Deputy Chief of Staff for Operations, shares his thoughts on the subject with fellow fighter pilots.

6 How Well Can You See?
Can you really see as well as you think you can? Or, are you fooling yourself?

10 Going for the Gold
The members of the 19th Tactical Fighter Squadron and the 19th Aircraft Maintenance Unit at Shaw AFB knew what they wanted to do, they planned it well and they did it.

18 Was It Worth It?
A fighter pilot shares his experiences about a flight mishap.

28 A Law We Lived With
Wear seatbelts! Why?

departments

8 TAC Tips
9,15,24,27,29 Safety Awards
13 Aircrew of Distinction
14 Chock Talk
16 In The Center
26 Weapons Words

TACSP 127-1

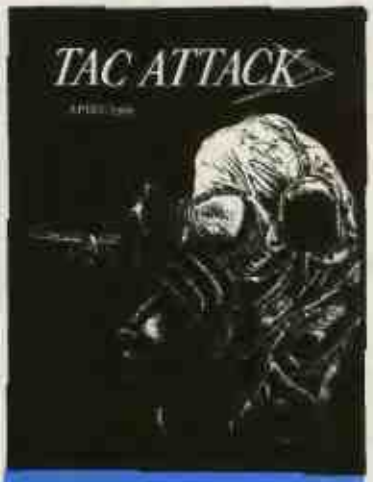
TAC Attack is not directive in nature. Recommendations are intended to comply with existing directives. Opinions expressed are those of the authors and not necessarily the positions of TAC or USAF. Mishap information does not identify the persons, places or units involved and may not be construed as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

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

Distribution F(X) is controlled by TAC/SEP through the PDO, based on a ratio of 1 copy per 10 persons assigned. DOD units other than USAF have no fixed ratio; requests will be considered individually.

Subscriptions for readers outside DOD are available from the Superintendent of Documents, Government Printing Office, Washington, D.C. 20402. All correspondence on subscription service should be directed to the Superintendent, not to TAC/SEP.

VOLUME 28 NUMBER 4



EDWARD C. ALDRIDGE, JR.
SECRETARY OF THE AIR FORCE

GEN ROBERT D. RUSS
COMMANDER

COL JACK GAWELKO
CHIEF OF SAFETY

MAJ DON RIGHTMYER
EDITOR

JANET GAINES
EDITORIAL ASSISTANT

STAN HARDISON
ART EDITOR

SSGT DENNIS WALLACE
STAFF ARTIST

TAC Attack (ISSN 0494-9388) is published monthly by HQ TAC/SEP, Langley AFB, VA. POSTMASTER: Send address changes to *TAC Attack*, TAC/SEP, Langley AFB, VA 23665-5563. Second-class postage paid at Hampton, Virginia, and additional mailing offices.

LOSE SIGHT,

Major General Marcus A. Anderson
Deputy Chief of Staff, Operations
HQ Tactical Air Command

In the history of air-to-air combat, the great majority of kills were unobserved.

When visual acuity is impaired, visual cues occur much later and at much closer ranges during an attack.

Numerous articles and briefings have begun with the "rules of BFM:" (1) lose sight, lose fight, and (2) maneuver in relation to the bandit.

In the *history* of air-to-air combat, the great majority of kills were unobserved. The importance of BFM rule #1 is obvious: You can't fight what you can't see. Rule #2 is equally *important*: You can't maneuver effectively against a bandit you cannot see *clearly!*

Recent mishap experience in TAC has highlighted the effects of reduced visual *acuity* in determining aspect angle and closure rates. In at least two TAC mishaps in the last year, reduced visual acuity (20/30, 20/40) impaired a mishap pilot's ability to *judge* closure rates as well as attitude/aspect angles and resulted in a midair collision. Three aircraft were lost and two crewmembers were fatally injured as a result.

When visual acuity is impaired, visual cues occur much later and at much closer ranges during an attack. During one such incident, it appears the mishap pilot *did not* recognize the high aspect angle and overtake until he was inside 2,000 feet. At high closure rates/aspect

Lose sight, lose fight

LOSE FIGHT

angles, it becomes impossible to react quickly enough to avoid a collision.

If you have spent any time at all in the air-to-air fighter business, you have probably scared yourself at least once while converting to a bandit's six o'clock when, to your surprise, what you thought was his stern rapidly became his nose and you had to get out of his way – FAST! The only thing that saved you was *early* recognition of your perceptual error – you saw him far enough out to miss him; not so with fuzzy vision, and I'm talking of anything worse than 20/20.

If you find that your wife can read road signs further away than you can while driving your car, it's time to have your eyes tested.

It is a fact of life; as we get older, our vision begins to deteriorate. If you find that your wife can read road signs further away than you can while driving your car, it's time to visit the flight surgeon and have your eyes tested. If glasses are prescribed, by all means *wear them* when flying. The consequences of flying with impaired vision may be more than just losing your next BFM engagement – it could be a midair collision with the loss of valuable lives and aircraft. Don't wait until you become a safety statistic to correct what's correctable – *your vision!*

SEE ARTICLE ON PAGE 6 BY COL BELIHAR FOR MORE INFORMATION ON YOUR EYES AND FLYING.

HOW WELL CAN

Colonel Robert P. Belihar
Chief, Aerospace Medicine Division
HQ TAC

During a recent briefing at an Air National Guard unit, I spoke on a favorite subject of mine – aircrew vision. The flyers showed a great deal of interest as we discussed a number of topics including spectacle design, laser eye protection, shooting glasses, and contact lenses. I'd like to share some thoughts with you on these topics and others relating to vision in future editions of TAC ATTACK, but for now I'd like to make a few general comments about your annual eye examination.

Each year as part of your flight physical you peer into a device called a Visual Testing Apparatus – Near and Distant (VTA-ND) and an aeromedical technician directs you to read the smallest line possible without squinting – first without any correction and then with glasses, if worn. The technician observes the test to ensure

There is a perception on the part of some that glasses are not consistent with the fighter pilot image.

YOU SEE?

that it is done correctly. If your best corrected vision is less than 20/20, you are referred to the eye clinic to confirm the acuity. If the substandard acuity is confirmed, you are examined by the optometrist to determine the proper prescription necessary to give you the best acuity possible. It should only be a short time before the appropriate glasses are available for use in flight.

There is a perception on the part of some that glasses are not consistent with the fighter pilot image. As a result, eyestraining and squinting are occasionally used in an attempt to "get by." Sometimes, however, squinting can be a natural, unconscious means of compensating for poor vision, as is evidenced in the following example.

A few years ago while walking by the ops desk, I noted one of the pilots squinting while attempting to read the scheduling board. When asked if he wore glasses, he replied that he did not. Curious why I had asked, I told him of his squinting – something he was totally unaware of. We stopped by my office and I examined him in my eye lane where I found his distant acuity to be 20/40 in both eyes (20/20 while squinting!!). When the proper lenses were placed before his eyes and he read a crisp 20/15, he was flabbergasted! With his new glasses his performance in the air-to-air arena improved dramatically.

Anytime you feel your vision is less than optimal, you should be be seen by the optometrist for an examination.

Others in the squadron observed the improvement, and soon I was sought after by other aircrew requesting a pair of what were referred to as "MiG Killers."

The pilot in the above example had tested 20/20 during his physical exam ten months previously. I am convinced that at that time his acuity was less than 20/20. Unconsciously using a squint that was not observed by the technician, he was able to pass the test.

To maximize the benefit of your annual eye exam, I would like to pass along a few suggestions. Relax during the exam – do not use a squint or eyestrain in an attempt to read the letters. Any attempt to "beat the system" will ultimately prove to your disadvantage. Note the clarity of each letter. There is a big difference between a crisp 20/20 and a blurry 20/20. Anytime you feel your vision is less than optimal, you should be seen by the optometrist for an examination. During the examination the optometrist uses special instruments to aid him in determining the proper lens combination. It is *you*, however, who determines the final prescription. This is done when you select from a series of choices of lenses presented by the optometrist while refining the prescription. Take your time to ensure the best correction possible.

A study conducted in 1980 revealed that 20% of pilots and 50% of navigators required corrective lenses.

A study conducted in 1980 revealed that 20% of pilots and 50% of navigators required corrective lenses. Virtually everyone, if they stay in the cockpit long enough, will require glasses for flying. Decreasing near acuity is a result of aging changes within the lens of the eye and usually becomes evident in the early to mid-forties.

There are, no doubt, some liabilities associated with wearing spectacles in the cockpit – limited field of view, fogging, and reflection, to mention a few. Given the choice, however, between a blurry 20/20 without glasses and a crisp 20/15 with – I'd choose 20/15 any day! The guy with the first tally's got the edge. Having the best acuity possible could mean the difference between winning and losing. ➢

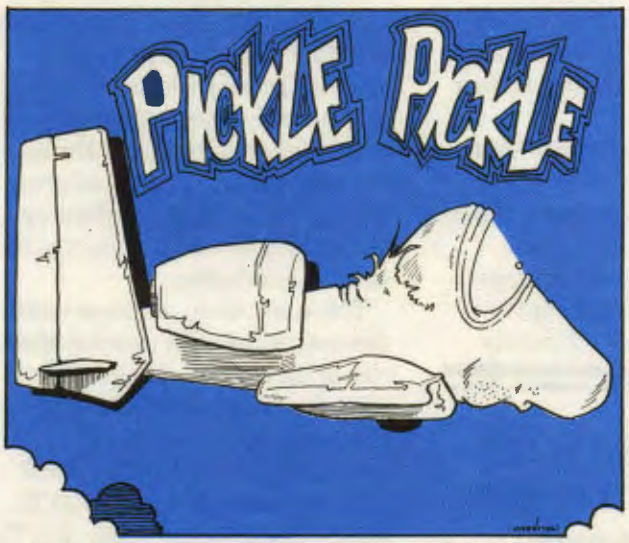
TAC tips

INTERESTING ITEMS, MISHAPS WITH MORALS, FOR THE TAC AIRCREWMAN

Just A Tad Off

An A-10 was loaded with wall-to wall BDUs on TERs and LAU-68 rocket launchers. The first bombing passes on the range went fine, but the first attempt to fire a rocket brought different results. On his armament panel, the pilot had selected station 9, release mode – singles, nose/tail fuzing and the master arm on.

The A-10 pilot rolled in for the rocket pass and pressed the pickle button, but he didn't see the expected smoke and fire from a rocket. When he checked the selected station, he noticed an empty light and, for the first time, saw that "LDGP" was showing in the thumbwheel display instead of the expected "RKT." The other station carrying a rocket launcher was also improperly set.



Both the maintenance specialists and the pilot erred in allowing the LAU-68 to be jettisoned like a bomb. The store display thumbwheels hadn't been set properly according to the A-10 TO, and the pilot didn't follow his Dash 34 preflight or inflight procedures to make sure that the systems were set up properly.

It's an old cliché, but "attention to detail" should never be taken lightly. There's no question that our aircraft and on-board armament systems are complex. That's all the more reason to make sure your ordnance is hooked up right, that the armament system is thoroughly checked out and your switchology is correct the first time to get the ordnance on target.

Skipping Stones

An F-4 pilot was in the pulloff from his final strafe pass when something struck the left quarter panel, causing a 4- by 2-inch hole. The front seat was showered with bits of plexiglass, but the pilot was able to make a normal recovery at home base.

The initial cause of the windscreen damage was thought to be a birdstrike, but there was no evidence of that. A ricocheting bullet seemed the next most likely candidate for blame, but the pilot's firing parameters and cease-fire distance were well within the established criteria designed to prevent such problems from occurring.

The strafe pits were in good shape that day because they had been disked just that morning and inspected by a highly experienced range officer.

So what caused the windscreen to be shattered? We don't know for sure, but the obvious point is this: you've got to have a plan for the times when you do everything RIGHT. Even then a stray bullet, a rock hit just right or a lucky BB can jump up and get your attention.

OUTSTANDING ACHIEVEMENT IN SAFETY AWARD

Major Donald G. Bintz's efforts in consistently identifying and correcting areas with a high accident potential have directly contributed to the 474th Tactical Fighter Wing's safety record during the past year. Working as officer-in-charge of the Quality Assurance Division, he has made the most of the opportunity to look at all maintenance functional areas from an operations perspective. This has permitted the wing's maintenance leadership to institute necessary changes that have proved beneficial to both operations and maintenance safety.

As an example, Maj Bintz discovered that three different types of oxygen regulators were used in wing aircraft, two of which required the supply lever to be safety-wired to the On position. Due to numerous functional checks and confusion about the different types, the levers were not always safetied. A one-time inspection immediately corrected this problem and follow-up actions have ensured continued compliance with technical data.

Maj Bintz also discovered significant differences between technical order troubleshooting procedures and those used on the Aircraft Ground Engine Test System (AGETS) while he was investigating a serious engine stall/stagnation problem. Due to an incomplete understanding of AGETS by backshop and flight line personnel, various inspections were not complied with prior to turning malfunctioning engines over for tests. Maj Bintz instituted procedures that improved the communications channels from pilot through maintenance debrief to the engine test technician. The result has been better troubleshooting and improved engine maintenance.

Maj Bintz has also contributed to wing safety as a result of several airborne emergencies experienced while flying functional check flights. From his own experiences, he has been able to pass on valuable information to the F-16 pilot force concerning aircraft systems and proper responses to a variety of aircraft malfunctions. Since Maj Bintz's arrival in May 1985, the wing has had no Class A or B mishaps attributable to maintenance or logistics. His efforts have clearly contributed to that record and earned him the TAC Outstanding Achievement in Safety Award.

Major Donald G. Bintz
474 TFW
Nellis AFB, NV

GOING FOR THE GOLD

Captain Mark R. Perusse
19 TFS, 363 TFW
Shaw AFB, SC

The 19th Tactical Fighter Squadron and the 19th Aircraft Maintenance Unit (AMU) of the 363d Tactical Fighter Wing at Shaw AFB, South Carolina, flew a world record 160 sorties on 3 June 1987. The surge required each squadron aircraft to fly eight times that day and each pilot to fly four sorties. The original plan called for flying to begin at 0600 hours and end at 1910 that evening, but the aircraft performed so well that the unit was able to finish an hour earlier than expected.

"It was a very busy day for both us and the maintenance folks," commented Lt Col Wayne Ivan, 19 TFS commander. "We are all very proud of this accomplishment and the chance we had to demonstrate our capabilities."

Prior planning by both Maintenance and Operations was the key to the success of the exercise. The ops project officer, Major Mike Hazenfield, who had participated in the previous sortie record of 144 set at Hahn AB, Germany (496 TFS),

going for the gold

applied his experience gained there to develop a flow plan for 160 sorties. Four launch windows were built, each comprising 40 sorties. Limiting factors at the base level were identified to the wing staff. Finally, the squadron planned to stand down the day prior in order to mission plan and receive a detailed mass flight briefing given by the squadron operations officer, Lt Col George Tuttle. When everyone left the squadron early the day prior, they knew the launch and recovery procedures and had the necessary line-up cards/maps completed and ready to fly either of two low-level routes to four different ranges.

The maintenance officer-in-charge, Capt Martha Kelley*, and noncommissioned-officer-in-charge, CMSgt Gleaton, called a meeting of key maintainers two weeks prior. They brainstormed and identified limitations in the following areas: aircraft tires, POL/hot pit flow, aircraft parking plan, launch/recovery flow plan, ground abort flow, aircraft spares location, repair procedures and munitions flow. Action items were assigned to OPRs and frequent meetings monitored the progress. The flight chiefs and back shops were called in and the scenario was diagrammed out on a board so everyone knew the flow plans and location of any extra prepositioned supplies.

On June 3, everything came together. Each F-16C flew a low-level navigation route, many of them fighting adversaries from various other dissimilar fighter squadrons throughout the Southeast in LOWAT scenarios. They all ended their flights by dropping bombs on Poinsett Range about 10 miles southwest of Shaw AFB before returning to base. The jets then had 30 minutes to dearm, hot pit refuel and takeoff for a second sortie before shutting down the engine. A one hour time period followed with three more "goes" launching exactly like the first one resulted in the record.

GOING FOR THE GOLD

When sortie number 160 landed, we had the following results:

– Sorties Scheduled/Flown
160 160

– 152 Code One Sorties
– 4 Code Two Sorties
– 6 Code Three Sorties

The following parts were used:

2 aircraft batteries
1 brake hydraulic line
1 EFCC
1 CADC
1 Sensor Controller
1 Priority Valve
1 Box Wiring Harness
Tires Used: 11 nose tires and 25 main tires

– 3 inflight emergencies (IFEs)

At 1830, the unit finished with 21 jets fully mission capable (FMC).

For the bombs dropped on *each* of 157 sorties, the results were:

Dive Bomb CEP – 9 meters
Low Angle Low Drag CEP – Bullseye

When the record-setting day was over, the folks of the 19 TFS and 19 AMU had vividly demonstrated the capabilities of a combat ready F-16 squadron. The exercise was a rare opportunity to match the integrated capabilities and professionalism of our maintenance personnel and pilots to the realistic challenges of combat operations. It was a day that we can all remember with pride as an outstanding example of what we can achieve if the need ever arises.

•Captain Kelley is now Chief, Weapons Safety Division, HQ TAC.

going for the gold

AIRCREW OF DISTINCTION

Maj Chester A. Wood
312 TFTS, 58TTW
Luke AFB, AZ

Lt Col Donald M. Krempel
422 TFS, 57 FWW
Nellis AFB, NV

Major Chester A. Wood and Lt Col Donald M. Krempel were scheduled as one and two in a four-ship with Lt Col Krempel flying an F-16C conversion course sortie. After an uneventful takeoff and joinup, the flight leveled off at 5000 feet MSL. Their departure progressed normally until approximately 12 miles south of the airfield when Lt Col Krempel heard a loud bang and experienced a loss of engine thrust. Scanning his engine instruments, he immediately discovered his engine had failed, and informed Maj Wood of that fact as he zoomed his aircraft to trade airspeed for altitude. Maj Wood directed Lt Col Krempel to turn his powerless aircraft toward a civilian field, approximately five miles away, while he assumed the chase position and began informing him of the runway available.

Lt Col Krempel acquired the airfield and set up a glide for a straight-in flameout landing since his altitude was insufficient for an airstart. As they approached the runway, the pilots saw a civilian aircraft on the same runway. Faced with (1) continuing the approach and attempting to avoid the civilian aircraft, (2) attempting a landing on a parallel taxiway which was also occupied by a civilian aircraft, or (3) ejecting and allowing the aircraft to crash on the airport complex, they quickly weighed the options and decided a landing beyond the civilian aircraft was possible.

Lt Col Krempel expertly maneuvered his aircraft around and above the civilian aircraft for a perfect touchdown approximately 2,000 feet down the runway. He then applied maximum braking to bring the aircraft to a full stop since no arrestment barriers were available. Realizing the potential for a fire due to hot brakes, Lt Col Krempel accomplished an emergency ground egress. As anticipated, the left main tire burst into flames and he directed the civilian firefighters until the flames were extinguished.

The accurate, timely decisions made by Lt Col Krempel and Maj Wood during a critical phase of flight saved a valuable combat aircraft. Their demonstration of outstanding airmanship and professionalism earned them recognition with the TAC Aircrew of Distinction Award.

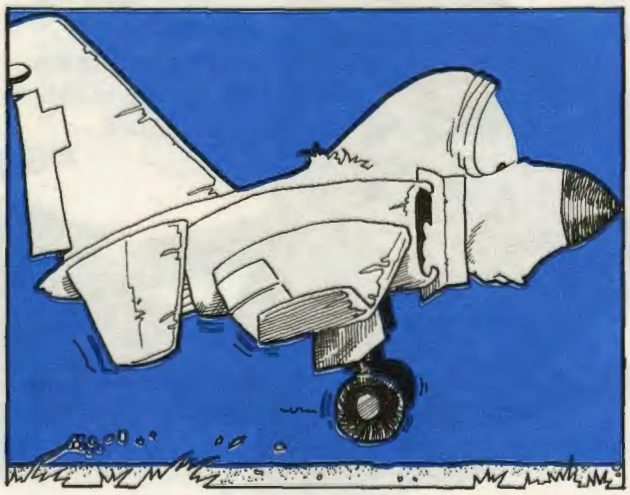
CHOCK TALK

INCIDENTS AND INCIDENTALS WITH A MAINTENANCE SLANT

It Looked OK

An F-4E pilot was on the wing during a formation takeoff. When he tried to deselect afterburner, the number two throttle wouldn't move. After several unsuccessful attempts to pull the right throttle out of afterburner, the pilot shut the engine down with the master switch. After burning down fuel, the crew set up for a single-engine landing. At 5 miles on final, the landing gear was lowered and the wingman noticed something fall from the aircraft.

Back on the ground, maintenance found that the number two cartridge breech cap was missing and that the right throttle moved easily. The day before this incident, maintenance had performed an engine starter oil level inspection. To do that, the cartridge breech cap was removed to allow access to the starter. When the jet engine mechanic was finished, he didn't tighten the breech cap. Neither the crew chief nor the pilot noticed the breech cap was loose. The result was a serious problem during the formation takeoff and an unnecessary dropped object.



Wind's Up

An APG technician went out to an F-4 to service the liquid oxygen. He placed the drip pan under the lox servicing door and proceeded to ground the lox service cart.

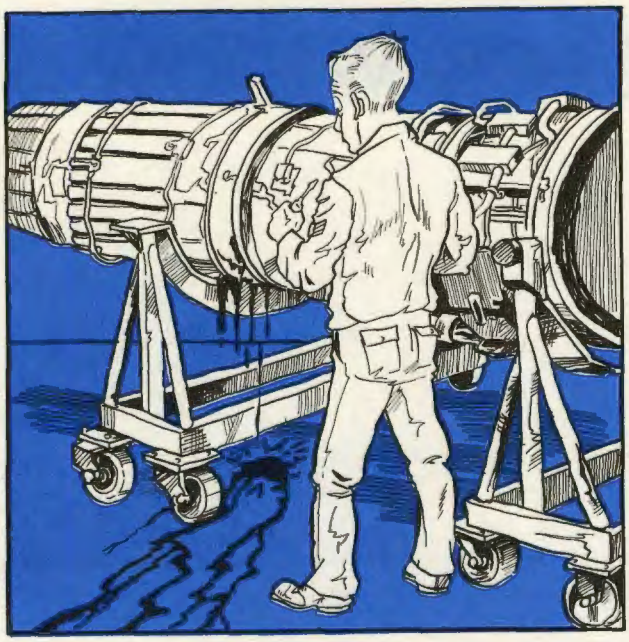
The wind was blowing at about 20 knots with occasional gusts even higher. When the technician returned to the servicing area underneath the aircraft, he noticed that the drip pan had moved several feet and there was glass lying on the ramp. The wind had blown the unsecured drip pan into the glass dome of a TGM-65 Maverick missile mounted on the aircraft.

Consistent strong winds and gusts are an everyday factor at many TAC bases, particularly in the West. You're usually not going to stop work because of them, but you do need to ensure that everything you're working with is secured sufficiently to prevent stuff from flying around striking vehicles, aircraft or other people.

Hidden Cost

The jet engine was installed on the test stand for an operational check following completion of some maintenance work. The test was stopped at 40-percent power because of an "A" sump leak. Technicians on the engine shop's day shift were called out to the test facility to remedy the problem, and the work was finally finished by personnel on the swing shift.

Before they attempted another run on the engine, the test cell folks performed both an inlet and a tailpipe



inspection. When the engine was started and running at idle power, one of the men heard loud, unusual noises coming from the engine. They shut down the engine and accomplished a borescope inspection. Serious damage was found on several stages of the compressor rotor, and the washer portion of a spinner dome nut was found lying between the high- and low-pressure turbines. The nut portion had apparently been carried downstream inside the engine, causing more damage before it exited.

It was impossible to determine exactly when the hardware that caused the damage was left lying inside the engine. Unfortunately, this is the leading cause of FODed engines – hardware and work debris left behind or unaccounted for after repair work is completed. The offending piece of hardware may be small enough to escape detection, but the resulting damage and repair costs aren't.

TAC OUTSTANDING ACHIEVEMENT IN SAFETY AWARD

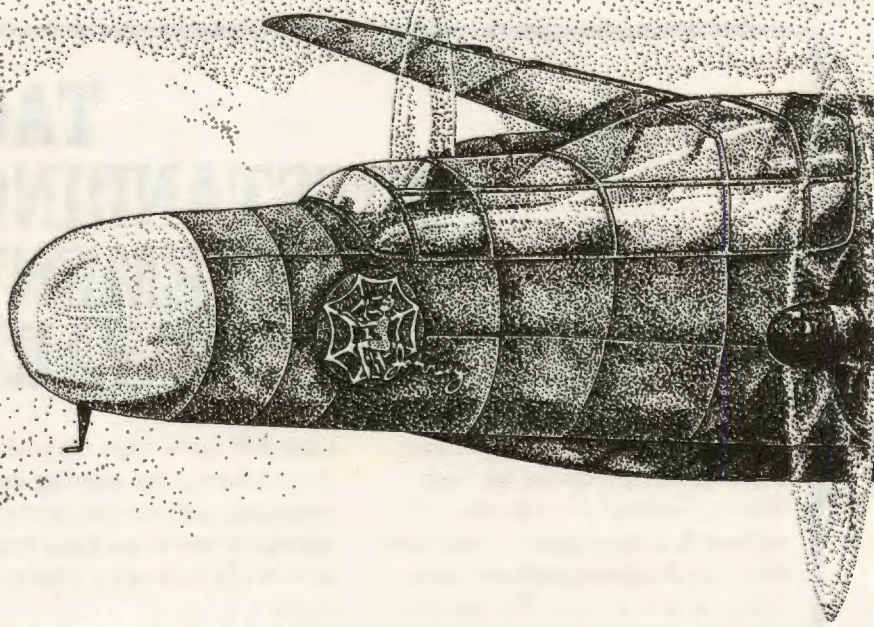
SSgt Kevin D. Dye was performing an inspection on his base housing heating unit when he noticed that the exhaust ventilation duct was damaged and torn loose from the heating unit. The damage to the ventilation duct seemed to have been caused by roofing contractors who had performed roofing maintenance.

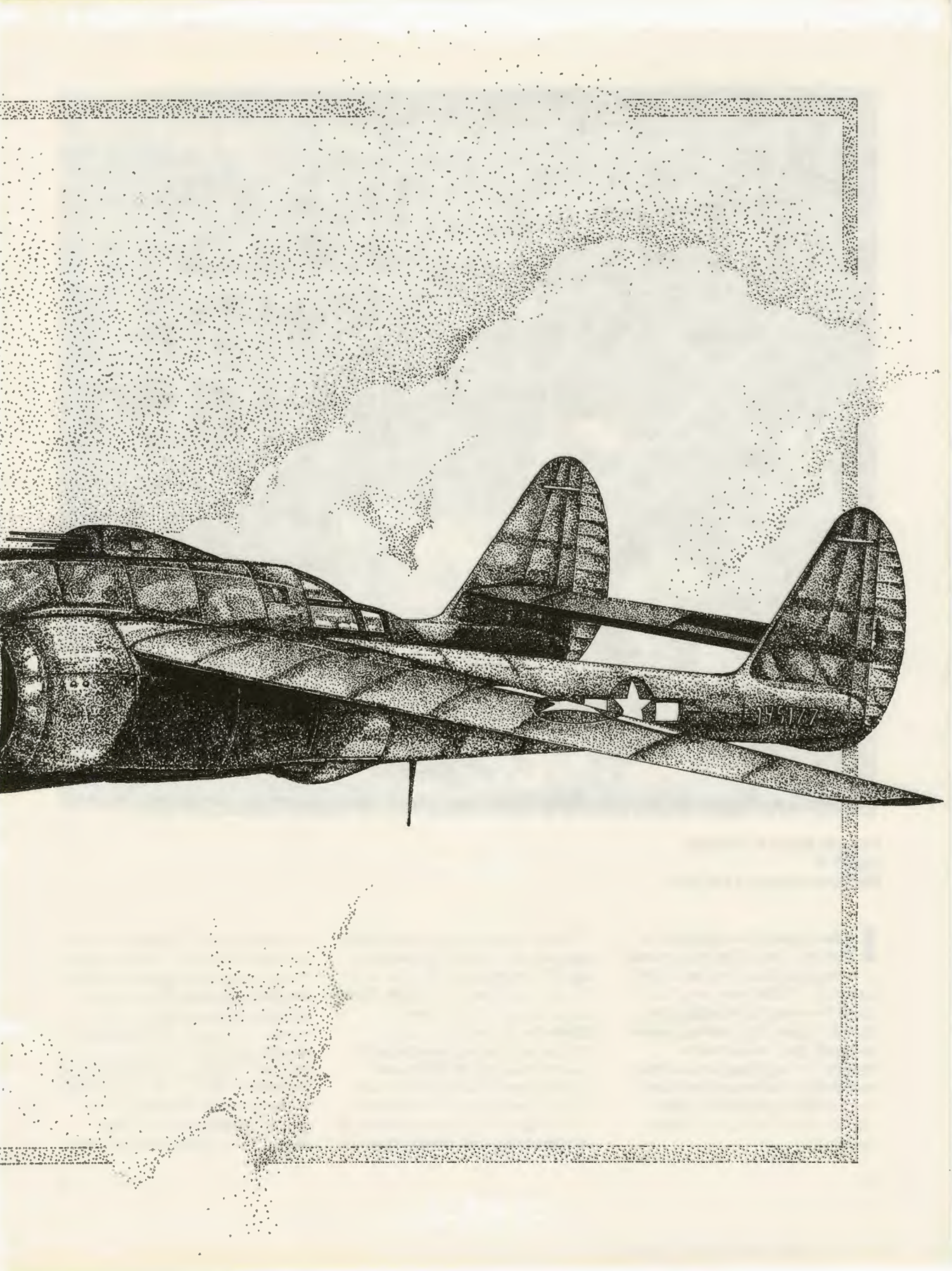
Realizing that other housing units could be affected by similar problems, SSgt Dye immediately notified the civil engineering service desk, security police and the base fire department. A door-to-door check was initiated to determine if other heating ventilation unit ducts were disconnected. A total of 32 ducts were found disconnected during that evening and the occupants of those quarters were instructed not to use their heating units while necessary repairs were made.

If this situation had gone uncorrected with the heating units turned on, fumes would have filled the attic and eventually the rest of the house. The determination of the fire department and base civil engineering personnel was, "This could have been a disastrous situation." SSgt Dye's quick actions and thorough follow-up of the problem have earned him the TAC Outstanding Achievement in Safety Award.

SSgt Kevin D. Dye
67 AGS, 67 TRW
Bergstrom AFB, TX

P-61 BLACK WIDOW





Captain James R. Preston
442 TFW
Richards-Gebaur AFB, MO

I'd like to propose a corollary to Murphy's Law: *If whatever could go wrong did, then Preston's Corollary states, "Whatever you do to fix it will be wrong."* Obviously, like Murphy's Law, this corollary is a little harsh. But, unless you've thought through your actions in an emergency, chances are you won't do everything *perfectly* to make your situation better. Let's get to the story . . .

There I was on a sunny, but rather hazy, day in northern Germany, flying ACT in my trusty Hog because the vis down low was terrible. Being the good, young flight lead that Blade was, he had thoroughly briefed an alternate mission of air combat training (ACBT) to our primary one of LATN. Blade was better than most; he was very conscientious and had even made up his own briefing guide which expanded on the official one. Therefore, when we got airborne and saw how gooey it was, we had no hesitation in flying our alternate plan. The scenario called for a total of twelve separate engagements, six with me being the bandit, and six with Blade attacking. The working area had a floor of 10,000 feet MSL, so we used 11,000 as the "ground." The flights went quickly (mostly because I hammered him unmercifully) and, as I

assumed the defensive role, I was determined to prevent him from getting even a snap shot. The next five engagements went pretty well. Blade's discipline in remaining the simulated Fast Mover didn't allow any real good shots.

THE SCENARIO CALLED FOR A TOTAL OF TWELVE SEPARATE ENGAGEMENTS, SIX WITH ME BEING THE BANDIT, AND SIX WITH BLADE ATTACKING.

I was psyched up on the last engagement because I was shooting for a 6-0 final tally. As Blade approached from my low 8 o'clock, I thought I had a great opportunity to spit him out and reverse. I let him get a little closer, then rolled into 120 degrees of bank and yanked it right into his face. I felt the airplane shudder, so I unloaded and rolled out of the turn. Yeah, I'd spit him out, but spit out both engines as well. As every light on the annunciator panel came on, I watched both ITTs moving to their upper limits. "Hey, Blade, knock it off . . . I just lost both my engines."

I set up a 140 knot glide and went through the bold face. (It always seemed to go faster on the ground.) THROTTLES – OFF, APU – START, FLIGHT CONTROLS-MAN REVERSION, LEFT ENGINE – MOTOR, LEFT ENGINE – START. The trouble was, motoring the left engine wasn't

YEAH, I'D SPIT HIM OUT, BUT SPIT OUT BOTH ENGINES AS WELL.

cooling it down like everybody said it would. Blade was giving ATC a heads up, and verifying that I had gone through the checklist. He had his hands full with the radios.

The problem had happened at 12,000 feet plus, so by now Blade was in chase, and I was at 8,000 to 9,000 feet waiting for the left ITT to come off the 1,200 degree peg. Since I had nothing better to do, I decided to get a little creative. I figured if the engine wouldn't cool down by itself, I'd help it by getting a little more airflow through it. I lowered the nose and picked up about 240 knots (I didn't want to give away *all* my altitude). Blade sounded cool on the radio, so I wasn't too worried yet.

At about 4,000 feet MSL (3,000 AGL) I decided (brightly) that the left engine wasn't going to start. I shut off the left throttle, and tried the right side. It started to cool off immediately, just not as fast as I had hoped. I entered the haze layer, and Blade decided wisely not to follow me. I had a pretty good idea of where I was and could see the ground directly below, so I wasn't worried about hitting something in front of me.

At 2,000 feet AGL, even though its temperature was still out of limits, I decided to try restarting the right engine. As soon as the throttle came out of Off, the ITT went right back to its peg. Blade had been asking my altitude and status, so when I answered, "2,000

A GOOD-SIZED TOWN APPEARED OUT OF THE HAZE, SO I TURNED TO AVOID IT, AND LOOKED FOR A NICE OPEN FIELD.

feet," he said, "You better be getting out." Yeah, the thought had occurred to me, so when both engines looked dead, I started thinking about dumping this thing. A good-size town appeared out of the haze, so I turned to avoid it, and looked for a nice open field. I tightened down the straps, found a nice area, and said, "Blade, I'm gettin' ready." He came back, "OK, go for

WAS IT WORTH IT?

it." *Boy, it's cozy in this cockpit,* I thought. I took one last look around, and saw the new LATN maps I'd made just the day before. *How can I take them with me,* I wondered. *Ah, forget it.* Outside it looked like I was at about 1,000 feet above the ground, so I made one more call. "I'm goin' now." "Well, *DO IT,*" Blade replied.

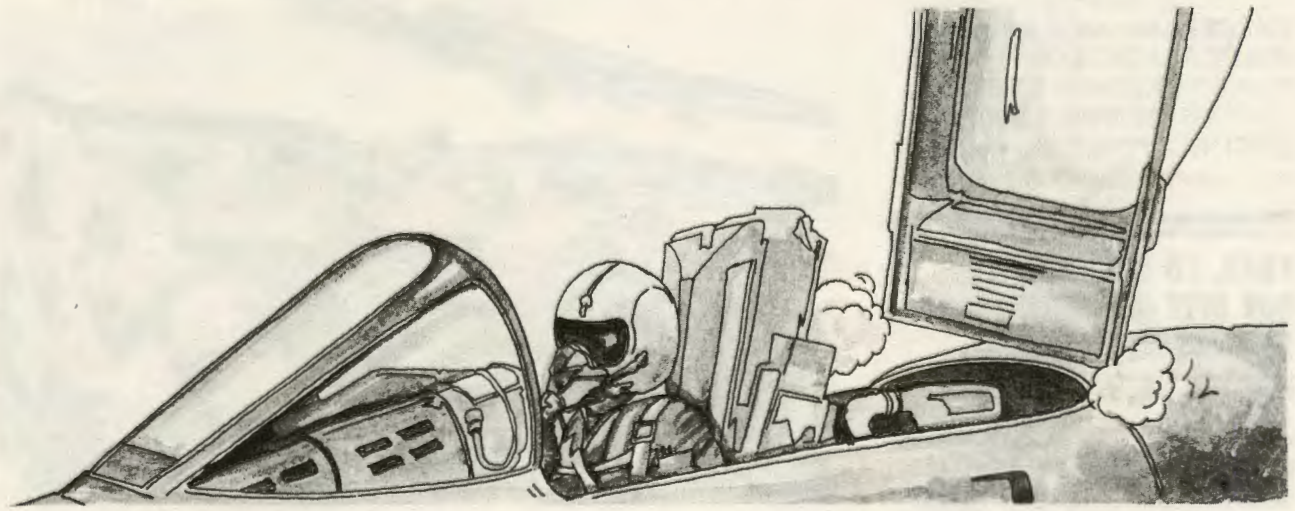
I sat back in the seat, got into position, and pulled the handles. My first thought was how easy the handles were to pull. Next, I got jerked back in the seat by the inertial reel, watched the canopy come off and saw a lot of vapor come in around the windscreen. Then I started moving up the rails. My head was forced down so I was looking between my feet. I saw the smoke from the rocket, and watched the airplane move away as I went up and out of the cockpit. I looked at the airplane getting smaller, and then started to tilt backwards. Then, "WHAM!" The seat was forcibly yanked from my hands as the parachute opened.

I looked up and checked the canopy. It looked good. I *had* to watch the airplane hit the ground. The left tailpipe was glowing bright red, and the right one was smoking. When the airplane hit, it was just like Hollywood, with a bright orange fireball and the mushroom cloud, but more of a "thump" than an explosion. I did my post-ejection

I SAW THE SMOKE FROM THE ROCKET, AND WATCHED THE AIRPLANE MOVE AWAY AS I WENT UP AND OUT OF THE COCKPIT.

checklist, but kept the mask fastened by one bayonet. (I don't know why.) I tried to find the four-line jettison, but could only see one red loop on the left riser. (The right one was blocked by a nylon "keeper.") I pulled the left one anyway, and turned into the 10 to 15 knot wind. I saw that I was drifting into a group of trees, but I was only along for the ride. I didn't really think about jettisoning the seat kit, but as I went into the trees, I regretted *that* decision. The "tree landing" position worked, and I smoothly slid through the trees. However, I jerked to a halt about 80 feet from the ground, held by the parachute canopy in one tree and the life raft/seat kit in another.

I was suspended between the two trees, feeling pretty stupid. I could hear 30mm rounds cooking off and could see the glow of the flames from the wreckage. *Great,* I thought, *I'll be shot by my own airplane.* I got my survival radio, and Blade immediately answered. "How you doin'?" he asked. "Just great," I answered. I told him to fly 120 degrees (don't ask me where that heading came from) and he shortly arrived overhead. "That's a mighty tall tree you're in there, Jimbo," he cleverly said. *Thanks, buddy,* I thought. He had already gotten a British rescue helicopter scram-



was it worth it?

bled, and was talking to them on Guard. I could hear him, but not them. About that time a woman showed up on the ground. (The airplane had missed her house by 300 feet.) Between my broken German and her broken English, I convinced her that I was the only one on the airplane. She said the fire department was there, and would be over to get me as soon as the fire was under control.

THE "TREE LANDING" POSITION WORKED, AND I SMOOTHLY SLID THROUGH THE TREES.

Just then, a gray and orange UH-1 arrived right overhead. This guy hovered right over the top of me, and those trees really started swaying. I tried waving him off, but he just sat there. If I'd been quick enough, I'd have shot him with a gyro jet. He got me rocking enough that I was able to grab onto the tree trunk and hang on *tight*. He finally moved over, and never came back. (I still don't know who it was.) While Blade was talking to the British helo, he was looking at the Huey, so he was a little confused when they reported they couldn't see me. I told him to ask what color their helo was, and when they said green and brown, we got that problem cleared up. They flew over once and landed in the field I'd missed by 50 feet. All four of them ran over and started laughing. I asked if they had any ideas, or a hoist or anything! (We didn't have personnel lowering devices in USAFE at that time.) They said, "Sorry, no. Our hoist broke yesterday."

Then the fire department arrived. They were kind of a rural department, and, as such, only had an eight-foot ladder for rescue, which they thoughtfully leaned against the tree. *Terrific*, I thought. Blade was down to his Bingo fuel by now, so he headed to Gutersloh and landed. It had been 45 minutes since the ejection, and my legs were falling asleep because the circulation had been cut off. I figured I'd better do something pretty soon. (The Germans had taken out a big tarp with a little red circle in the middle, and had 12 guys hanging onto the edges. One of them pointed to the middle and said, "You come down now." I respectfully declined, remembering all the Three Stooges movies I'd ever seen.)

I fastened my harness' chest strap around the tree trunk and carefully disconnected the seat kit and the parachute, all the while hanging on

WAS IT WORTH IT?

with one arm around the tree. I started to slide down the tree like a telephone lineman. When I got to the first branch, I had to unfasten my chest strap, but the adrenalin was still pumping so hanging on was no big deal. I slid down the rest of the way and stopped about ten feet up, standing on a long branch. I decided to graciously use the ladder the firemen had set up, but as I twisted myself around the tree, the branch broke, hit one of them on the head and knocked him down. I climbed down the ladder, and as a German newspaper put it, "walked away on shaking knees." The British helo crew took me to Gutersloh and the hospital there.

After all the tests, x-rays, etc., I stayed overnight for observation. My only injuries were a very slight compression fracture in my neck, and a cut on my chin from the mask microphone. The next day I was flown to Ahlhorn to meet with the safety investigation board (SIB), and then on to Bentwaters.

I CLIMBED DOWN THE LADDER, AND AS THE GERMAN NEWSPAPER PUT IT, "WALKED AWAY ON SHAKING KNEES."

The leadership back at my wing was outstanding. From the wing commander on down, they called and asked if I was *really* alright and if there was anything they could do for me. I was also fortunate enough to have a great guy as the SIB president. He was always concerned about my feelings, as well as trying to get the facts. The other board members were super, too.

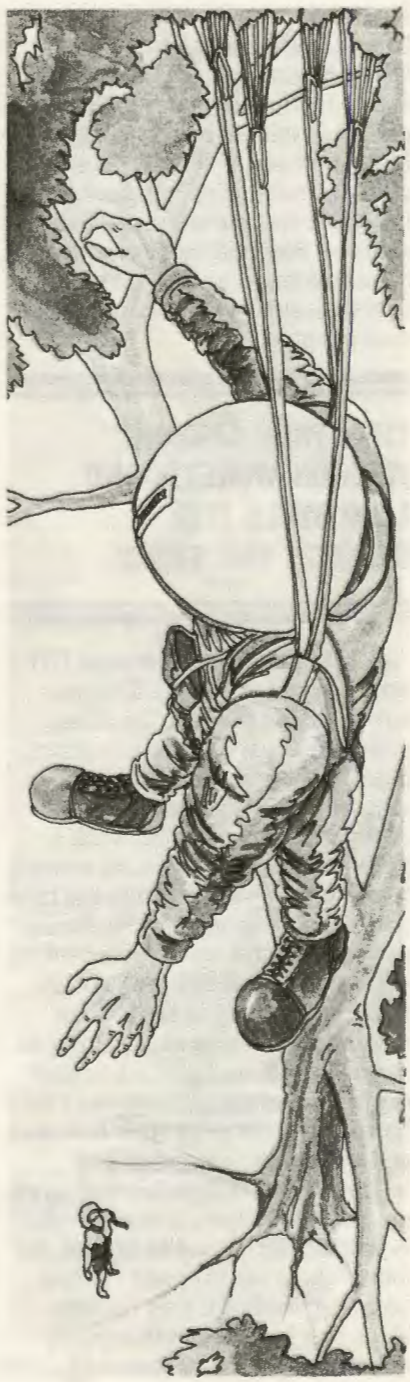
Basically, the board said I was one of the three causes, which I could live with. After all, if I hadn't stalled the airplane, the engines wouldn't have compressor stalled. The other causes addressed both the Dash One and the fact that the ITTs wouldn't cool down as advertised. They found a throttle rigging problem which had allowed enough fuel into the engines to prevent cooling.

So, to answer the original question in my title; yes, it was worth it. I was flying again ten days later, I still got promoted and I have a great war story. Did I learn anything from this episode? Yes, again, and I think about it all now before I fly.

– Make the decision to eject before you take off. It's been said a hundred times before, but I'd never *really* thought about it. I always thought an ejection decision would be forced on me and I'd react immediately. Obviously, not all emergencies happen at 500 feet.

– If you're part of a formation, have one of the other flight members handle the "mundane" functions, like talking on the radio, keeping track of altitude, etc. Fortunately Blade handled everything for me so all I had to do was fly the airplane.

– Don't sacrifice altitude unless it will definitely help. I gave up two extra minutes of cooling time by lowering the nose. I would have needed 315-plus knots to get any kind of effective airflow through that engine, and I didn't have *that* much altitude. It turned out that the left engine had essentially



was it worth it?

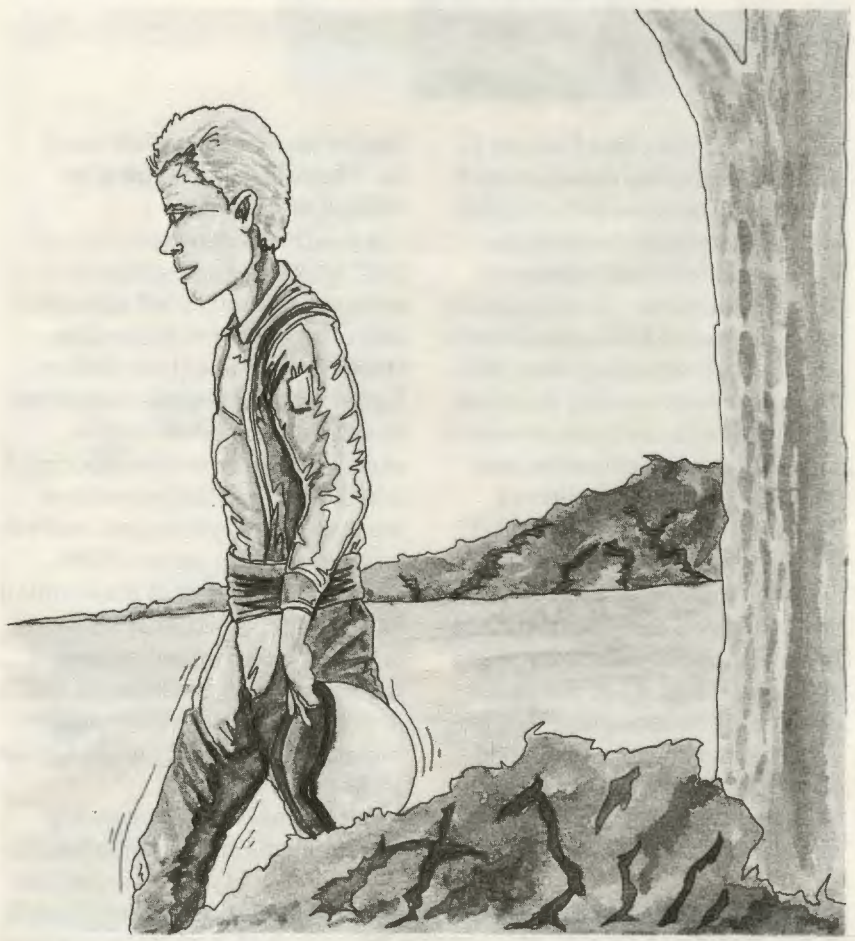
melted and wouldn't have restarted no matter how long I'd had.

– Remember the first three things you do in an emergency. You have to be aware that they're not just something you do after winding the clock. MAINTAIN AIRCRAFT CONTROL – if you have your head buried in the checklist or the cockpit, you may get the nose down, you may get too fast (or slow), you may go into the weather, etc. ANALYZE THE SITUATION – the analysis continues all the way through. The situation changes constantly as your altitude decreases, your airplane tells you things (good or bad), the weather becomes more of a factor, or you go through all of your options. As the situation changes, you MUST anticipate it, and be flexible enough to handle those changes. If you have the time, ask if anyone else has any ideas. In the excitement, you may have overlooked something, or the other guy(s) may have more experience than you. TAKE PROPER ACTION – your actions will depend on any number of things – altitude, airspeed, your progress in handling the problem, and so forth. If you have plenty of the good things, press on. However, if things just aren't working and the problem isn't getting better, the proper action is "Bail Out."

– Know your equipment. If I had paid attention during the life support briefings, I would have known about the "keeper" on the risers. (I also would have found my gyro jets in time to shoot down that Huey.)

– Be aware of "Temporal Distortion." That's where your brain speeds up so much that everything seems in slow motion. When I got in the simulator to recreate the situation for the SIB, it took me twice as long to do everything I had done in the airplane. I was trying to do it in the proper sequence and time frame, but I thought I was going *too fast*, and it really took *twice as long!* I remember watching the entire ejection sequence, and marveled that it was so slow. One thing that surprised me was that the SIB determined that I had actually been at 500 feet AGL when I pulled the handles. The "apparent" motion at 500 feet and 140 knots was close to what I'd been used to at 1000 feet and 250 to 300 knots. Fortunately, I'd had enough time to get ready to punch out, but how many "no ejection attempted" mishaps are because the guys thought they had more time? The bottom line is *2000 feet AGL controlled.* There is NO good excuse for waiting.

Well, that's all I have. I don't mind telling the story, and maybe the guys I've shared it with have thought about emergencies and ejection a little bit more. Maybe you will, too.



TAC CREW CHIEF SAFETY AWARD

Airman First Class Dwayne E. Alexander has demonstrated his safety awareness and attention to detail on numerous occasions while performing end-of-runway (EOR) inspections. On one occasion, an F-4 arrived in EOR with an over-serviced left main gear strut. A1C Alexander's outstanding technical knowledge and alertness prevented a probable gear malfunction and possible damage to the aircraft.

On two different occasions, A1C Alexander spotted aircraft with incorrect pin configurations. On one, he noticed an F-16 taxiing into EOR with the downlock and safety pin storage door open. His discovery of that situation prevented foreign object damage and dropped object incidents. On another day, an F-16 arrived in EOR with the left main landing gear pin still installed. His thorough inspection techniques prevented a non-effective sortie and numerous manhours that would have been lost as a result of an inflight emergency.

A final incident occurred when A1C Alexander noticed that five access panels on the left forward side of an F-16 were hotter than those surrounding them. He conferred with the aircrew and recommended an immediate engine shutdown. After troubleshooting, it was determined that an environmental control system peri-seal was leaking hot air in excess of 380 degrees Fahrenheit. If the condition had gone undetected , avionics and environmental control system failure could have resulted as well as burn-through of numerous wire bundles in the vicinity of the hot air leak.

A1C Alexander's outstanding achievements and contributions to TAC flight safety have earned him the TAC Crew Chief Safety Award.

A1C Dwayne E. Alexander
31 AGS, 31 TFW
Homestead AFB, FL

TAC FLYING SAFETY AWARD OF THE QUARTER

Staff Sergeant Samuel G. Rende
56 TTW
MacDill AFB, FL

Staff Sergeant Samuel G. Rende, Combat Flight Safety NCO, 56th Tactical Training Wing, MacDill AFB, Florida, has demonstrated sustained superior performance in the field of flight safety. His dedication, job knowledge and insight have made significant, lasting contributions to the 56 TTW's safe mission accomplishment, contributing to an "Outstanding – Best Seen to Date" rating received in the unit's TAC Unit Effectiveness Inspection.

SSgt Rende worked effectively with all base-level organizations to promote safety awareness. His attendance at maintenance cross-tell meetings and FOD meetings as well as daily interface with Quality Assurance have enhanced information flow. His development of an F-16 safety briefing given to all new maintenance personnel provided an introduction to the wing's combat flight safety program, F-16 system safety, and local safety record. These efforts have also fostered an aggressive safety awards program for recognition of unit personnel.

SSgt Rende's management of the Bird Aircraft Strike Hazard (BASH) Program and the creation of a unique tracking map that graphically portrayed problem areas resulted in USAF recognition of the program as superior. His close association with local airports, federal agencies, and the USAF BASH team also ensured that base officials were aware of the latest bird hazard reduction technology.

By monitoring unit mishap investigations and inspections, SSgt Rende ensured that all reports were completed and forwarded to appropriate agencies with exceptional timeliness. An aggressive program for tracking follow-up actions, local inflight emergencies and reportable mishaps helped identify and correct wing problem areas. This data was incorporated into a comprehensive quarterly trend analysis which was distributed to F-16 units throughout the command.

SSgt Rende's innovative ideas and ceaseless efforts have made valuable contributions to F-16 mishap prevention and earned for him the TAC Flight Safety Award of the Quarter.

Assumptions can kill you!

Several years ago, some folks in the Navy learned a valuable lesson that came at a deadly, tragic price. A trainer model of the A-4 jet crashed after the pilot was forced to eject from it. The front seat ejection seat worked as advertised. Upon arrival at the wreckage scene, the rear seat, which had been unoccupied, was found with the exhaust portion of the seat rocket burned. They *assumed* that the rocket was expended and took it back to the base to use as a training aid for both aircrew and maintenance personnel.

The saying "familiarity breeds contempt" holds true far too often and, after a while, they started using the rocket as an ashtray. Finally, when one of the people stubbed out a cigarette butt on the "ashtray," it exploded, killing two men and injuring two others.

We'd like to think that none of us would be stupid enough to do such a thing, but if we're honest with ourselves, we know better. Are you making any *assumptions* in or around your daily work environment that could sneak up and bite you? If you are, take care of the problem now.

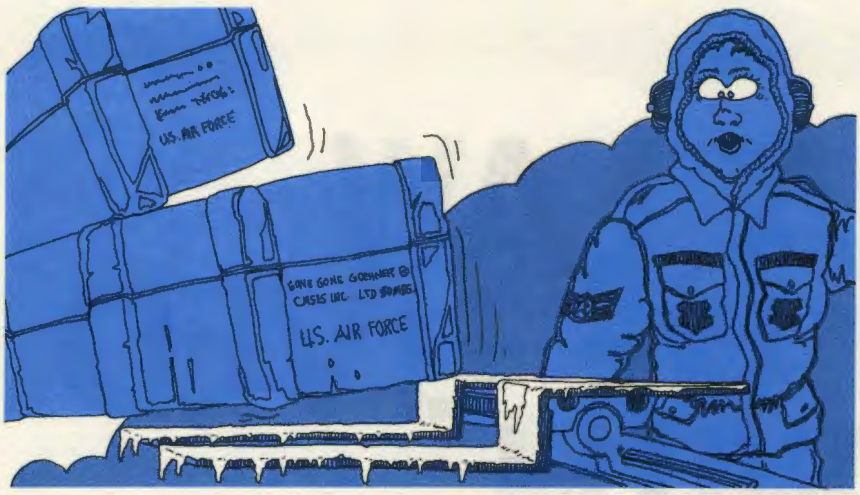
Handle with care

A TGM-65 Maverick missile was inspected in its all-up-round (AUR) container late Friday afternoon and loaded on a trailer in preparation for an ICT the following Monday. The crew that performed the inspection, opened the container lid, noting no defects on the missile.

When the missile was delivered to the flight line on Monday morning, the AUR container was removed from the munitions trailer where it had been stored over the weekend. When the load crew removed the container lid, they found the radome on the guidance section broken and the missile unusable.

The missile had been properly treated during inspection and transport. All of the containers used for the ICT had been properly secured on the trailer with tie-down straps for movement to the ICT site. However, despite several warnings and cautions in the tech data, the inspection crew had caused the resulting damage to the radome when the container lid was reinstalled.

The AUR container was designed and built to make movement of munitions easier and to lessen the chance of damage during handling and transportation. Unfortunately, the protective containers don't do much good if their improper use results in damage to the munition inside.



Did you see that?

A missile crew was tasked to move two stacked containerized missiles from outside the missile shop to the storage bay, using an MHU-83 bomb lift to do the job. The crew chief prepared the lift for use but didn't notice that the forks were iced over. With two crew members acting as spotters, the lift driver positioned the forks under the missile on top of the stack and lifted it. While the spotters moved to secure the missile with a tie-down strap, the missile slid off the forks and fell to the ground.

The crew should have fastened the missile container down securely before ever lifting it. But even more important during these winter months, keep your eyes open for slippery conditions on both your equipment and the area where you are planning to transport munitions.

TAC GROUND SAFETY AWARD OF THE QUARTER

Technical Sergeant James M. Creson's efforts as unit safety NCO for the 405th Equipment Maintenance Squadron have resulted in one of the best unit safety programs at Luke Air Force Base. For example, he devised a checklist to provide rapid assessment of safety hazards which has been adopted by the air division safety office and all base unit safety NCOs. To heighten awareness of the need for safety practices in the workplace, he has contributed numerous safety posters and articles for local use as well as a *TAC Attack* article entitled "Think." He has also worked in association with Mothers Against Drunk Drivers to facilitate the distribution of information throughout high schools in the local area.

TSgt Creson's knowledge of industrial safety has been acquired through research, training and practical experience. He has spent numerous hours establishing a unit safety library. His program of education and safety awareness also includes briefings at commander's calls, work center seminars and spot seat belt inspections. His technical ability, enthusiasm and insight have earned TSgt Creson the TAC Ground Safety Award of the Quarter.

TSgt James M. Creson
405 EMS, 405 TTW
Luke AFB, AZ

TAC Ground Safety Award of the Quarter

A LAW WE LIVED WITH

MSgt Gerald Kester
2036th Communications Sq
Mountain Home AFB, ID

"Oh my God, Gary!"

Those are the words my wife shouted that brought me out of my half-sleep in time to see a truck fill the windshield of our car. The almost immediate impact was devastating. It placed, from what I am told, a force of almost ten times my own weight against my seatbelt and shoulder restraint.

The pain was not instantaneous as adrenalin had shot through my veins, but came slowly some time after the crash.

As I sat in the crumpled remains of our new car, I realized I must have blacked out, if only for a few moments and, as I slowly regained my senses, I knew I had survived.

A thick smoke filled the car and made it difficult to see and even more difficult to breathe. I attempted to open the passenger-side door to escape, only to find it impossible. I later learned that the camper from the truck that had hit us was wedged between the door and the guardrail. The dashboard of the car had collapsed around my legs and the steering column was now in the center of the car, lying on the floor further blocking my way.

It took a great deal of effort and strength I didn't know I had to free myself and drag my body to the driver's side of the car and then out the door to safety. As I unbuckled my seatbelt and dragged myself from the wreckage, a strange thought crossed my mind. The last words my supervisor had spoken to me as I left for my vacation were, "Wear your seatbelts."

My wife, who had been driving, was standing in the road yelling that her leg was broken. As it turned out, both of her arms and her right leg were broken by the force of the impact. I sustained broken ribs, a bruised spleen and

damaged both kneecaps.

Although our injuries were serious (my wife now has a 75 percent loss of the use of her right hand), they are far less than they could have been had we been ejected through the car windshield.

Neither of the two men in the other vehicle was wearing a seatbelt and, as a result, both were thrown from the vehicle. You can imagine the results.

Like most people, I never believed this would happen to me. I'm a good driver. My wife is a good driver. I never realized that the careless act of another could put us in a life-threatening situation that we had absolutely no control over. I also never realized the force of the impact that results when a car traveling at 50 mph is struck head-on by a truck moving 70 mph. That is, until I lived through it.

After nearly 20 years in the Air Force and countless numbers of safety briefings, the use of a seatbelt has become second nature to me. This was not true of my wife. It seemed like it was a constant battle to make her wear her seatbelt. She had all the usual excuses: "It's uncomfortable," or "It wrinkles my dress," or my personal favorite, "I'm only going to the store."

I don't know what made my wife wear her seatbelt that day. Maybe it was my constant nagging. Whatever it was, I am grateful that we were both securely belted in where there was a chance for survival.

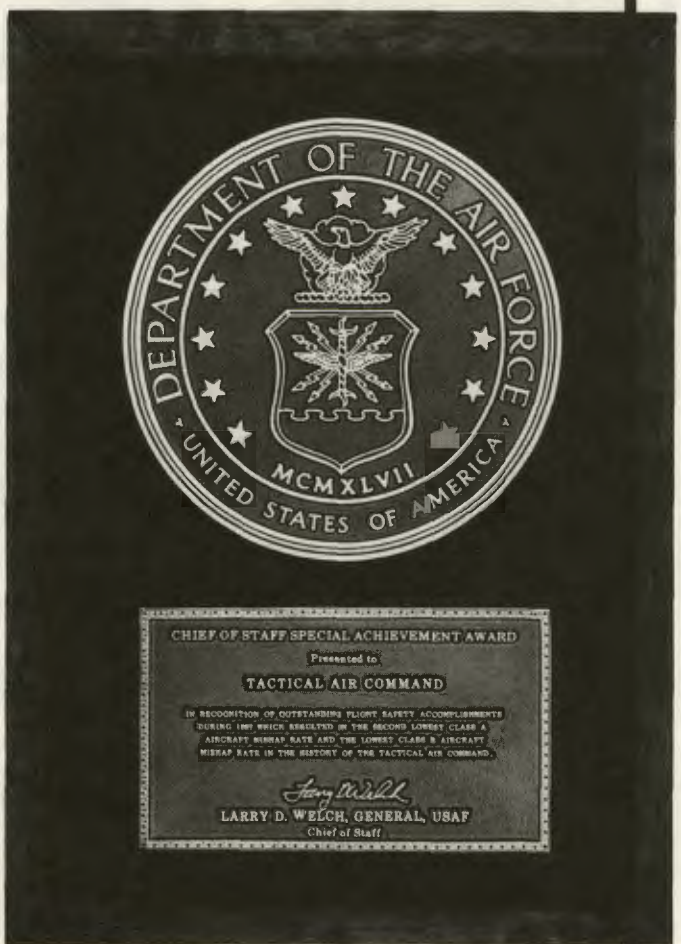
You may think it trivial to pass a law making it mandatory to wear seatbelts in vehicles, but take it from someone who knows – it is definitely A LAW WE LIVED WITH.

THE CHIEF OF STAFF SPECIAL ACHIEVEMENT AWARD

The Chief of Staff Special Achievement Award is presented to the Tactical Air Command for outstanding flight safety accomplishment during 1987.

The Tactical Air Command achieved a Class A mishap rate of 2.2 mishaps per 100,000 flying hours, nearly equaling the record-low 2.1 rate of 1985, but the Class B aircraft mishap rate of 0.4 was more than 60 percent lower than the Class B rate of 1985. The Command flew more than 562,000 hours and 365,000 sorties in 18 different types of aircraft. More than 80 percent of the hours flown were in fighter/attack aircraft performing a demanding combat training mission. These accomplishments attest to the professionalism and total commitment to safety of the men and women of the Command.

The achievements of the Tactical Air Command exhibit high standards of safety and mission accomplishment and reflect great credit upon the Command and the United States Air Force.



TAC Weapons Safety Award of the Quarter

TSgt Kenneth W. Shifflett has made many outstanding contributions to the 1st Tactical Fighter Wing's weapons safety program. As NCOIC of the egress shop, he has worked closely with both the wing weapons safety officer (WSO) and the unit commander to keep them apprised of explosives-related mishaps and any hazardous operations within the shop. He assists the WSO in constructing specialized functional area checklists and coordinating spot inspections monthly. He also reviews all lesson plans, operating instructions and required explosive facility licenses as well as insuring their currency prior to submitting them for approval.

TSgt Shifflett has consistently demonstrated the highest standards of safety. Since becoming the egress shop NCOIC in May 1986, quality assurance reports have never dropped below a 100 percent pass rate on task evaluations. He took the initiative and personally reviewed all Planning and Inspection Requirements on egress time change items. Finding several discrepancies, he quickly brought the problem to the attention of the aircraft maintenance units' Plans and Scheduling sections. Had these discrepancies gone undetected, the possibility of seat failure during ejection could have occurred.

Another of his innovative ideas was to order egress time change items on one Munitions Authorization Record (AF Form 68). This idea saved time and insured time change items were issued and returned in a more efficient manner. Previously each AMU that ordered egress time change items maintained their own AF Forms 68 which created unnecessary problems in accomplishing egress time changes. He also initiated an egress augmentee program since the egress shop was manned at only 50 percent due to temporary duty at other locations. By qualifying additional personnel through the augmentee program, he ensured that the mission would not suffer at home or during TDYs.

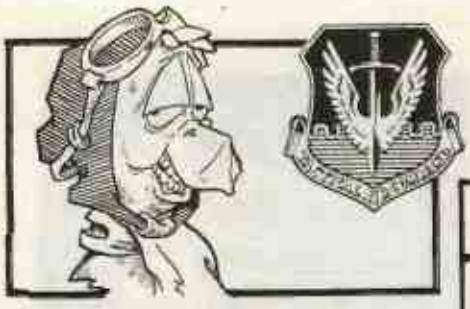
TSgt Kenneth W. Shifflett
1 CRS, 1 TFW
Langley AFB, VA

TSgt Shifflett ensured the integrity of the aircraft egress system was never overlooked. On one occasion, he detected discrepancies in the recorded dates of manufacture (DOM) for shielded mild detonation cord (SMDC). He verified this problem by checking the three SMDC lines in question. His assumptions were correct and the items were updated accordingly, ensuring that the items would be changed at the correct time two years earlier than previously scheduled.

TSgt Shifflett's shop is highly visible in the wing's Foreign Object Damage (FOD) Program. He emphasizes to his folks the importance of maintaining ejection seats and aircraft in top condition at all times. His egress shop personnel responded and won four out of the last five FOD Fighter of the Quarter awards.

TSgt Shifflett's shop is responsible for teaching egress initial familiarization classes to over 800 personnel a year. He ensures that wing personnel get the best egress training available. During the most recent unit effectiveness inspection (UEI), the egress shop received an excellent rating.

TSgt Shifflett is a critical member of the 1 TFW team. His dedication, integrity, managerial abilities and outstanding contributions to the weapons safety program have paid great dividends and earned him the TAC Weapons Safety Award.



TAC TALLY

	Total			TAC			ANG			AFR		
	FEB	THRU FEB		FEB	THRU FEB		FEB	THRU FEB		FEB	THRU FEB	
		FY 88	FY 87		FY 88	FY 87		FY 88	FY 87		FY 88	FY 87
CLASS A MISHAPS	3	9	17	1	7	12	1	1	3	1	1	2
AIRCREW FATALITIES	1	5	10	0	4	9	0	0	0	1	1	1
• IN THE ENVELOPE EJECTIONS	1/0	6/0	16/1	1/0	5/0	10/1	0/0	1/0	5/0	0/0	0/0	1/0
• OUT OF ENVELOPE EJECTIONS	0/0	0/1	0/1	0/0	0/1	0/0	0/0	0/0	0/0	0/0	0/0	0/1

• (SUCCESSFUL/UNSUCCESSFUL)

TAC'S TOP 5 thru FEB 1988

1st AF	
CLASS A MISHAP-FREE MONTHS	
90	318 FIS
37	325 TTW
25	57 FIS
4	48 FIS

9th AF	
CLASS A MISHAP-FREE MONTHS	
60	33 TFW
33	507 TAIRCW
24	31 TFW
19	354 TFW
13	23 TFW

12th AF	
CLASS A MISHAP-FREE MONTHS	
36	58 TTW
29	35 TTW
23	474 TFW
21	388 TFW
19	602 TAIRCW

ANG	
CLASS A MISHAP-FREE MONTHS	
223	182 TASG
207	110 TASG
182	138 TFG
164	177 FIG
159	114 TFG

AFR	
CLASS A MISHAP-FREE MONTHS	
90	482 TFW
80	924 TFG
68	906 TFG
42	507 TFG
29	917 TFW

DRUs	
CLASS A MISHAP-FREE MONTHS	
137	28 AD
7	USAFTAWC
4	USAFTFWC

CLASS A MISHAP COMPARISON RATE

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

		OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
TAC	FY 88	6.4	3.4	3.0	2.7	2.5							
	FY 87	7.5	5.8	5.1	4.7	4.2	3.7	3.3	2.9	2.9	3.1	2.8	2.9
ANG	FY 88	0.0	0.0	0.0	0.0	0.9							
	FY 87	4.0	6.6	4.7	3.5	2.8	4.5	3.8	3.3	3.4	3.0	2.7	2.5
AFR	FY 88	0.0	0.0	0.0	0.0	4.7							
	FY 87	21.8	11.7	8.5	12.6	10.2	8.3	7.0	12.2	10.8	9.6	8.5	7.8
Total	FY 88	4.3	2.9	2.3	1.8	2.2							
	FY 87	7.3	6.3	5.2	4.8	4.1	4.1	3.6	3.4	3.4	3.4	3.1	3.0

UNITED STATES PRINTING OFFICE: 1987 - 1988 625-031/4


Fleagle
BUZZZZ
ZZZzz
?
POW
BANG!
WHAP!
SMASH!
HIT!
HIT!
BEAT!
BEAT!
WHAP!
WHAP!
IT WUZ BOUND TO HAPPEN. WHEN YOU LIVE A HONEY SWEET LIFE, AN' DO NOTHING BUT TAKE AN' NEVER GIVE, YA' GOTTA XSPECT TH' GIVER TO GET A LITTLE FED UP AN' STRIKE BACK.
HARDISON