TAC ATTACK

tac attack

JUNE 1980

JUN

READINESS IS OUR PROFESSION

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VOLUME 20 NUMBER 6

Angle of Attack

safety overkill

What's your approach to safety? Are you one of those people who could be accused of using the word "safety" in every other sentence. If you are, you're not alone since we all could be accused of that at some time. But, we all should be careful so we don't try to oversell safety for "safety's" sake.

Safety isn't a neatly packaged product like soap, breakfast cereal, or the newest automobile. If it was, we could identify the best way to market the product. But, safety isn't a tangible product you can hold in your hand. It's an elusive goal that tempts us to use a "shotgun" approach in trying to reach it instead of identifying the real problems and attacking them directly.

From every imaginable source we are urged to "fly safe," "drive safely," "think safety," and do everything else--safely. No one will question the value of a safe approach to our duties; but what is a safe approach? It is not the most cautious, nor is it the slowest. It is not just safety for safety's sake. It is the use of tech data, checklists, self-discipline, common sense--it is professionalism.

We must remember safety is not the final objective. It is a by-product of doing the job correctly. It's the bonus resulting from the proper execution of procedures and a knowledgeable approach to operations.

The next time instead of saying, "We have to be safer," you should say, "We have to do the job right." The emphasis will then be where it always should be--on effective mission accomplish ment.

Richard K. Ely

RICHARD K. ELY, Colonel, USAF
Chief of Safety

200 & ½ MI

By Major Pete Abler
Editor

While you're reading thjs article, stop for a moment and take a look out the window. How's the weather? Pretty nice, isn't it? Probably just a few cumulous clouds floating around providing a bit of shade from the summer sun. Even the weather fronts moving across the country provide only transitory thunderstorms and other severe weather which seems to go as quickly as it comes. The need for really sharp instrument flying may be gone for the next four months or more. Maybe the need driven by poor weather is missing, but the overall need to keep your personal flying skills at a high level is still there.

During the past years, TAC and other USAF commands have lost a number of aircrews and aircraft in mishaps where instrument flying deficiencies were known, or were strongly suspected to be, leading causes. Instrument flying proficiency is a result of several things: training, experience, and practice. Training provides the basics for instrument flying and as you progress through your career, you learn many more "tricks-of-the-trade" which can be a real help in flying a particular aircraft or type of aircraft. Once you are really proficient in instrument flying and can handle your aircraft pretty well, only practice can keep you proficient—lots of practice. The practice you get this summer could very well determine how well you handle your first crack at 200' & ½ mile this fall. Let's talk about it a bit.

TRAINING

Back to the old days in ATC—bad news huh? No one likes to remember that wonderful canvas visor you used for instrument flying in the *Tweet*. Seems like all it gave you was a stiff neck and a case of vertigo from having to hold your head down. The T-38 was better, but you still had to sit in the back seat under the hood for most of the mission. But what did you learn

back then, do you remember?

You probably were introduced to the concepts of "attitude instrument flying" and "control and performance" instruments. You probably still use many of the procedures and techniques you learned from day one, although you don't think about them any longer. Believe me, they haven't gone away. Just a few days ago, I was flying along and decided to really utilize those AFM 51-37 procedures and techniques for awhile. I was amazed at how I had been using a rather sketchy crosscheck, using the attitude indicator only occasionally for reference and usually just making pitch or power changes by feel. Corrections to altitude and airspeed came pretty close, but that feeling of being "right on" just wasn't there.

So, I began to make precise, controlled pitch and power changes. It took a little more concentration to force myself to make precise, measured changes, but it sure worked. Altitude and airspeed control rapidly improved and that feeling of being "right on" returned. Over the years I had apparently forgotten precise habits yield precise results. When I went through pilot training, my instructors had spent a great deal of time and effort teaching me how to do it right, but through the years I had slacked off.

Think back to your own training. Are you doing things differently now? More importantly are the procedures and techniques you use now working better or are they just habits you developed over the years—habits which are usually shortcuts and don't yield the same precision you're used to, or capable of.

EXPERIENCE

Speaking of experience and the habits which you've developed over the years, it could very well be that your habits and the "tricks" you've learned through the years allow you to be just as precise as you've always been. That's great. I've flown with a number of senior officers who just came back to flying duty after extended staff tours and was amazed at how easily these "old heads" took to the cockpit and flew superior instruments. It became obvious that a "sixth

sense" and many years of flying in Europe, the northern U.S., and other garden spots of the world were integral parts of their on-board computers.

You may have a lot of the same type of information stored in your "old head." Have you ever tried to extract it and pass it on to someone else? I hope so. The younger guys in the flying squadrons just don't have an extensive amount of experience to draw upon. Instrument training in UPT is considerably less than what it was 10 years ago. Even operational units are flying less hours. The younger fliers simply are not as experienced as you were at their age. Help'em out.

Fighter pilots, or any kind of pilots, are notorious for gathering at the local watering hole, parties, or wherever and swapping war stories, usually deftly maneuvering their hands to emphasize the heat of the battle. As much as this was accomplished in a spirit of comradeship, it was also one of the best "classrooms" we had. I learned more tricks and secrets from these sessions than I ever got from the books and my instructors. Younger pilots need to have this other kind of instruction and not just in ACM or

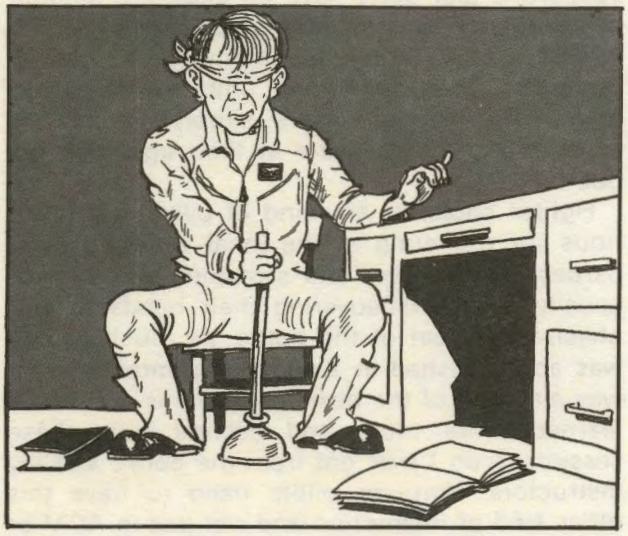
200 & ½ MI

air-to-mud. Take a few minutes to talk to the wingmen about some personal techniques for flying a good GCA, ILS, TACAN, or circling approach. You could be doing them a real favor and also save them busting minimums—and their fannies.

PRACTICE

Practice is really the key to the whole problem. All the theories, tricks, and procedures aren't worth a hoot if a person doesn't practice a task, maneuver, or instrument approach enough to become proficient. This is sometimes the hardest to accomplish—especially during the summer months. It's awfully hard to simulate a 200-foot ceiling when it's "clear and a million" and you have to clear for other aircraft 'cause its VMC. I didn't say it would be easy fellas.

How many really honest PARs will you fly this summer? Probably not too many. When was the last time you had to switch from GCA to TACAN cause the radar went down? A year ago? How did it work out? If you had all the switches set up it was probably pretty easy. If the approach plate was still in the pubs holder, things were perhaps a bit sporty. If you're tempted to slack off on your procedures 'cause you can see the field from 20 miles away, you might forget to have your backup approach set this winter—which isn't the time to be caught short.



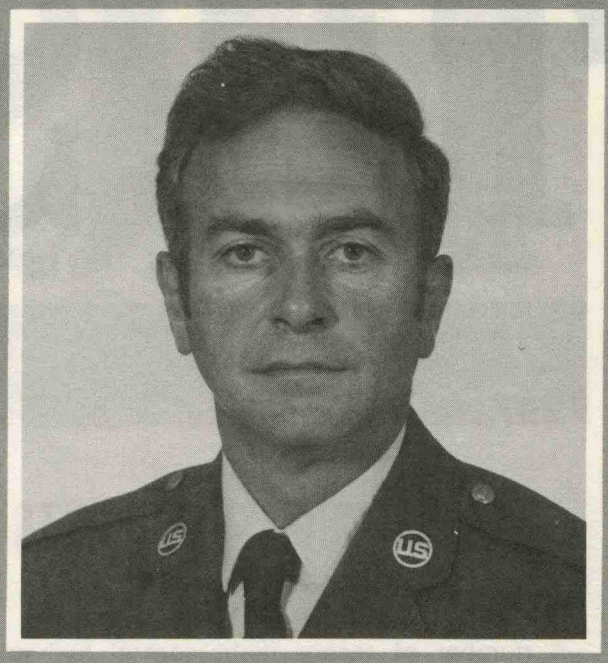
How about the simulator? I know I just said a nasty word. It doesn't fly like the airplane and everyone considers it an instrument of torture—or close to it. But, you can still practice many things in the simulator, unusual attitudes, different type approaches, to name a few. You can also practice these without fear of running into another aircraft or smashing into the turf. If you goof, the penalty's pretty light.

What about instrument checks this summer? Are they pretty much of a "square filler" or do you really get a chance to fly precise instruments, including good honest steep turns and unusual attitudes? Even though the old instrument hood was another instrument of torture, it was also a lot harder to cheat and you were forced to fly nothing but instruments. One peek sure is worth a thousand crosschecks, but that doesn't help your proficiency much. Just a few more words and I'll end this thing up. The more precise you are at flying instruments, the greater will be your confidence level in the aircraft and yourself. One of the worst things to encounter in the weather is a severe case of vertigo. I can almost predict when I'm going to get vertigo and what it will feel like. You may be able to do that too. It's the times you get disoriented without warning that are dangerous.

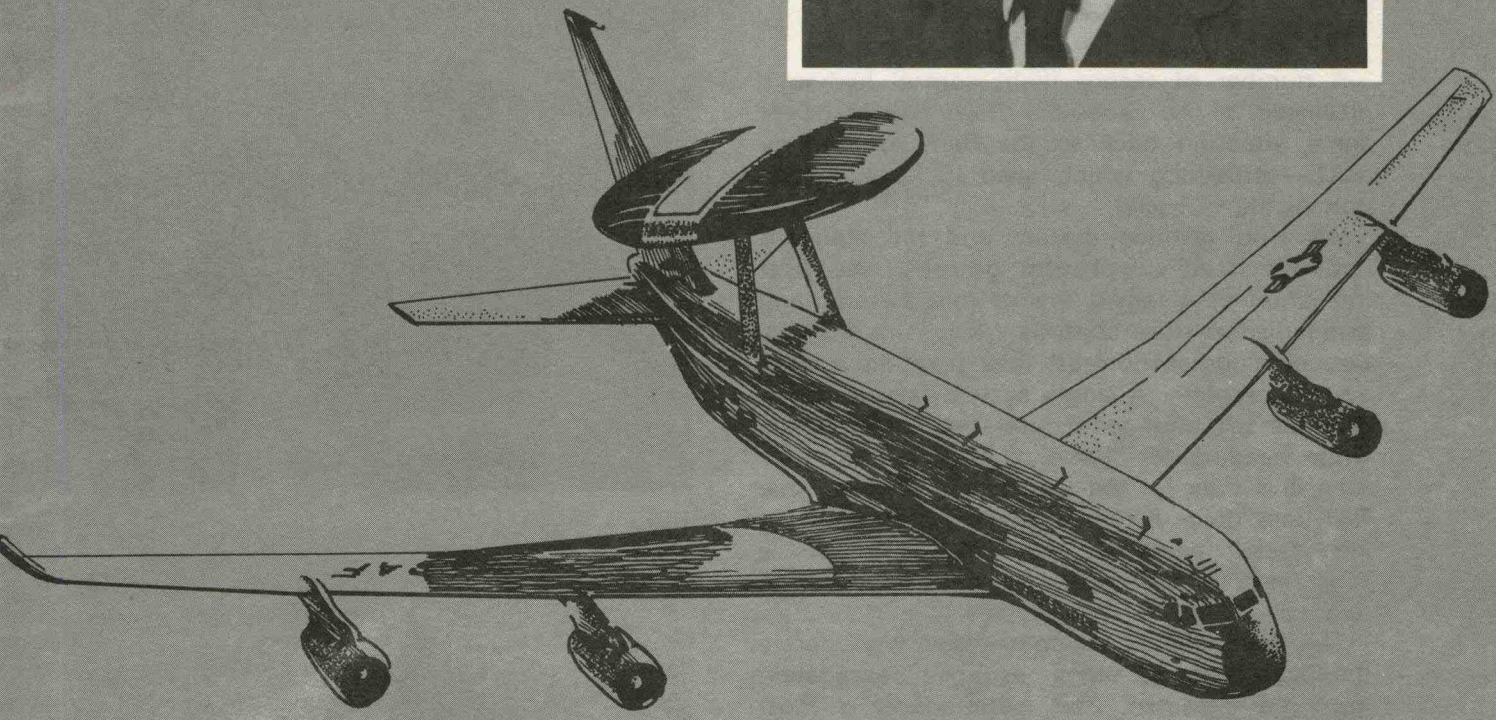
In 1971, I was coming back to my home station after picking up an airplane at the factory. It was a bright summer day when I took off from Little Rock AFB on my last leg home. There were a lot of cumulous clouds around and on my climb out, I was flying half instruments, half outside in a climbing turn when I dropped my checklist. I made the mistake of bending over to find it. The world went wild. I couldn't focus on anything. The best I could do was concentrate on the attitude indicator and try to keep the wings level and climb. I couldn't even tell approach control what was wrong. I came out of it in 30-45 seconds, but it seemed like forever. If I hadn't forced myself to concentrate on the attitude indicator, I might not have recovered the aircraft at all. We've had several recent cases of aircraft in formation, at night, in some clouds where the wingman fell off the wing and never recovered. We'll never know the truth, but severe vertigo may have been the cause.

Instrument proficiency is something you can't get from a book. You won't get it overnight. If you don't work at it this summer, you certainly won't have it this fall and winter when you need it!

AIRCREW of DISTINCTION



TSgt Lew A. Rice
966 AWACTS/552 AWACW
Tinker AFB OK



On 28 February 1980, Technical Sergeant Lew A. Rice was performing flight engineer duties on board an E-3A when his actions averted a midair collision.

The aircraft was flying transition training in the Tinker Air Force Base pattern and was on an IFR clearance. The incident occurred while on downwind at an assigned altitude of 3,000 feet on vector heading 350 degrees. The instructor pilot was flying the aircraft from the left seat, and the copilot and an additional pilot were in the process of exchanging seat positions. Sergeant Rice was seated at the engineer's panel. While the additional pilot was getting himself situated in the copilot's seat, Sergeant Rice saw an orange and white Cessna 172 aircraft at the one o'clock position at the same altitude a short distance away and converging at approximately 320 degrees magnetic.

Sergeant Rice's quick, decisive actions in alerting the instructor pilot in time to take evasive action averted a midair collision and prevented possible loss of life and both aircraft. His actions qualify him for the Tactical Air Command Aircrew of Distinction award.

TIPS

Tac tips

...interest items, mishaps with morals, for the TAC aircrewman

Those who occupy their minds too much with small matters generally become incapable of great.
La Rochefoucauld

THUNDERCHIEFS AND RATS

By Capt Terry Paasch
508 TFG (AFRES)

A number of recent flight control hydraulic problems in the venerable *Thud* have brought some attention back to the Ram Air Turbine (RAT)—something which used to be exercised only by the FCF pilot.

With no warning system and the standard "peanut-sized" hydraulic gauges, the first indication of a failing system may be stab-aug problems/sensitive controls if P_1 is on the way out, or sluggish controls may point to a P_2 system problem. A single system failure simply requires the pilot to monitor the other system while heading for home. If both systems fail, then it is time for the RAT. In the B-model, the RAT uses utility hydraulic fluid to pressurize the P_1 system while the other models pressurize P_2 from a separate emergency hydraulic reservoir.

The book tells us a single system will operate the flight controls but a response degradation must be expected. This degradation is most noticeable in the D/F and G models because of the restricted system. Another important point to remember is the emergency fluid supply may be pumped overboard if there is a leak in the part of the normal system being supplied by the emergency system. If this happens inflight, ejection will become the only course of action.

A considerable amount of "need-to-know" information is tucked away in the dash one on the RAT and emergency hydraulic system. Knowing the workings of the system, and how and when to use it may be the difference between a normal landing and jettisoning the ole *Thud!*

TO LEARN OR TO BURN

These flight jackets were worn by the aircrew involved in a recent aircraft fire. They were

exposed to approximately equal intensity of flames. The jacket with the burned left arm is an L-2B summer weight nylon. The undamaged jacket is a summer weight CWU-36P Nomex type. Which one would you want to be wearing?

Both pilots were wearing Nomex flight suits and gloves, and they kept their helmets and masks on minimizing burns and fire inhalation injuries. Neither pilot thought he would ever find himself in an aircraft fire—but it happened anyway. The time from initial explosion of the cockpit area being surrounded by flames was literally seconds.

This crew was prepared. Maybe you ought to review your own procedures to see how well-prepared you are.

IT'S TOO LATE

A recent F-106 incident resulted in a tail-pipe-first landing. The pilot was flying a precision approach and at decision height he was slightly high on glidepath and left of the runway. During the ensuing correction, airspeed bled off but altitude remained unchanged.

Anticipating an excessively long touchdown, the pilot began a go around, first in mil power, then in afterburner—too late. The maneuvering had bled off too much airspeed and the high sink rate plus too much aft stick resulted in the crumpled *Dart* tail feathers.

On final approach, once you've slowed to approach airspeed, there's very little "extra" energy available for maneuvering—especially if you really need to move the aircraft around some. The pilot made the right decision in this case. Unfortunately, it was a bit too late.

WRITE IT UP !

By Capt Larry Black
HQ TAC/DOV

Have you ever been guilty of not writing up an airplane which had a problem of one type or another? The results of that neglect may have been totally insignificant, or could have contributed to a disaster. A recent mishap illustrates the point clearly.

After takeoff, the pilot noticed some minor uncommanded flight control inputs. He debated about aborting the mission, but the uncommanded inputs stopped, and he elected to

continue the mission. After landing, he decided not to write up the airplane.

On the aircraft's second mission of the day, another aircrew took off on a transition mission to fly some acro, stalls, and high energy maneuvering. During an approach to an accelerated stall, the aircraft abruptly departed controlled flight without any warning to the crew, then entered a flat spin, and the crew ejected.

During the mishap investigation, the board discovered the airplane had a recent history of flight control problems. Although the wreckage did not produce conclusive evidence of a flight control problem, the board concluded the mishap *could* have been caused by an uncommanded flight control input.

The lesson from this mishap is clear. If an airplane system is not working properly—*write it up*. Be thorough, and give maintenance all the details you can. Another point is important. Even if you only *think* there's a problem with the airplane, but can't pinpoint anything specific, write it up anyway. Call it your gut-level feeling, professional opinion, or whatever, but write it up and let maintenance troubleshoot the symptoms. Your inputs may be the missing link maintenance needs to solve an otherwise elusive problem.

Your write-up may even prevent a major accident. Now wouldn't that be worth it?

TAC TIPS

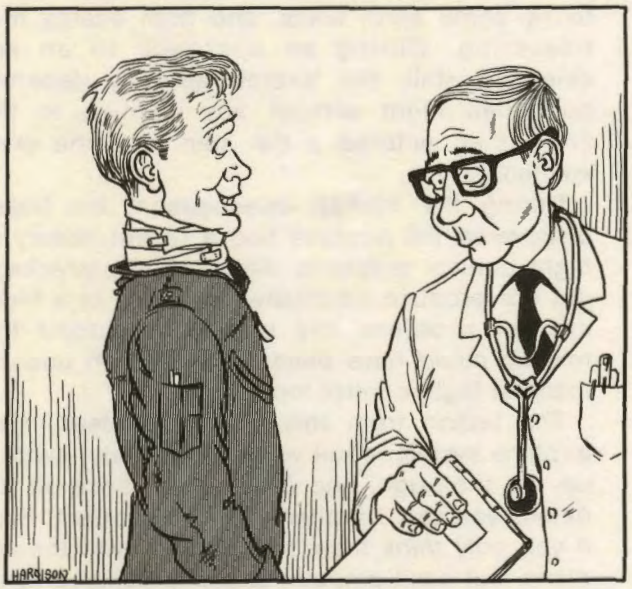
HI, STRETCH !

The high sustained G capabilities of some of our newer aircraft can sometimes cause a few problems...

A two-seat *Eagle* jet in another command was flying an aircraft handling demonstration following the DACT portion of the mission. At 10,000 feet, a 7G, 450-knot turn was entered with the backseat pilot flying the aircraft. After the initial portion of the turn, the IP in front leaned forward to check the G meter. The G loads forced his neck into his lap.

He was unable to raise his head or push forward on the stick. Because of the radio chatter and the M-1 maneuver being performed by the rear seat pilot, the IP was unable to communicate his trouble. The turn was sustained for approximately one minute, and then the crew returned to base.

The IP reported to the flight surgeon the next day, and it was discovered he had acutely



strained several muscles and ligaments in his neck. Fortunately, he didn't sustain any permanent injuries.

When you're out there "yankin' and bankin'," watch out for your bod. Even some of our older aircraft can sustain G loads capable of bending your neck when you're not in the proper position.

LOCK THOSE RAMPS

By Capt Gary Porter
HQ TAC/SEF

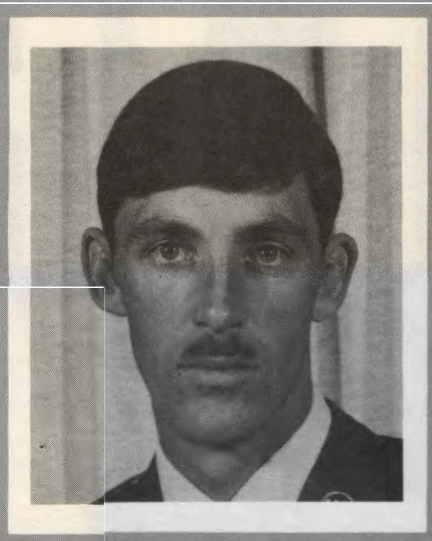
You're starting your trusty Eagle jet for a DACT mission. You're really gonna have those F-5s for lunch, right? Right engine starts OK; left OK; emergency generator check OK; and ramps Auto. But wait! The left ramp stayed up. So you tell the crew chief you're gonna shut down the left engine so he can check out the circuit breakers in door 10L. After the engine winds down, the crew chief discovers the left AIC circuit breaker popped. He pushes it in and the left ramp promptly comes down, dings the open door and whacks him on the head (if he's taller

than the average bear). What happened? You didn't put the left ramp switch back to emergency. Shutting down the engine did not remove any electrical power on that side since the other generator or emergency generator (depending on model) picked up the load. So when the circuit breaker was pushed in, the ramp tried to go where you told it to go before--down (Auto). TO 1F-15A-2-2-1, para 2-127 warns the maintenance man to insure the ramp is up and locked prior to performing maintenance on the circuit breakers but doesn't specifically say to do this by having the ramp switch in emergency. Units should consider comments in their Local Operating Procedures (Chapter 8 to TACM 55-115). As a general rule, whenever an engine is shut down for any reason, the pilot should place the master switch off and ramp switch to emergency.

TAC SAFETY AWARDS

CREW CHIEF SAFETY AWARD

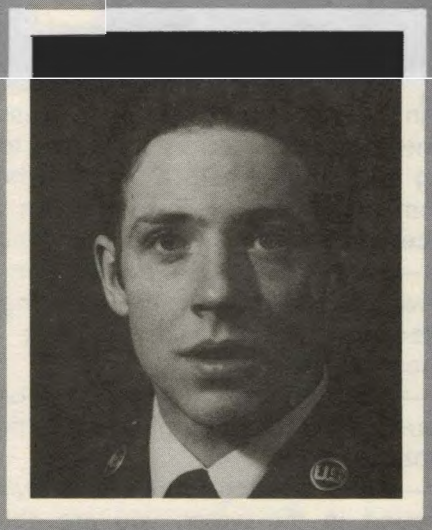
Senior Airman Darrell Moore, 49th Aircraft Generation Squadron, 49th Tactical Fighter Wing, Holloman Air Force Base, New Mexico, is the recipient of the Tactical Air Command Crew Chief Safety Award for June 1980. Airman Moore's outstanding performance of duties and self-discipline in adhering to rigid safety practices made his aircraft the "high flyers" of his squadron. In addition, his initiative in identifying and resolving potential problem areas in all aspects of his job has contributed to the effectiveness of the Mishap Prevention Program.



SrA Darrell Moore

INDIVIDUAL SAFETY AWARD

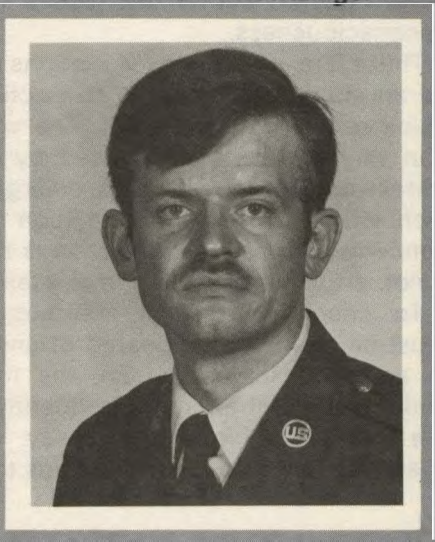
Senior Airman David P. Huntzinger, 35th Equipment Maintenance Squadron, 35th Tactical Fighter Wing, George Air Force Base, California, is the recipient of the Tactical Air Command Individual Safety Award for June 1980. Airman Huntzinger performed his duties as a member of the Fuel Systems Shop in a superb manner. His safety awareness and dedication were recently demonstrated when he detected an aircraft external power unit fire while making an F-4 functional pressurization check. His quick response to move the unit away from the aircraft and extinguish the fire prevented damage to the aircraft and possible injury to other personnel.



SrA David P. Huntzinger

GROUND SAFETY AWARD OF THE QUARTER

Staff Sergeant Rudolph Hofmann, USAF Clinic Howard, 24th Composite Wing, Howard Air Force Base, Panama, is the recipient of the Ground Safety Award for the first quarter of 1980. Sergeant Hofmann's safety awareness and conscientious performance of duties as Biomedical Equipment Repair Technician have enhanced the safety program of the 24th Composite Wing. In addition to identifying and correcting numerous safety deficiencies in medical equipment, he established an excellent preventive equipment survey program for the entire clinic, improving equipment reliability and effectiveness. His mishap prevention efforts reflect credit upon his unit, Tactical Air Command, and the United States Air Force.



SSgt Rudolph Hofmann

FIRST AID

In previous articles we discussed first aid emergency procedures to follow to stop bleeding and how to help a person who is suffering from broken bones. But what can you do when faced with the following hypothetical situations?

—When going by a parked car, you see the driver slumped over the steering wheel and discover the person is not asleep but unconscious.

—When checking to see if the baby is asleep, you find the child tangled under the covers and motionless.

—While boating, you see a swimmer flailing around in the water; you are able to get the person aboard but he/she lapses into a state of unconsciousness.

These are emergency situations which could be an immediate threat to the victim's life. Your quick response is essential. The victim's condition might have been caused by heart failure, shock, or drowning—which emergency medical technicians will diagnose upon arrival—your concern is to see if the person is breathing and if not, artificial resuscitation is vitally necessary.

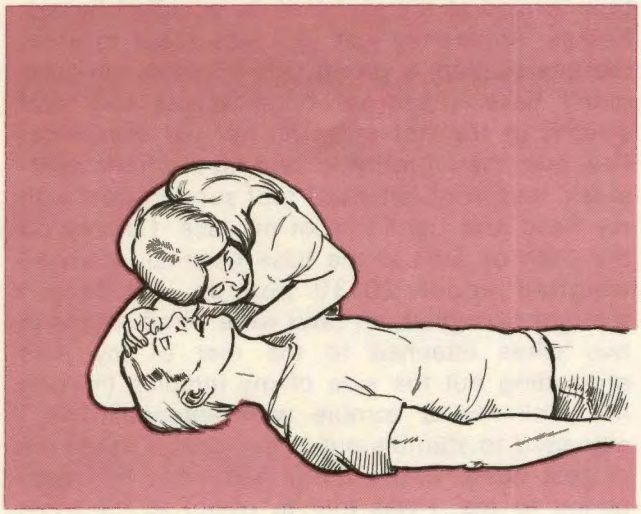
To check a person's breathing, the airway must be opened and cleared of any obstruction. In an unconscious person, the muscles relax; and therefore, the tongue frequently falls back in the throat and blocks the airway. The following is a concise rundown of the steps to follow:

1. IMMEDIATELY PLACE VICTIM ON BACK. Don't let their head strike the ground. Don't twist or bend neck. Don't waste time loosening clothing, draining water from lungs, or moving to a better place (unless threatened by other hazards—fire, explosion, drowning, etc).

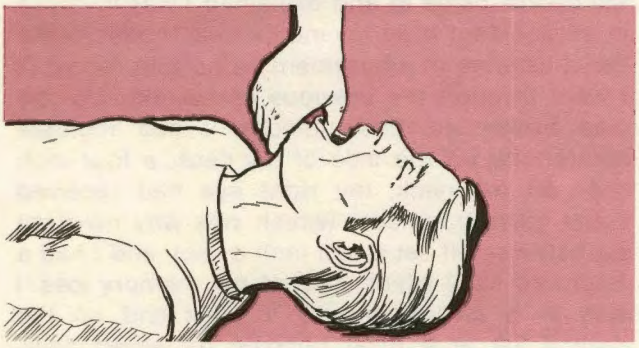
2. QUICKLY CLEAR MOUTH AND THROAT OF ANY OBSTRUCTION. Sweep deep in mouth with index finger in hooked position.

3. TILT HEAD BACK SO CHIN IS POINTING UPWARD. Do not bend neck if injury is suspected.

4. LOOK, LISTEN, AND FEEL FOR BREATH. Lean over victim's face. Look for chest to rise and fall. Listen for breathing. Feel for breathing on your cheek. *Do not shake victim.*



5. LIFT LOWER JAW FORWARD. Grasp jaw by placing thumb into corner of mouth.



6. PINCH NOSE SHUT (OR SEAL MOUTH) TO PREVENT AIR LEAKAGE.

7. GIVE 4 QUICK BREATHS. Take a deep breath, cover victim's mouth with yours and blow forcefully into mouth or nose four deep, quick breaths. (For infants, seal both mouth and nose with your mouth. Blow with small puffs of air from your cheeks.)

8. TAKE MOUTH AWAY AFTER EACH BREATH. Watch for chest to fall. Repeat every five seconds. Check the pulse from time to time. Continue until victim breathes on his or her own.

Mouth-to-mouth resuscitation is the most practical method for emergency ventilation of an individual of any age who has stopped breathing, in the absence of medical help and proper equipment, regardless of the cause of cessation of breathing. If the victim's heart has stopped beating, than Cardio-Pulmonary Resuscitation (CPR) is required. CPR cannot be learned from reading about it, and the potential for damage to a person is great if you are untrained. It is a skill learned through a course set up for this purpose. CPR courses are readily available through local hospitals, fire departments, YMCA's, and other institutions.

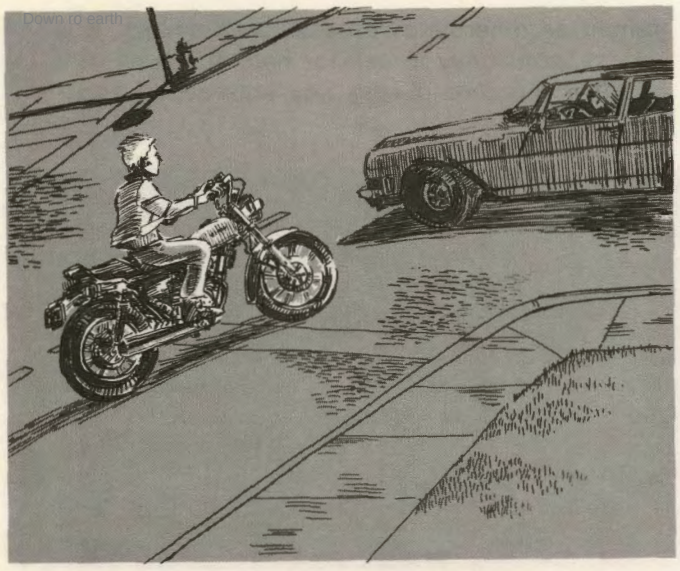
A big asset in our modern society is the high quality of medical care that is available even *before* the victim gets to the hospital by ambulance attendants and rescue personnel who are trained as emergency medical technicians. It is your responsibility to call for help at the earliest possible moment during any emergency situation.

In future issues we will continue to feature other first aid procedures which you should know. You can help yourself and be way ahead of us if you would look at your work area. Are there fluids like paint, oil, gas, hydraulic fluid, or fuel which might damage your skin or eyes? Do you know what to do if this happened. What about shock from electrical equipment? Or a deep cut from a packing knife? The list could go on. A few minutes anticipating what could go wrong and finding out what to do about it is all it takes.

DOWN TO EARTH

A CYCLIST'S WAR STORY

On 24 May 1979, I hopped on my 650C Yamaha Special motorcycle. (I didn't bother to put my helmet on as I was only going two miles for a little food.) After purchasing the food I needed, I was returning home through a school zone, buzzing along at the posted speed limit—35



MPH. I was traveling south and approached an intersection that had the east to west crossing posted with stop signs. I don't remember any of the following, but it was relayed to police when they arrived at the scene of my accident by witnesses. Apparently just as I was about to enter the intersection, a young lady 16 years old (who didn't have a license) burst across the road directly in front of me. I hit her car broadside, flew over the motorcycle, and hit the front windshield and front left hand roof support post with my head and right side of my face. I awoke on the 16th of June at the base hospital, noticed I weighed about 25-30 pounds less than I thought I weighed; my jaws were wired shut with two wires attached to the rear of my jaws protruding out the side of my temples (making me look like a zombie with antennas). As I managed to stumble out of my room, I asked the closest nurse where I was and what had happened to me. I was told to return to my room and my doctor would see me in a minute and explain what happened to me and where I was. My doctor came in and explained I was involved in an accident (that my motorcycle broadsided a car). I listened in amazement as he told me what I went through the previous few weeks. My jaw was broken in three places, I had multiple lacerations on the side of my neck, a four-inch scar on my neck, my right eye had received some glass fragments (which was why my right eyeball was off set a half inch or so), and I had a fractured skull which caused my memory loss. I was in a semi-coma for a week and on the critical list at a local hospital for seven days. After listening to the doctor telling me it would be a while before I could leave the hospital, I was very upset by the fact that I was almost wasted by a youngster without a license who failed to yield the right-of-way by bursting across an intersection. Apparently, she thought I had a stop sign and would be stopping at the intersection. I spent two more months in the base hospital before I was released on convalescent leave for two weeks. I believe staying in the hospital for as long as I did really helped me get my head back together. When I got home to visit my mother, she was extremely happy because she said I looked so well. I thought I looked terrible. She informed me that she was beside me a day after my accident, and the doctors could not tell her whether I would live or die for a week after I spent the six hours in surgery. Well, all I can tell any of you is that I am

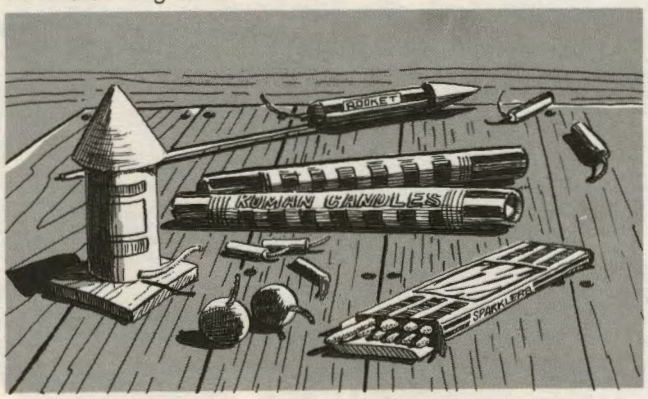
extremely fortunate to have survived and that I believe the only mistakes I made were not wearing a helmet and driving a motorcycle. I have driven motorcycles for eleven years and considered myself to be an excellent and careful driver, However, I learned that driving a motorcycle is extremely dangerous and makes one vulnerable to serious injury or death whether in the right or wrong.

Extracted from ATC SAFETY Kit

FIREWORKS AND THE 4TH

Although the 4th of July is about a month away, many folks will be tempted to celebrate early. Depending upon which state you are in, you may be free to blow yourself to bits with any pyrotechnic device you can get your hands on.

This year once again, people will be fascinated by the sight and sound of fireworks. This year also, people will lose eyes, ears, fingers, toes, and receive numerous other injuries because of the temptation to use fireworks. Even those innocent looking sparklers can cause burns and start clothing afire.



Why not just leave the fireworks to the experts and fools? Remember, fireworks aren't toys and should be kept out of the hands of all children from two to eighty-two.

OFF-THE-ROAD DRIVING

No, I'm not talking about driving your 4-wheel drive, super powered, mechanical burro. I'm talking about the family sedan, pressing down the freeway at the legal 55 MPH when you suddenly find yourself off the road. If the road meets federal highway administration requirements, you're in luck. All major highways being constructed or improved are required to have either traversable slopes adjacent to the

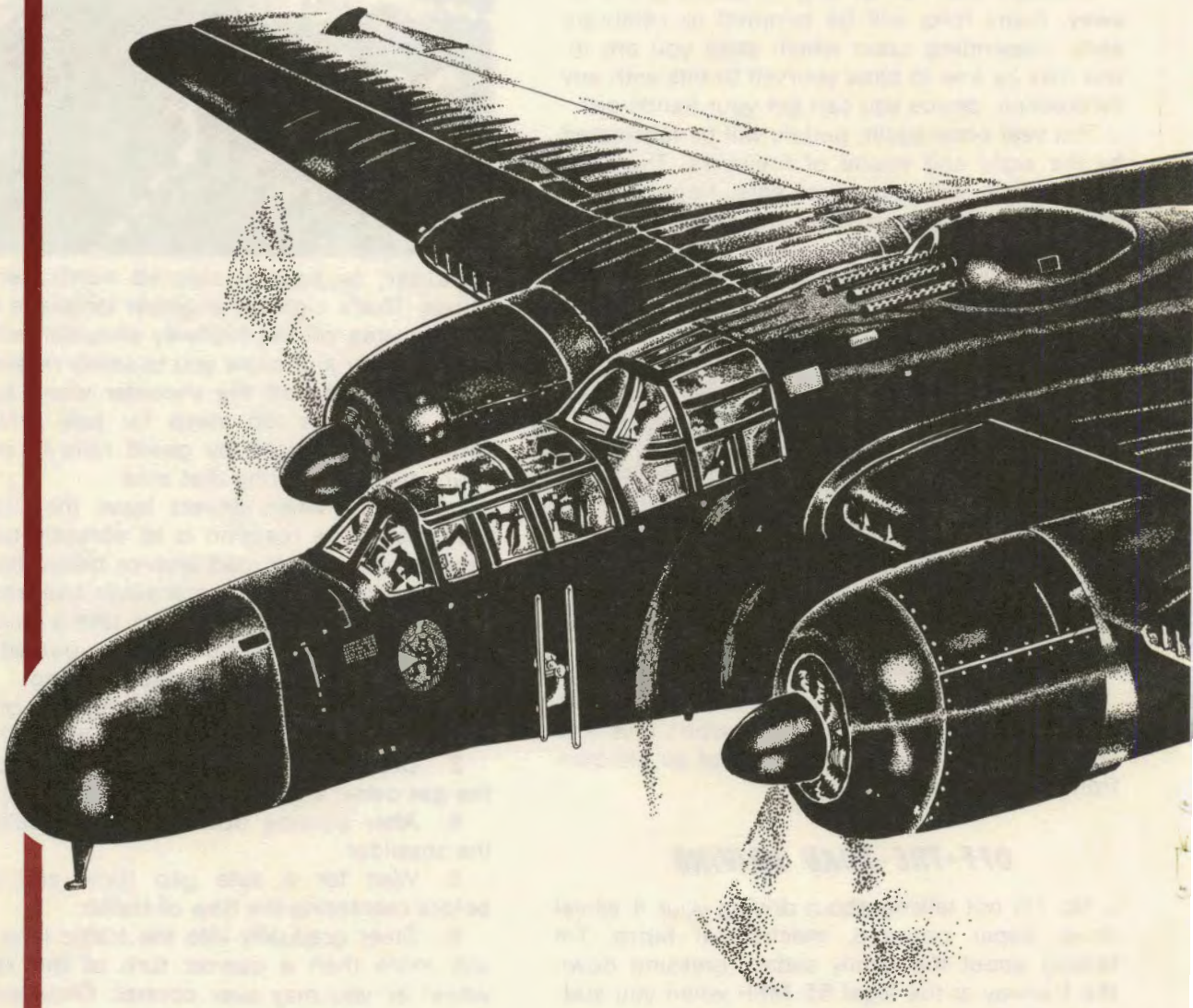
shoulder, or have protected nontraversable slopes. That's highway engineer language meaning the area off the highway shoulder will support your car and allow you to safely regain control. If the area off the shoulder won't support your auto or is too steep for safe driving, it should be protected by guard rails to prevent your car from entering that area.

Frequently, when drivers leave the highway, their instinctive reaction is to abruptly turn the vehicle back to the road and/or brake too hard. This usually leads to a maneuver best reserved for Hollywood stunt folks. Let's take a quick look at what you should do if you find yourself doing a little inadvertent off-the-road traveling:

1. Don't panic! If you lose control of yourself, how are you going to control the car?
2. Decelerate gradually. Take your foot off the gas pedal and don't use the brake.
4. After slowing down, steer gradually onto the shoulder.
5. Wait for a safe gap (time and space) before reentering the flow of traffic.
6. Steer gradually into the traffic lane. Don't use more than a quarter turn of the steering wheel or you may over control. Once safely in the lane, resume safe speed.

Next time you're tooling down the highway, just give a few seconds thought to what you might do if you run off the road. You never can tell when it might happen.

P-61 Black Widow




239278
DAVID GARCIA '80

TO FOAM OR...

By Maj Garry S. Mueller
HQ TAC/SEF

NOT TO FOAM

Beginning the first of July, runway foaming prior to emergency recovery will be discontinued at all USAF bases except Travis, Altus, Dover, Ramstein, Hickam, Clark, and Yokota. This decision was based on a comprehensive analysis of damage sustained during emergency landings. The analysis didn't find any significant differences in aircraft damage with or without foam.

The origin of foaming a runway is not exactly known. There was one Viking leader who was rumored to have used foam from malt ale to coat tables in preparation for a ritual called "carrier landings," but that is unconfirmed. During the Korean conflict, the practice of using a water and protein foam mixture prior to landing an aircraft with gear problems evolved. The reason for using foam was described as allowing the aircraft to land on a "cloud of shock-absorbing foam."

The Air Force adopted runway foaming in 1961, first using locally modified equipment to spread the foam. While the practice of runway foaming was being implemented, the following were listed as the expected benefits in support of foaming.

1. Foam reduces the extent of damage to an aircraft by cushioning the contact between the airframe and the runway.

2. Foam reduces the coefficient of friction between the airframe and runway which decreases deceleration forces imposed on the airplane, decreases the airplane's tendency to swerve when landing in asymmetrical configurations, and decreases slide damage incurred during landings.

3. Foam reduces the friction spark hazard, a possible ignition source following impact-imposed damage to fuel tanks or systems.

Later damage analysis revealed most of these expected benefits were not supported by the facts. Impact damage isn't really prevented by the foam. The cushioning effect of the foam—which is actually 90% air, 10% water, and a stabilizing compound—is about as effective as the popular shaving cream is at stopping a sports car, as shown in a recent TV commercial. Impact damage is almost entirely a function of landing weight, configuration, design, velocity, and pilot technique.

Other investigation revealed foam results in only a 5 percent reduction in the coefficient of friction. This small change should not affect the length of runout, slide damage, deceleration forces, or braking action. The one area where foam has proven to be effective is in reducing sparks.

Ignition (sparks) suppression effectiveness on metals, based on a two-inch depth of foam, was found to vary from 57 percent to 100 percent for various types of stainless steel. Aluminum alloys produced no friction sparks capable of igniting aircraft fuels on either dry or foamed runways. On the other hand, foam was completely ineffective in the suppression of titanium sparks. Sparks by themselves are not a hazard. Fuel and fuel vapors are the primary problems. Normally, aircraft are fairly low on fuel during emergency landings. Thus, the risk of igniting fuel is relatively low. In the cases where fuel and fuel vapors may be a hazard, the hot sections of the engine create a much greater hazard than the sparks coming from the aircraft.

In 1976, the Naval Safety Center concluded from a statistical analysis of 254 intentional wheel-up landings that these emergencies can be accomplished essentially as safely on unfoamed runways as they can on foamed runways. Additionally, they found no evidence to support a variation in damage between foamed and unfoamed runways. Based on this data, the Navy discontinued runway foaming in 1976.

TO FOAM OR NOT TO FOAM

In 1979, the USAF conducted a computer study and an analysis of selected mishap reports to determine the effects of foam versus no foam for reported Air Force mishaps. All landings with gear up, partially up, or collapsed, as well as mishaps resulting in landing damage, during the period from January 1968 to December 1978 were reviewed. The data included many mishaps where foaming of the runway was not possible; e.g., unintentional gear-up landings, collapsed gear on takeoff or landing, or low fuel requiring an immediate landing. Aircraft that departed the runway surface were excluded since damage would be caused by other than contact with the runway surface and could not have been prevented by foam.

There were 447 declared emergencies and/or aircraft landing mishaps during this period. Of these, 130 landed on a foamed surface and 317 touched down on an unfoamed runway. Aircraft damage was proportionally the same for all aircraft that remained on the runway.

As for fires, a total of five fires (3.9%) occurred when foam was used and 21 (6.6%) happened on unfoamed runways. The majority of fires were quickly extinguished by fire department personnel. However, several aircraft did receive major damage due to the impact, slide, and fire combination.

Several other incidents occurred which highlight additional consideration:

1. An F-100 flamed out while waiting for the runway to be foamed.
2. Another aircraft received minor damage when the foam/water froze prior to landing. The aircraft slid off the edge of the runway. Foaming isn't practical in rain, high winds, or below freezing.
3. A T-39 was attempting to "shake" a gear down and made a "touch and don't go" over the foam when the other gear collapsed.
4. A number of aircraft have either missed the foam entirely or slid out of it.

Based on these studies, the following conclusions were derived:

1. No loss of life or aircraft can be directly attributed to the presence or lack of foam.
2. Declared emergencies can be accomplished as safely on foamed runways as they can be on unfoamed runways.
3. The probability of fire resulting from a declared emergency is essentially the same in either case, provided the aircraft remains on the runway surface.
4. When an intentional emergency landing was accomplished on a foamed or unfoamed runway, pilots with sufficient time to optimize the aircraft fuel configuration landed safely and aircraft damage was essentially the same.

This was the rationale behind the Air Force decision to discontinue runway foaming except at the previously listed bases. Foaming the runway has probably always had more psychological than actual benefits. But, your well-planned, well-executed emergency procedures, along with the response of the crash vehicles will prevent the situation from getting out of hand.

chock talk

...incidents and incidentals with a maintenance slant.

TWO "CLASSIC" FOD INCIDENTS

I

An F-4 from another command was scheduled to depart its deployed location for a return to home station. The crew chief completed the preflight and prepared to go to lunch. Since he did not have his tool box with him, he decided to save some steps and place his mike cord in the right engine intake. The engine intake covers were placed on the aircraft, and the crew chief went to lunch.

While the crew chief was at lunch, an earlier launch was negotiated between ops and maintenance due to deteriorating weather conditions at the home field. Two other crew chiefs were assigned by the line chief to fill in and expedite the launch. The aircrew had already started their preflight when the crew chiefs arrived. The aircraft commander noticed the cord in the intake but didn't remove it, assuming the crew chief would use it to start and launch the aircraft.

The crew chief launching the aircraft was using his own headset. He removed the regular crew chief's headset from the nose door antenna and laid it aside. Having no prior knowledge of the cord in the intake and under the pressure of a more hurried launch, the crew chiefs did not notice the cord.

Checks were completed and the right engine was started. The airflow quickly sucked the cord into the engine. The crew chief called for a shutdown when he saw sparks and fire coming from the tail pipe.

Total cost for this mishap—$49,300.

II

During postflight inspection of an F-4, the crew chief noted FOD damage to the compressor. The engine was removed from the aircraft and inspected. Various stator and compressor blades from the second through thirteenth stages were found damaged. A 10-32" screw of the type used in the louver panels fit the impressions in many of the damaged compressor blades. Thread impressions also matched a sample screw. All damage was within repairable limits, and the engine was released for blending.

Meanwhile, the board investigated further. The louver panels had last been removed during phase inspection 17-21 December. The task of removing and replacing louver panels is relatively complex. There are eight different screw lengths used in the panel. The screws are identical in appearance except for length. Due to the confined area between the intake and fuselage—there is also some difficulty in using a depth gauge properly in some of the screw holes. These factors take on increased importance if a task is being performed too quickly.

CHOCK TALK

During the time period the incident aircraft was in phase, the inspection section was experiencing a heavy workload. People were working weekends, and they were attempting to run three inspection docks with a manning strength of two docks. The situation was made more acute by the approaching Christmas holidays.

The source of the 10-32" screw could not be determined conclusively but all evidence suggests the right-hand upper louver panel for the following reason:

1. There was a screw missing on the upper louver panel.
2. The nut plate of the missing screw was worn.
3. Other screws in the panel were too short.
4. A screw dropped from the louver panel travels forward down the sloped vari-ramp wedge between the ramp and the fuselage and drops into the suction area of the intake.

Luckily, damage in this case was repairable. It still required 210 maintenance hours to repair the engine—210 unnecessary hours.

****

Both incidents point out one thing—we'll never be able to prevent FOD if we don't get *everyone* involved in the program. Remember, FOD isn't a maintenance problem. It isn't an aircrew problem. It isn't a base problem. It's our problem—we're the only ones who can fix it.

A REAL CRUNCH

During the start sequence on an F-4, the oil servicing dust cap came loose. When the generators were cycled, the aux air door closed on the cap, breaking the door. The cap was hanging by its safety chain which was longer than the six-inch maximum recommended by the T.O.

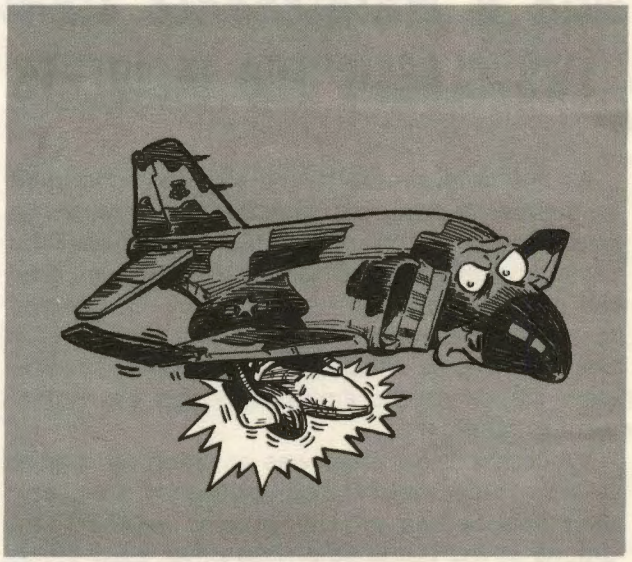
It is possible the servicing crew chief didn't push the locking ring on the cap up to the fully locked position and vibrations from the engine caused the cap to drop off. This particular wing inspected their aircraft and found other chains which were too long.

Sometimes an item as simple as a safety chain can cause problems when it's combined with a few moments of inattention.

MURPHY AND THE F-4 BAGGAGE POD

An F-4 crew in another command was preparing to launch to an alert site. On arriving at the aircraft, they noticed the baggage pod was missing so they asked the crew chief to load one ASAP. The ground crew quickly located a pod, loaded it, and launched the aircraft. After takeoff, when the pilot attempted to retract the gear, the right main caught on the baggage pod and wouldn't retract. The pilot lowered the gear, burned down fuel, and landed.

The ground crew loaded the pod too far aft. The forward lug was engaged in the aft hook on the pylon. The aft lug on the pod fit into an empty space in the plyon and all looked OK. But it wasn't. The ground crew loaded the pod without tech data 'cause they were in a hurry. The aircrew either wasn't aware of the possibility of hanging the pod incorrectly or didn't check for it.



I wonder how many more times we'll manage to hang an F-4 baggage pod incorrectly. Any guesses?

THE FIRE'S OUT...NOW WHAT ?

By Maj Tim Brown
12 AF/SEF

Often, there's a fine line between "just another incident" and a mishap which becomes an item of special interest. Recently, what would have been "just another incident" was pushed over that line. Following a barrier engagement, the

pilot did not shut off the engines before he egressed the aircraft. The fire department elected to snuff the engines out using light water foam (Aqueous Film Forming Foam). The damage to the aircraft and cost of repair was relatively minor up to this point.

Engines subjected to fire suppressant agents usually require shipment to depot for overhaul. This case was no exception. Now, the reportable cost of the mishap increased by about $60,000! And it's not over yet. The real cost to the Air Force for this mishap will include repair or replacement of any engine components which are damaged by the corrosive effects of the fire suppressant.

Chemical agents have varying corrosive effects on different types of metal. They range from protein foam (highly corrosive runway foam soon to leave the inventory) to Halon 1211 which is not corrosive. The longer the engine is exposed to chemical agents, the greater the damage will be.

The cost of engines and engine repair is very high and isn't decreasing. Therefore, the cost of a mishap can be greatly increased by failing to take timely action against the corrosive effects of chemicl agents. The procedures vary but generally include a water wash ASAP after the incident, drying, engine teardown, preventive lubrication, and expeditious shipment to depot. In the subject mishap, the engines were not water washed, were not removed from the aircraft for a month, and were not shipped to depot until four months after the fact. The actual damage to the engines remains to be seen.

There currently exists a 2-J series tech order for all jet engines except the F-100 which is still being tested and the TF-30. The general procedures in T.O. 1-1-1, Chapter 4, can be used on the TF-30. The tech order describes procedures to be followed in case an engine is subjected to fire suppressants. It is important that every unit recognize the need to apply these procedures and know where to find the information. The attached chart (subject to change, of course) should help.

Each flying unit should be familiar with the required procedures to use following fire suppressant ingestion into engines. If supervisors know where the procedures are written and ensure timely compliance, we've established one more way to keep "just another incident" on this side of that fine line.

ENGINE	TECH ORDER	PARAGRAPH
J-79	2J-J79-46, 56	11-22
T-85	2J-J-J85-56-1	3-11A
T-58	2J-T58-6	11-25
TF-34	2J-TF34-6	11-7
J-75	2J-J75-6	3-30 (Note)
TF-41	2J-TF41-3	3-9A
F-100	Under Investigation	
TF-30	1-1-1	Chap 4

When Lt Col Meredith J. Thomas, Installation Chaplain at the 23 TFW, England AFB, LA, heard about aircrew boldface emergency procedures, he thought it would be a good idea to develop a test for chaplains covering things which might happen to them. His final product was sent to the printers for repro. Unfortunately, through the base distribution system he received back a supply of A-7 Boldface Forms. Captain (Chaplain) Rich Johnson received his copy and promptly proceeded to fill it out. I think the tech order writers could probably learn a few things from Chaplain Johnson's approach. At any rate, both the Chaplain's Boldface procedures and the "New" A-7 procedures are reprinted below.

CHAPLAIN BOLDFACE EMERGENCY PROCEDURES

1. OFFERING LARGER THAN EXPECTED.
2. PUBLIC ADDRESS SYSTEM FAILS.
3. ORGANIST PLAYS WRONG HYMN.
4. WORSHIP BULLETINS LOST.
5. CHILD DOES NOT WANT TO BE BAPTIZED.
6. BRIDE DESIRES RECEPTION CATERED BY CHAPLAIN.
7. CHURCH SUPPER/NO MAIN DISHES/TOO MANY DESSERTS.
8. CANDLES WET/WON'T LIGHT.
9. RAPTURE OCCURS DURING SERMON/ CHAPLAIN LEFT BEHIND.
10. "CHRISTIAN BROTHERS" WINE NOT AVAILABLE/"ANNIE GREEN SPRINGS" ABUNDANT.
11. COMMANDER REQUESTS GOOD WEATHER: FOR GOLF GAME.
    FOR FLYING SCHEDULE.

A-7 BOLDFACE EMERGENCY PROCEDURES

1. ABORT/ARRESTING GEAR/CABLE ENGAGEMENT
O Lord, my strength and my stronghold,
My refuge in the day of trouble—
—Jer. 16:19
For thou hast been a stronghold to the poor, a stronghold to the needy in his distress—
—Isa. 25:4

2. ENGINE FAILURE DURING TAKEOFF
IF DECISION IS MADE TO STOP:
And the king said to the man of God, come home and refresh thyself—
—I Kings 13:7
IF UNABLE TO ABORT:
Where no wood is, the fire goes out—
—Prov. 26:20
He raised the poor out of the dust—
—Psm. 113:7
I will cast you out of my sight—
—Jer. 7:15

3. TIRE FAILURE DURING TAKEOFF
IF DECISION IS MADE TO STOP:
I will proceed no further—
—Job 40:5

Thou shall be steadfast—
—Job 11:15
IF TAKEOFF IS CONTINUED:
And I say, "O that I had wings like a dove!" I would fly away and be at rest— *—Psm. 55:6*

4. MULTIPLE PC SYSTEMS FAILURE
God prolongs the life of the mighty by his power—
—Job 24:22
Do all things without grumbling or questioning—
—Phil. 2:14

5. TOTAL PC SYSTEMS FAILURE
And he told them a parable to the effect that they ought always to Pray— *—Luke 18:1*

6. MASTER GENERATOR FAILURE
I have power to lay it down, and I have power to take it again, this charge I have received from my father— *—Jn. 10:18*

7. AIRSTART
Behold, I will proceed to do a marvellous work—
—Isa. 29:14
Make a joyful noise to God—
—Psm. 66-1

8. ENGINE INSTABILITY/FUEL CONTROL MALFUNCTION
O Man of God, this is the king's order, come down quickly—
—II Kings 1:11
Discretion shall preserve thee—
—Prov. 2:11

9. DEPARTURE RECOVERY
The Lord shall preserve thy going out and thy coming in—
—Psm. 121:8
At the same time loosening the ropes that tied the rudder—
—Acts 27:40
The time of my departure is at hand—
—II Tim. 4:6

10. BLOWN MAIN GEAR TIRE DURING LANDING ROLLOUT
Consider your way—
—Hag. 1:5
For we wrestle not against flesh and blood— *—Eph. 6:12*

HILL AIR FORCE BASE

"First in the F-16"

Maj Donald W. Staffon
388 TFW
Hill AFB, UT

Located just east of the Great Salt Lake, Hill AFB is the home of the 388th Tactical Fighter Wing and the Ogden Air Logistics Center (00-ALC). The base is located about 5 miles south of Ogden and 25 miles north of Salt Lake City. Airfield activities continue around the clock seven days a week because of 00-ALC logistic support responsibilities. Flying organizations at Hill AFB include the 388th Tactical Fighter Wing (TAC) which flies F-16 fighters, 508th Tactical Fighter Group (Reserve/TAC) which employs F-105B fighters; 6514th Test Squadron (AFSC) which conducts test and evaluation of the Air Force unmanned aircraft program; Det 16, 57th Fighter Weapons Wing (TAC) which conducts the Multinational OT&E of the F-16; Det 4, 40th Air Rescue and Recovery Squadron (MAC) which provides support Huey Helicopters; and the 00-ALC Flight Test Branch (AFLC) which flies depot F-4 FCF's along with F-4 Engineering and Munitions Test. For the aircrew planning on coming to Hill AFB, Transient Alert is open 24 hours a day. Hill has one 13,500 foot runway, 14/32. Because of airspace restrictions and prevailing winds, arrivals and departures normally use Runway 14. As with most airfields, some unique local problems and/or high risk areas exist and all aviators should be aware of these.

Nearly all civil light aircraft flying north and south between the Wasatch Mountains and the Great Salt Lake follow Highway I-15, which parallels the base one mile to the west. This traffic should be at 5,800 feet MSL and below. Commerical carriers, executive and light civil aircraft flying out of Salt Lake City International Airport are normally above 7,600 feet MSL in the same area.

Ogden Municipal Airport is under the instrument approach to Runway 14 at Hill AFB. While on extended final, transient aircraft have mistakenly landed or made low approaches to Ogden Municipal thinking they are at Hill AFB. (See photo of Ogden Municipal with Hill AFB in the background.) In addition, because of parachute jumping in the vicinity and numerous light aircraft operating at Ogden Municipal, a high midair potential exists.

Our feathered friends have several large refuges located along the eastern edge of the Great Salt Lake between Salt Lake City, to the south, and Brigham City, to the north. Extreme caution should be used when flying in this area, especially during the migration seasons.

With the Wasatch Mountains and Weber Canyon just to the east of Hill AFB, one can normally expect strong easterly winds between 0500 and 1000 local, due to "Canyon Winds." The intensity of the "Canyon Winds" may vary

considerably from one end of the runway to the other. This local phenomenon can cause unexpected wind shear and strong crosswinds that may approach or exceed crosswind landing limitations for most aircraft types.

VFR traffic should contact Salt Lake Approach Control 20 miles from Hill AFB for radar vectors. This will aid in traffic advisories and also ensure vectors to Hill AFB. Transient jet aircraft are restricted to one full stop landing. If these aircraft must go around, the proper procedure is to climb as fast as practical to traffic pattern altitude and maintain it on downwind. When landing Runway 14, do not extend over Washington Terrace, the residential area, northeast of the field.

Runway 14 Hill AFB

HILL AIR FORCE BASE

"First in the F-16"

NOTE: No circling approaches are allowed east of the field due to the mountains, which reach over 9,700 feet MSL.

Once on the ground at Hill, caution must be used because of the extensive taxiway construction and repairs that are in progress.

All transient aircrews flying locally out of Hill AFB are required to receive a Noise Abatement Briefing from Base Operations. Traffic patterns and departure routes have been developed to minimize aircraft noise in the surrounding communities.

Runway 32 Hill AFB

Numerous transient aircraft utilize the Utah Test and Training Range (UTTR) formerly the Hill/Wendover/Dugway Range Complex. In order to use the range areas, prior coordination with the 6501st Range Squadron, AUTOVON 458-4401 is necessary. The 299th Communications Squadron (Clover Control) is the range controlling agency. Primary range activities during the weekend by transient aircraft on the range complex are air-to-air tactics, low levels in the MOA's, and an occasional attack strike in the Wildcat tactics range. Aircrews should become familiar with 00-ALC Regulation 60-3, Air Traffic Control and Flight Operations, and AFFTC Regulation 55-18, Operations, Utah Test and Training Range, prior to local range flying.

Clover Control approves all entrances to Lucin, Gandy, and Seveir MOA's as depicted on the Salt Lake City and Las Vagas sectional charts. While flying the MOA's, avoid by 3 NM or 3,000 feet AGL the communities, airports, ranges, homes, and wildlife refuges as depicted on the appropriate sectional charts. Do not fly supersonic on IR routes or in MOA's. Supersonic flight, however, is authorized in specific portions of the range complex.

For aircrews who plan to RON, BOQ or BEQ facilities are available. The Officers Open Mess is located next to the Billeting Office. BEQ's are located near the Airman's Dining Hall, Bowling Alley, and about two city blocks from the NCO Club. Contract quarters are available in Ogden when base quarters are full. The Billeting Office reservation phone number is AUTOVON 458-2601. For those who arrive late, a twenty-four hour a day snack bar with hot sandwiches is available near the flight line.

Prior to departing, please fill out the transient comment sheet and/or the Base Commander's "Eagle Ear" form. This is the primary means of improving our transient service for you.

Major Staffon is Chief of Flight Safety at the 388 TFW. He has been in F-4s since completing UNT in 1969, serving in the CONUS, Korea, and Germany. He holds a BS from Tarleton State College and an MS from the University of Utah.

SPO CORNER

More on F-15 brakes

In the TAC TIPS column of your February issue of TAC ATTACK, some suppositions were presented as facts and require clarification. In the article titled *F-15 Emergency Brakes*, the writer comes to the conclusion that; (1) there was sufficient pressure in the normal brake lines to prevent the brake shuttle valve from shifting when the emergency brake handle was pulled, and (2) this is the normal way for the brake system to operate. Both these items are presented as fact for which there is no basis.

The system is designed such that if emergency pressure is available at the brake valve, only emergency pressure will be metered. If any utility pressure is present at the brake valve and is being metered by holding the pedals depressed, the application of emergency pressure, by pulling the emergency brake/steering handle, to the brake valve will cause the metered utility pressure to be dumped to return. The design of the brake valve allows only one pressure source to be metered to the brake shuttle valve at any time. The brake shuttle valve is designed and has been proven by test to positively shift and close the brake's opposite supply line whenever pressure is metered to either port.

MCAIR tried operating the brake system in the manner described in the article. For our test, we used production aircraft and a static ground test article which we call the *Iron Bird* which duplicates the aircraft system with production hardware. In repeated attempts, the system dumped normal brake pressure and metered emergency system pressure whenever the emergency handle was pulled. This test was conducted at varying normal metered pressures and with the pedals held depressed during and after engine spool down.

In regards to the reported incident, follow-up reports from the base state that no faults were found in the normal or emergency brake systems and that the problem could not be duplicated. As a result, there is nothing to indicate that momentarily releasing brakes would have established emergency braking, in fact, extensive engineering evaluations and testing indicate that it would not have helped. We should not confuse the pilot community with theoretical explanations for an isolated incident (first occurrence reported in 250,000 flight hours) which had not been satisfactorily explained. Similarly, recommending a procedure which was not used during this incident and which cannot be supported by design analysis or testing is not sound practice.

In short, pulling the emergency brake handle should put the pilot on the emergency brake system regardless of any prior braking actions. If the pilot is already trying to meter brake pressure, he is going to get emergency brakes—count on it.

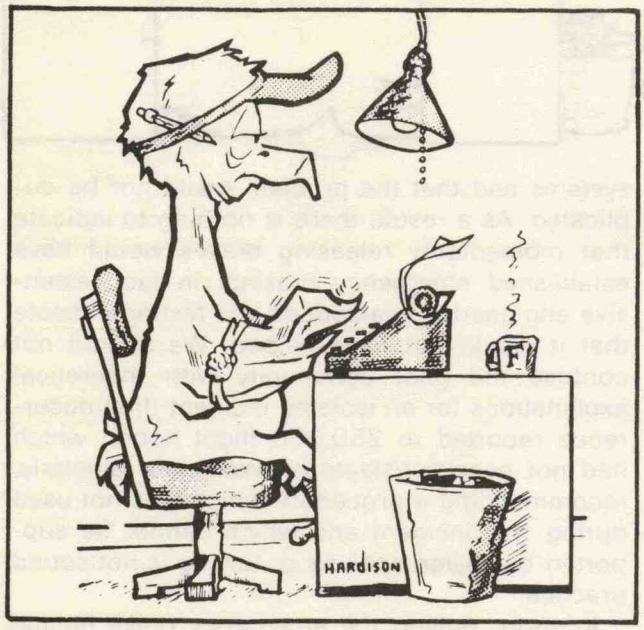
R. M. Ehle
Design Engineer - F-15
McDonnell Aircraft Company

SPO COMMENTS

I've done a bit more research with McDonnell Douglas. The incident involved an F-15 without normal or emergency brakes. It was theorized that residual utility hydraulic pressure prevented the brake pressure shuttle valve from moving and allowing emergency pressure to the brakes. This incident sequence violates system design and should not have happened.

The malfunction could not be duplicated at MCAIR or the incident base, so we may never know for sure what occurred. The suggestion we provided in the February magazine may work—even if you shouldn't have to release and reapply the brakes. Remember, anytime you're rolling along the ramp and the airplane doesn't feel like stopping, any reasonable idea is worth a try. . .

LETTERS



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Dear Editor,

Captain Rogers' letter in TAC TIPS of the March 1980 TAC ATTACK gave some good poop for jocks flying into "P" fields. I would only like to add a suggestion to his comments.

Unlike our friends in MAC, I doubt if many aircrews in TAC spend their idle time thumbing through FLIP. I don't normally, but I once had an occasion to review the pilot procedures in the General Planning Section. In chapter 5, para 5-4b, information is provided for NOTAMS at civil airports. Basically, it states that if a proposed flight will terminate at a "P" field, then consult the FSS that services the area for local NOTAMS. More importantly, if a jock had to divert into a "P" field, then he could call FSS (255.4 UHF; 122.2 VHF) and receive the information he needs and alert them of his arrival.

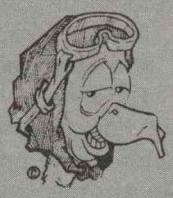
The possibility of such an occurrence is rare, but it would be nice to know that the runway was covered with snow and ice before you were on short final!

BRENT LIVINGSTON, Captain, USAF
Flying Safety Officer
301 TFW, Carswell AFB TX

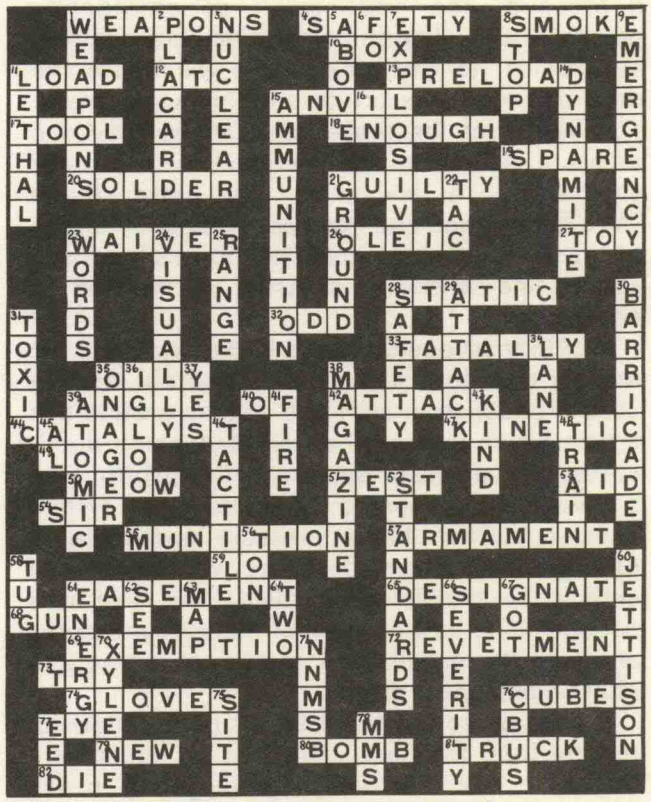
Dear Capt Livingston,

Thanks for the additional info. There are several ways of getting the information; but for "P" fields, you have to make sure you ask for everything you need. A lot of times, they don't offer the RCR and other things automatically.

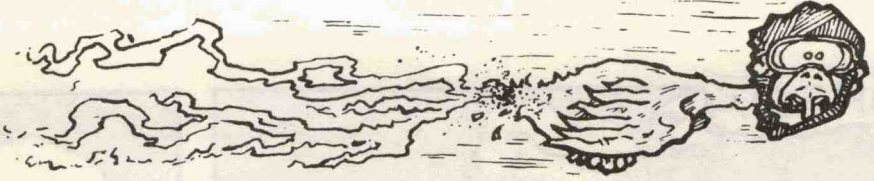
Ed



MSgt Paul C. Pittmann, TT Luke/SEG, Luke AFB, Arizona, is the winner of a Fleagle T-shirt in our crossword puzzle contest. I want to thank all the folks who participated. The correct solution to the puzzle is shown below. Due to the tremendous response we had this time around, we plan on running another puzzle in the near future.



TAC TALLY



tac tally

	TAC			ANG			AFR		
	APR	THRU APR 1980	APR 1979	APR	THRU APR 1980	APR 1979	APR	THRU APR 1980	APR 1979
CLASS A MISHAPS	1	9	12	2	6	5	0	0	3
AIRCREW FATALITIES	1	6	12	0	5	4	0	0	2
TOTAL EJECTIONS	0	10	12	2	7	4	0	0	3
SUCCESSFUL EJECTIONS	0	7	5	2	4	2	0	0	1

TAC'S TOP 5 thru APRIL '80

TAC FTR/RECCE	
class A mishap free months	
40	347 TFW
26	33 TFW
22	56 TFW
19	1 TFW
18	31 TFW

TAC AIR DEFENSE	
class A mishap free months	
101	84 FIS
87	57 FIS
40	5 FIS
37	48 FIS
23	318 FIS

TAC GAINED FTR/RECCE		
class A mishap free months		
134	152 TRG	(ANG)
96	188 TFG	(ANG)
88	138 TFG	(ANG)
87	917 TFG	(AFR)
84	116 TFW (128 TFS)	(ANG)

TAC GAINED AIR DEFENSE		
class A mishap free months		
93	191 FIG	(ANG)
74	102 FIW	(ANG)
70	177 FIG	(ANG)
36	125 FIG	(ANG)
19	119 FIG	(ANG)

TAC/GAINED Other Units		
class A mishap free months		
129	182 TASG	(ANG)
122	193 TEWG	(ANG)
114	110 TASG	(ANG)
109	USAFTAWC	(TAC)
105	919 SOG	(AFR)

CLASS A MISHAP COMPARISON RATE 79/80

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

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
TAC	1979	6.9	7.0	5.9	6.6								
	1980	2.0	4.0	5.2	4.4								
ANG	1979	0.0	11.4	9.0	9.7								
	1980	5.0	7.6	6.6	7.5								
AFR	1979	0.0	0.0	19.9	23.1								
	1980	0.0	0.0	0.0	0.0								

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FLEAGLE
BUZZZ
HARRISON
BUMP!
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GOTCHA!
YOWEE!
AND WHAT HAPPENED AFTER HE GRABBED TH' HOT BAR-B-Q ?