

TAC ATTACK

OCTOBER 1984





ANGLE OF ATTACK

Never make the last run -- an admonition normally aimed at downhill skiers. It is based on mountains of evidence that injuries increase dramatically when a skier is tired, cold, or in a hurry and the conditions have deteriorated because of ice, flat light, or bare spots/moguls that appear at the end of the day.

Never make the last run has a direct application to TAC safety -- flight, weapons, and ground, to you and me in the workplace. It needs only to be reworded.

In the air-to-air arena, it translates to *Know when to terminate the engagement*. Prolonging the fight beyond desired learning outcomes, continuing the competition below the briefed floor altitude or below minimum airspeeds, or overly aggressive maneuvering can increase the probability of loss of control. We continue to prove the validity of this wisdom, even in aircraft that are relatively resistant to departing controlled flight. The attitude of *another half-G, just one more scissors, or unorthodox slamming of the stick into the northeast quadrant will 'make me somebody'* is closely akin to *one more run through the moguls will make me a clone of the Mabres or Suzy Chaffee*.

On the weapons side, we've seen two instances of pressing on with no regard to tech data, aircraft placards, or common sense. In both cases flares designed to counter infrared missiles were accidentally ejected onto the ramp

and damaged the aircraft. The *I know what the tech data says, but I've got a better way* attitude, carries the price of pain of failure.

On the highway, the last run translates to *It's only another hundred miles, and I can be home in a couple of hours*. Recently one of our teammates was driving his car back from an extended TDY. He was tired but it was only about one hundred more miles to home. Some of his buddies also making the return trip in their own cars expressed their concern about continuing, but he said *No sweat, I've almost got it made*. Just a few miles later he disregarded the posted construction signs and 35 mph limit, crossed the center stripes at 70 mph, and met another driver head-on. He died making *the last run*.

You are important to your family and friends. You are a valuable asset to the TAC team, to our ability to do the mission. Don't make the last run.

Harold E. Watson, Colonel USAF
Chief of Safety



ON THE COVER:
OV-10 BRONCO

OCTOBER 1984

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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.

TAC Attack (ISSN 0494-3880) is published monthly by HQ TAC/SEP, Langley AFB, VA.

POSTMASTER: Send address changes to *TAC Attack*, TAC/SEP, Langley AFB, VA 23665-5001.

Second-class postage paid at Hampton, Virginia, and additional mailing offices.

Fighter Pilot Survival

By Col Paul F. Rost
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(Editor's Note: Last month, in the first part of his article, Col Rost opened the fighter pilot's survival kit and pulled out self-discipline and ego, risk taking, and crosscheck. The remaining keys to survival follow.)

Habit Patterns

Do you have specialized or generic habit patterns? To the maximum extent possible, basic habit patterns you develop should be transferable from weapon system to weapon system. The basic instrument crosscheck should include the same instruments—perhaps in different locations—as you transition to other aircraft.

In particular, when you transi-



tion to a new aircraft, review your habit patterns and see where the old ones may conflict with the new. Ejection-seat handle location is one of the most



Kit, Part II

critical. Like it or not, the habit patterns you learned best (usually on your first operational aircraft) will come out at the most unexpected times. They could mean trouble.

A simple example I personally experienced was in the back seat of a T-38. I was not current in the aircraft and the IP offered me a chance to do a back-seat pattern. As I started the final turn, I was amazed to see a horrendous nose slice—until I realized I had put in full rudder, just as I used to do two years prior in the F-100. Without consciously realizing it, my mind had equated the T-38 performance with my F-100 experience long ago and I reverted to the old habit pattern.

It should be obvious that where we put the gear down should be a “standard” location throughout our flying careers.

What do you do when you get that uneasy feeling that you’ve broken your habit pattern? My solution is to go back at least two steps prior, to what I think I’ve previously finished, and start over from there. Often, I’ve found the interrupted step, which I thought I had completed, was what I had missed. By going back two steps, I make sure I’ve gotten everything.

Task Saturation

This is a very common factor in Ops mishaps and all of us seem to become task saturated at some time. How can we control it?

Complete mission planning is mandatory in a single-seat fighter. If you step to the aircraft without knowing exactly what you are going to do, then you are asking for trouble.

Hopefully, we all know that *complete* mission planning is mandatory in a single-seat fighter. If you step to the aircraft without knowing exactly what you are going to do, then you are asking for trouble. What appears like good inflight mission planning by “old heads” is actually application of options already preplanned on the ground.

Another aid we have in flight to help prevent task saturation is timing patterns. One of the things that should have been drilled into us in pilot training is that a disciplined crosscheck—visual or instrument—allows us to be consistent in making corrections. This means that if you use the same parameters for making control corrections, you eventually develop a sense of timing of when it is time to crosscheck that parameter again, i.e., altitude corrections should take 30 seconds regardless of the size of the correction.

Avoiding task saturation requires that you be a jack-of-all-



FIGHTER PILOT SURVIVAL KIT

trades, master of none. What I mean is you must be able to detect errors in altitude, airspeed, and heading while trying to concentrate on tactical events—and make corrections without devoting 100-percent attention to any single item (channelized attention).

The most important thing about task saturation is to preempt it. That's why flight planning is so important. It's much easier to keep up rather than catch up, so have a plan. When you detect task saturation coming on (falling behind in your crosscheck or unsure of what is coming next), it's time to call for a "knock it off." At low altitude, climb to cope. Get on a basic crosscheck—visual or instru-

ment, and catch your breath.

If you're handling an emergency, go for survival issues first. Once they're handled, you can talk to the rest of the world. If the emergency occurred in the training area, chances are you won't become task saturated until the approach phase. Tell them you want a single frequency approach.

If possible, prior to sticking your head in the clouds, burn down the fuel if that is necessary. Remember "land as soon as possible" really means "as soon as prudently possible," not 500 knots until on short final. A 360-degree turn to give you time to get your act together may be just what you need to keep ahead of the game.

Night Flying

It seems a higher number of accidents occur at night than is proportional to our night flying hours. When I hear people talking about turning down their interior lights to save their night vision, I get the impression they are flying at night using outside references. There are only two

references I use at night. One is my leader if I'm in route formation or closer; at all other times I use the gauges. Interior lighting should be high enough that you can immediately and accurately read the instruments. With better lighting, you won't need your head in the cockpit as much (allowing you to clear better in VMC) and your night vision will not be impaired. Put the lights on the bright side rather than the dim side. If they're dim, and you get vertigo, you'll add that much more to your problems as you are forced to stare at the instruments to read them. You'll be task saturated for sure then; inadequate lighting will only make it worse.

Is there a tactical need for "night vision" in our current single-seat fighters? I don't think so. No matter how bright my interior lights, I've never had trouble finding a bogey within 10 miles. In the F-16 with its strobe light, 20 NM tallyhos are common during intercepts. If it's a real bandit, I doubt he'll have any nav lights on and all the night vision in the world won't



find him. In the air-to-ground business, even if you're not working under flares, your night vision will last only until the first MK-82 goes off. You'll want your lights up pretty high after that.

Stress

Do you recognize when you're in a stressful situation? What is your personal reaction to it? I've found mine is to start humming to myself. When I see this reaction, I stop and analyze what is causing it. Sometimes we enter a high stress situation without recognizing it—and that can be dangerous. If we recognize it, we can take action to handle it better.

Stress means adrenaline, and that speeds everything up. Yet, the guys with the "right stuff" that we admire so much, sound very cool and deliberate under stress. How? I think this is a learned response. With adrenaline pumping through you, you tend to do everything faster, but there are physical limits as to how fast your hands can move and do it accurately. Moving too fast leads to mistakes—and more stress.

Instead, try to be very deliberate. When you reach for a switch, do it slowly enough to get it right the first time. Chances are it will only seem slow; you'll actually be moving faster than normal. The success in doing it right the first time will give you more confidence and help reduce the stress. However, you can't do these things until you recognize you're under stress—so learn your personal stress symptoms.

Fatigue

I believe fatigue is the most significant second level cause of Ops factor mishaps. We'd all like



to be nice and fresh for each flight, but it's a fact of life that it just isn't so. How you handle fatigue in yourself, and in the people who work for you, will determine your success in the fighter business.

First, your own fatigue. Part of being a fighter pilot is knowing you can hack it. None of us want to back down. This is where our self-discipline should come in. Before flying, you preflight both the aircraft and yourself. Are you really ready or are you betting on the odds that nothing will go wrong? My experience is that fighter pilots take themselves off the schedule only when they have genuine concern about being able to handle the routine. Our real concern should be whether we feel capable of handling the worst case situation. You owe it to your fellow pilots to take yourself out when you can't give 100 percent.

In every squadron I've ever been in, supervisors would tell us not to fly if we weren't ready, and that no retribution would be taken. This was true. However, when you saw the same supervisor flying when you knew he shouldn't be, you quickly got the unspoken message that those who couldn't hack it were "weak."

As a supervisor, make sure the unspoken message you are sending is the one you really intend.

As a supervisor, make sure the unspoken message you are sending is the one you really intend. Also, remember that many highly motivated fighter pilots will press themselves farther than you want. A "preemptive strike," removing someone from the schedule who is obviously tired (even yourself), can show the troops that you really do not want them flying when overly fatigued. Give additional consideration to crew rest for night flying. Normal crew rest times may not adequately compensate for the change in the work/sleep patterns.

We've discussed some attributes and concerns which influence our long-term survival in the fighter business. While you may not agree with everything I've said, I hope you'll take the time to clearly define in your own mind how these factors should be handled because, how you do handle them will determine both your success and longevity as a professional fighter pilot. The choice is yours—fly safe. ➤

Reprinted from *Flying Safety Magazine*, Mar 84

AIRCREW OF DISTINCTION



On 2 July 1984, 1ST LT ERIC T. STAKE and CAPT KENNETH P. RADOSEVICH were recovering their T-33 from a weapons controller training mission as number two of a four-ship formation. As the flight leveled at 3,800 feet above the ground, Lieutenant Stake, flying the aircraft from the front seat, noticed erratic stick inputs and asked if his instructor pilot in the rear cockpit had bumped the control stick. Captain Radosevich replied that he had not touched the controls. Then the aircraft began a slow right roll. Lieutenant Stake applied full left aileron to counter the roll, with no effect. As the aircraft continued to roll right and the nose began to drop, Captain Radosevich assumed control of the aircraft. He also instinctively tried using full left stick to counter the uncommanded roll, to no avail. When the crew switched both aileron boost levers Off, the ailerons were still unresponsive. The IP gave the order to prepare for ejection. As the aircraft attitude reached 90 degrees of bank at 3,000 feet AGL, however, Captain Radosevich was able to reverse the roll using rudder.

The crew found they could keep the wings level and control the aircraft using a combination of aileron trim and rudder. While climbing, the aircrew visually confirmed that the ailerons did not respond to control stick inputs. The control stick was extremely loose. Later, they would learn that the link-



Capt Kenneth P. Radosevich
1st Lt. Eric T. Stake
84 FITS
Castle AFB, California

age connecting both control sticks to the ailerons had become disconnected.

After conferring with the supervisor of flying, Lieutenant Stake configured the aircraft so Captain Radosevich could confirm its slow speed flyability. With adequate control and calm winds at home station, the crew decided to attempt landing.

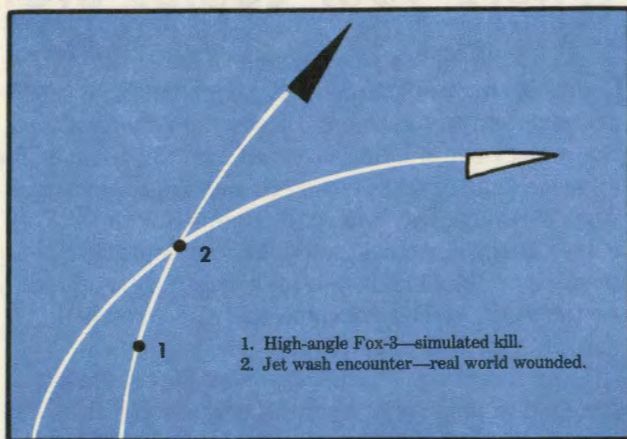
Lieutenant Stake reassumed control of the aircraft and judiciously maneuvered the aircraft for a straight-in approach to the alternate runway, avoiding the city near the primary runway. He completed a safe, uneventful landing.

The outstanding airmanship and professional skill of Lieutenant Stake and Captain Radosevich saved the aircraft and earned them the Tactical Air Command Aircrew of Distinction Award.

TAC tips

Close encounters of the jet wash kind

Close encounters of the jet wash kind have been responsible for aircraft damage ranging from missing light lenses to major over-Gs and attendant structural/engine damage. We've even lost some airplanes because they drove through jet wash. No single tactical fighter/attack/recce platform seems to be immune, regardless of size, speed, or turn radius.



It's no surprise that most trips through another's jet wash occur during air-to-air missions. What is surprising is how frequently we encounter jet wash during more benign events like departure, your basic crossunder, and tactical formation. *Distraction* accounts for some. *Not planning* accounts for some others. *Not seeing a situation develop until driving through the jet wash is inevitable* accounts for many.

Sometimes combinations of all three reasons put us in a place where there are no options but to drive

through it (taking it down at 300 feet in tac formation is not an option). So we can and should work hard at avoidance. But let's face it, that's not the unforgivable part.

We need to have a fall-back plan for those times when we fail to avoid it. In those instances where at the last moment we see it coming, *unloading* has to be automatic.

It's very similar to a boxing match. Each boxer tries to employ a strategy, to use the tactics he's planned, and to avoid the threats. But if ducking isn't an automatic reflex nanoseconds before the opponent's right hook finds the mark, the fighter may be "outa there." So might yours. Plan to avoid jet wash. When that doesn't work, unload.

Little things mean a lot

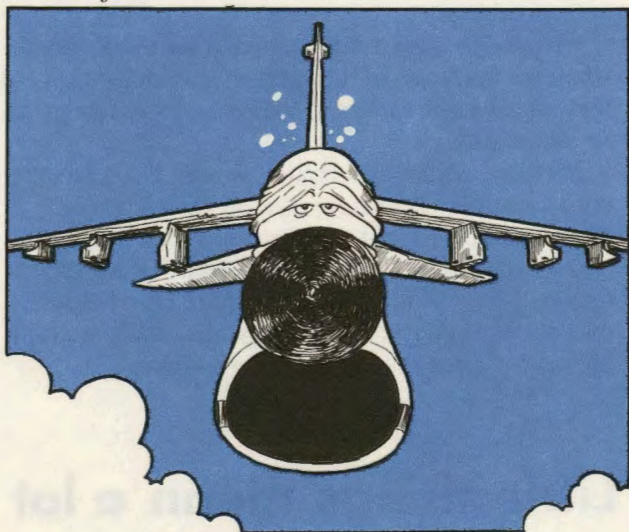
A couple of A-7s took off for the final leg of their cross country flight and leveled at FL250. After cruising for about ten minutes, the wingman became concerned about his flight lead—his voice over the radio had begun to sound funny and now he couldn't correctly repeat the new frequency that center was trying to give him. The wingman eased over into close formation and noticed the other pilot was unmasked. He also saw the other pilot making unusual movements with his head and hands. The wingman told him repeatedly to put his mask back on and go to 100 percent oxygen but to no avail. Then the wingman declared an emergency with center and told the flight lead to lower the nose.

All of a sudden the flight lead's aircraft abruptly pitched down and rolled right. The aircraft began a Split-S type maneuver which the wingman chased

TAC TIPS

INTEREST ITEMS

while he was calling for the leader to roll left. Both aircraft entered the clouds about 12,000 feet MSL where the wingman lost sight of the flight lead and told him if he couldn't get the nose back up, he should eject.



Apparently, the increasing airspeed caused the aircraft (that was trimmed for a slower cruise speed) to climb. When the wingman climbed back above the clouds, he saw the flight lead's aircraft in a climbing attitude above him. The flight lead said that he was OK now and that he had control of the aircraft. The wingman put him on his wing and led the flight to an uneventful emergency landing.

When the incident pilot met his flight surgeon, he said that apparently he hadn't noticed that his cabin pressure switch had been left in the Dump position; so when he took his mask off, it wasn't long until he was hypoxic. He didn't remember anything after taking his mask off until he "woke up" again at about 6,000 feet MSL.

It's not hard to forget a little thing like the cabin pressure switch. Some pilots in several types of aircraft are in the habit of dumping cabin pressure

before opening the canopy each time they land to make sure the cockpit isn't overpressurized. So finding the switch misplaced for flight isn't surprising. That's why we carry a checklist—to help us remember the little things.

But there's another little matter that's not covered in the checklist—checking the cockpit pressure before unmasking. That just makes good sense. So does checking it as part of the cruise check. Sometimes, little things mean a lot.

10 o'clock . . . Know where your cables are?

An F-15 pilot was returning to base with Utility-A hydraulic failure. Rather than close the primary runway in the midst of a busy flying period, the supervisor of flying directed the pilot to make his approach-end arrestment on the alternate runway. The chosen runway was well-equipped with BAK-12 cables at the approach, midfield, and departure positions. Unknown to the pilot, and not mentioned by the SOF, an MA-1A cable was also stretched across the runway threshold.

Unaware of the MA-1A, the pilot flew a shallow, dragged-in approach. As the Eagle crossed the threshold, the tailhook engaged the MA-1A cable. Because of the wrong-direction engagement, the cable snapped. The aircraft continued on down the runway and successfully grabbed the first BAK-12.

Our Chapter 9s all tell us not to land over raised MA-1A barriers. And this pilot didn't; the webbing portion for the barrier had been dismantled for several months. But the cable was still in place.

Looks like we've discovered another reason for knowing the "20" of all our cables. Do you know the cable configuration on all your runways? How about the primary divert field?

MISHAPS WITH MORALS, FOR THE TAC AIRCREWMAN

Judgment

By Maj P.C. Bryant
106 TRS/SEF (ANG)
Birmingham, Alabama

Each of us will sooner or later hear of a pilot we know dying in an aircraft accident. Most probably, we will discover he did something that reflected poor judgment.

We should keep in mind that he didn't think he was using poor judgment. He believed what he was doing was correct. He believed it so strongly that he bet his life on the outcome.

That anonymous one-liner says it best: Every instructor, supervisor, and contemporary who ever spoke to him had an opportunity to influence his judgment; so a little of each of us goes in with every pilot we lose . . .

Hey Ranger

Three flights of Phantoms practicing for a weapons competition had already beat up the range that day when Mud flight showed up. Mud was a three-ship of F-4s that intended to practice too. The mission went well, and no one knew anything was amiss until the post-flight inspection where the crew chief discovered that Mud 2's Phantom was wounded. A 20-mm bullet was lodged in the bottom of the radome.

Gun camera film showed that the mishap pilot had done everything right. He stopped firing 800 feet before minimum range, his dive angle was within parameters, and his pull-offs were aggressive.

A visit to the strafe pit followed. Tech order requirements for the acoustiscorer include a berm depth of 30 inches of soil of which 12 inches must be loose dirt. About 18 inches of soil had been shot



away by the four flights, and the remaining soil was hard. The ranger (range control officer) said that at the beginning of his tour, the dirt in the strafe pit met both the 30- and 12-inch depth requirements. But what was the condition just before Mud flight arrived?

This episode took place in the strafe pit of a range that had only worked F-4s with their 20-mm M-61 cannons. Do you suppose the same problem exists on days when A-10s and their 30-mm GAU-8 cannons are also range customers?

If you do, you're correct. On another range, on another day, Sod flight was also about third to use the range. These Phantoms followed a Warthog flight which fired their GAU-8s. This time, Sod lead came back with ricochet damage from his own bullets to one of the outboard tanks. Same scenario. The strafe pit was several inches short of sand after the incident, even though it was satisfactory at the beginning of the range control officer's tour.

Sounds like periodically checking the soil depth in the strafe pits throughout the day may be a way that RCOs can help their friends keep from shooting at themselves. But that may be impossible; sometimes flights seem to drop in one after another all day long. In that case, the ranger who passes on that he's had considerable previous gun business performs a service to his fellow marksmen.

THE HEAT IS ON

Photos by Sgt Jeffrey McConnell, 1 CSG/OTCL



GET TO KNOW YOUR FIRE DEPARTMENT

By Marty Diller

I'm going off—the brakes aren't hacking it. The nosegear steering doesn't help. I'm going off the runway. I can't believe it. Maybe aileron or rudder will

work. No luck. Rats. In the dirt. I'm just a passenger now. Stop, you pig! Whump! There goes the gear. I hope this tub stays upright and holds together.

Ah, stopped at last. I did everything I could do; it's not

my fault. The nosegear steer...

What's that smell? Fire—I gotta get outta this death trap! What's the boldface? I gotta get this lid off now or I'll be trapped in here. I gotta run. Where's the fire truck?

In a situation like this one, you know the fire department will be there; what you aren't sure of is how fast or from where. And the questions probably don't stop there. So in recognition of National Fire Prevention Month (October), here are some answers to some of those questions—some things you, the aircrew member, wonder about the fire department.

What's the fire department's response time? Maximum three minutes. The fire department has to be on the scene of an emergency within three minutes. If they can't make it to a location within that time frame, a vehicle is prepositioned at a specified standby location where it can meet this requirement. Fire departments practice their responses, and can respond to a declared emergency within one minute or less and to an undeclared emergency in less than two minutes. The tower notifies the fire department of all emergencies.

How does the fire department respond? Could you cope with two crashes at opposite ends of the runway at once? In a declared emergency, fire trucks will always be at predesignated positions. If they are not attending an emergency, fire trucks are at the fire station or on routine standbys, like engine runs. Fire chiefs have designated priorities when responding to emergencies. Fire departments are manned and

equipped to fight one emergency at a time. If there are two emergencies at the same time, the fire department will first go to the one with the largest life-loss potential. After life-loss potential is considered, mission or monetary value of equipment would be considered—an AWACS first, then an F-15.

How familiar are firefighters with the cockpit of locally based aircraft? Can you open canopies from outside and unstrap an unconscious aircrew member? What kind of training? If a plane lands at a base frequently, fire department personnel have to know how to enter the aircraft, make the seats safe, shut down the engines,

turn off fuel, turn off electrical power, and get the pilot out. Training is done during daylight hours at least quarterly on all assigned aircraft; once a year they practice at night.

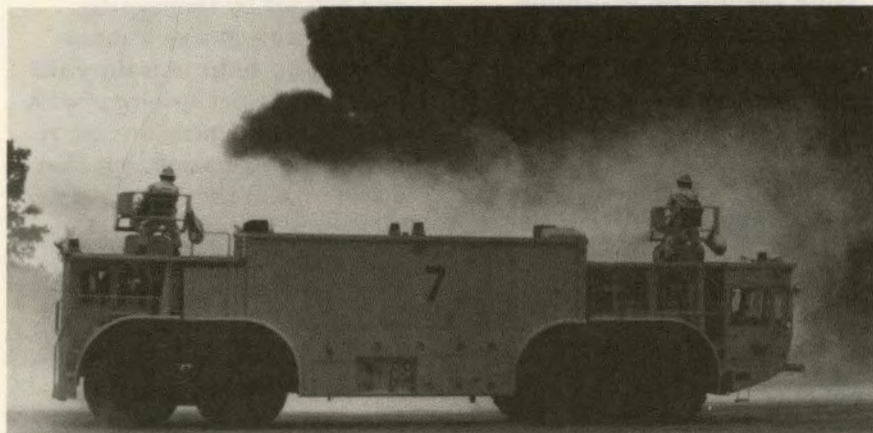
If you have any questions about handling an emergency aircraft, do you know how to get in touch with the supervisor of flying? Who do you talk to? During an emergency, communications always include tower, the fire chief, and the SOF. The SOF has control of the emergency while the plane is in the air; the fire chief has control of the emergency once the airplane is on the ground.

What do you spray on an aircraft that's burning? Is it harmful to me and could it

incapacitate me? The fire department's primary agent is foam. Foam and dry chemical are used for exterior and interior fires. Halon 1211 is used for internal fires. Foam will not harm you; neither will dry chemical, although it leaves a terrible taste if inhaled. Halon 1211 replaces oxygen and can incapacitate crew members in an enclosed area. It will only be used if the crew member is already incapacitated or the fire is spreading to the cockpit. When the crew member is removed from the plane, resuscitation will begin immediately. Halon 1211 is the lesser of two evils—incapacitate then resuscitate versus being on fire.

Talk to me about your firefighting equipment and vehicles. What are their capabilities with respect to burning aircraft? What limitations should aircrew members be aware of? The fire department can open doors or canopies, cut the skin of an aircraft, and penetrate the skin of the aircraft with nozzles to extinguish an internal fire from the outside—all primary capabilities for a burning aircraft. The only limitation is time: an interior fire will take longer to extinguish than an exterior fire. There are no limitations in fighting an exterior fire on an aircraft unless there are munitions on board. The class of munitions determines where firefighting vehicles will be positioned and how the fire will be fought.

If my jet is off in the mud on a rainy day, can you get that big fire truck out to me? Yes. Some vehicles have eight-wheel drive, the rest have four-wheel drive. Firefighting equipment is designed to get



The Oshkosh Truck Corp P-15 has 8-wheel drive, weighs 65 tons, goes from 0-50 mph in 47seconds, and can operate in altitudes up to 7,500 feet. There are two in TAC. It takes three people to operate, and it was designed to be driven on a smooth or rough surface. There are two separate pumping systems; each one can reach 180 feet. It delivers 2,500 gallons of water/foam mixture per minute at 250 pounds psi pressure.



THE HEAT IS ON

there under adverse conditions. Our vehicles are designed to operate in cold and hot environments as well.

Sometimes there seems to be confusion over who pins a landing gear that indicates unsafe. Who does pin the gear? Who gets us out of the cable and what are the fire department's responsibilities for barrier engagements?

Crash recovery pins the gear. The fire department will pin the plane only if the pilot or aircraft are in immediate danger and crash recovery hasn't arrived on the scene. During a barrier engagement, the fire department chocks the aircraft and asks the pilot to shut down the engines, while crash recovery simultaneously

pins the gear. The fire department removes the aircraft from the barrier and restores the barrier to its operational position. The fire chief has total responsibility during a barrier engagement.

Who determines if brakes are hot? Crash recovery determines if the brakes are hot. The fire department is on standby with firefighting vehicles, 300 feet away; if it's an F-111, vehicles are positioned 800 feet away. If the brakes are hot, crash recovery pins the aircraft and makes sure the pilot is taken to a safe area. The fire department only acts if there is a fire—not heat, not smoke—only fire.

Do you train in CB gear for wartime duties? Will your service be available when the base is liable or under attack? The fire department doesn't train in CB gear. Personnel can only work

in impermeable CB gear for 30 minutes before becoming exhausted—the same time limitation applies to our normal firefighter protective gear. The fire department will disperse to predetermined positions prior to airfield attack. Action to put out fires will not take place until after bombing stops and the command post gives the order to go out. During a CB attack, only external fires will be fought, none inside buildings. Here's why: the M-17A1 gas mask doesn't offer protection against smoke. A firefighter would have to remove the gas mask and put on firefighting equipment, risking contamination. Therefore, people inside buildings will have to rely on the buddy system and get out by themselves.

What can aircrew members do to help you do your job? Mandatory briefings with the fire department are not required by regulation, but that doesn't mean they aren't a good idea. Some bases have set up such recurring training for their aircrews. Call the fire department and set up regular briefings. And SOFs can help: during emergencies, pass on specific information. An example is gear problems: the fire chief needs to know what kind of gear problems—nose, main, or gear indicator lights—each one requires a different response from the fire department.

TAC Attack thanks Assistant Chief Ken Klein of the Langley Air Force Base Fire Department for his assistance in writing this article. And we congratulate the Fire Department for receiving the TAC Commander's Special Achievement Award. ➤



TAC SAFETY AWARD

CREW CHIEF SAFETY AWARD

SSGT ROBERTO AYERDIS was performing duties as transient alert crewman. He had completed blocking a C-12 and was on the way to block a 747 when he had to assist another transient alert crewman with a C-141. When he returned to the 747, the civilian crew had already removed the maintenance stands and chocks, started the engines, and had begun to taxi. As the plane taxied, Sergeant Ayerdis noticed a dragging ground wire that hadn't been disconnected. He immediately contacted tower by radio and asked them to stop the 747 so he could recover the ground wire.

The 747 continued to taxi behind a row of C-130s and narrowly missed the tail section of one C-130 and was coming close to two others.

Sergeant Ayerdis switched on the stop sign of the "Follow Me" truck, and drove in front of the 747. He stopped the truck, hopped out,



SSgt Roberto Ayerdis
24 CAMS, 24 COMPW
Howard AFB, Panama

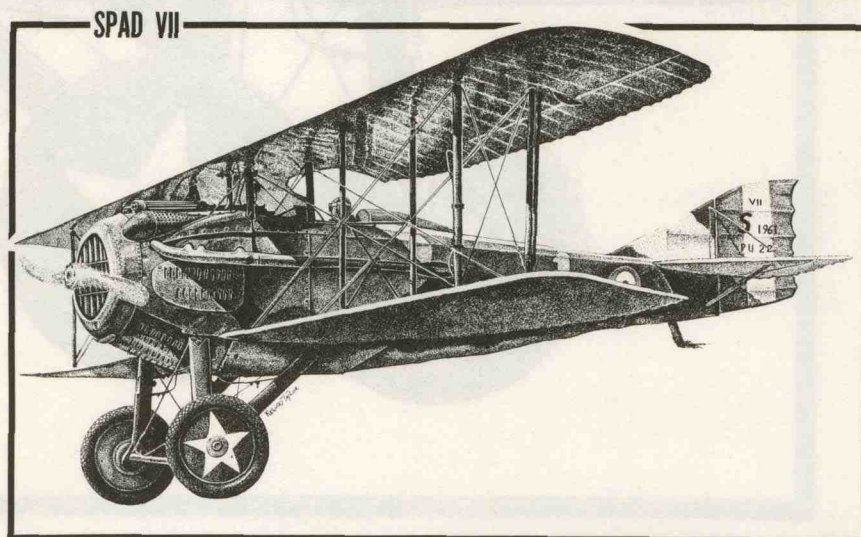
and gave hand signals for the 747 crew to stop. Sergeant Ayerdis recovered the ground wire then towed the C-130s forward so the 747 had room to safely taxi.

Sergeant Ayerdis' attention to detail, quick thinking, and rapid response prevented a serious mishap.

■ IN THE CENTER

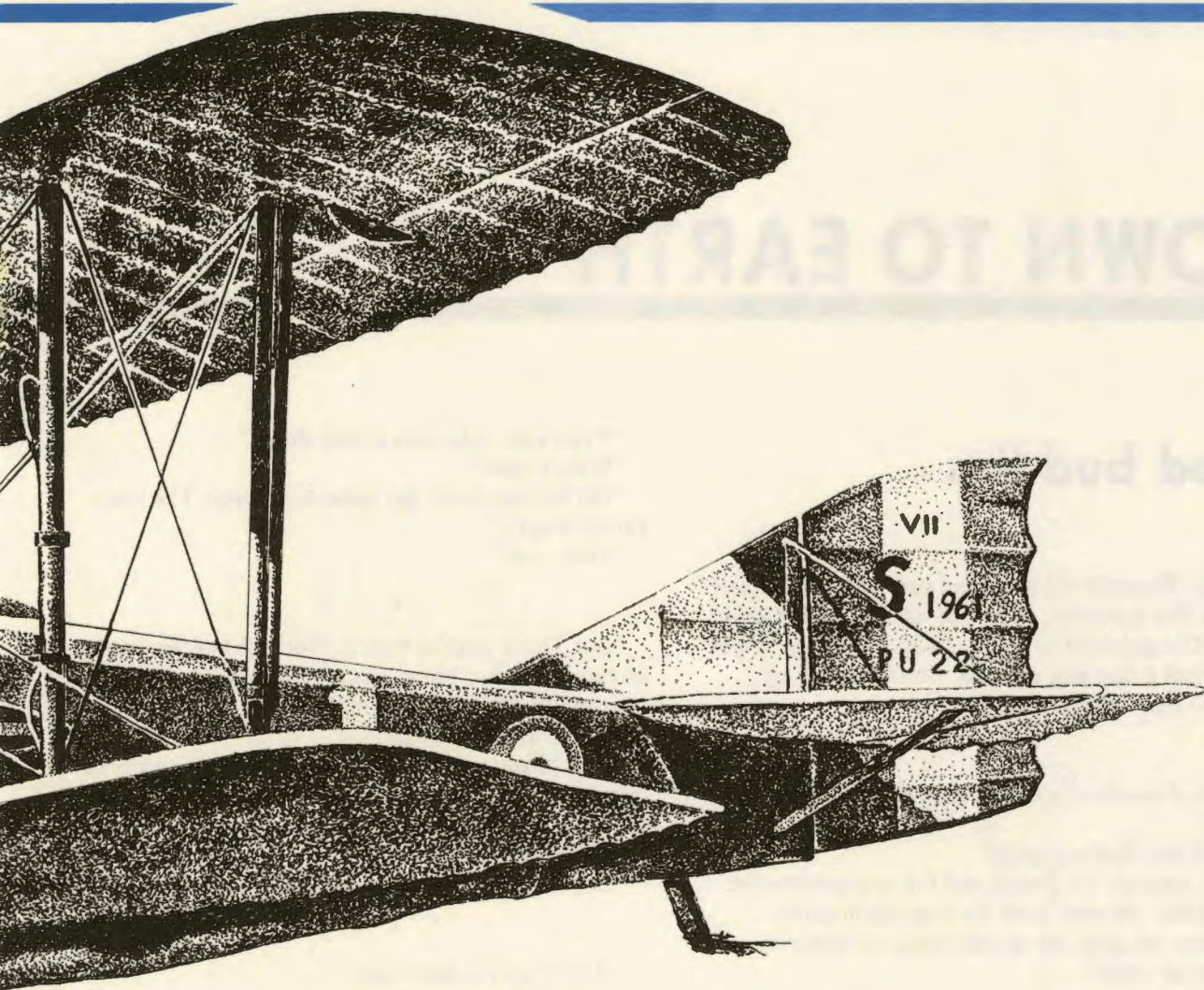
The Spad VII was a rugged, maneuverable fighter that helped our WW I Allies establish air superiority. She was a French product constructed mostly of wood and abundantly reinforced with wire. The scalloped trailing edges of the wings, elevator, and rudder made the Spad VII easy to identify.

Top speed: 119 mph
Length: 20 feet, 1 inch
Wing Span: 25 feet, 6 inches



SPAD VII





DOWN TO EARTH

Good buddies

Friday. Thought it'd never get here. Maybe I'll sell my bike this weekend. Sure can use the cash. Gotta get up. I'm gonna shoot that clock some day. Might not be such a bad day afterall. Gonna knock off early for that squadron party.

* * *

"Mary, I need some clean socks. Mary? Where's my socks?"

"Can't you find anything?"

"Hey, com'on, it's Friday and I'm in a good mood. We're gettin' off work early for a squadron party. Think you can pick me up and bring me home on your way to work?"

"Better not be drunk."

"Hey . . ."

* * *

Mary should be here soon. Sure do hate to go home now—feelin' too good. "Jim, Tony, Alex. Com'on over to the house. I'll get a keg of beer and we'll cook some hamburgers. Mary'll be at work, so we can have some fun."

* * *

"So this is the bike for sale? How much? Sounds good. My wife doesn't believe in bikes. Thinks they're dangerous."

"Your wife tell you what to do?"

"Heck no. Let me ride it over to where she's working and show her MY NEW BIKE."

"Ever rode a bike before."

"Nope."

"Then just make sure of one thing."

"What's that?"

"On the way back, get some more beer. The keg's almost empty."

"Yeah, sure."

* * *

"No. Don't want to hear it. No! No! No! You're not buying that bike. I love you too much to see you kill yourself on a bike."

"Love? You're jealous."

"How'd you get here? You mean you rode that bike over here. You can't even stand up. Look at you. I thought they were your friends—they let you ride like this?"

"Don't care what you say. I'm buying this bike."

* * *

"Think we can save him."

"Don't know. He's pretty messed up."

"Let's get him to the hospital, fast."

* * *

"Here's the report on that motorcycle accident that happened Friday."

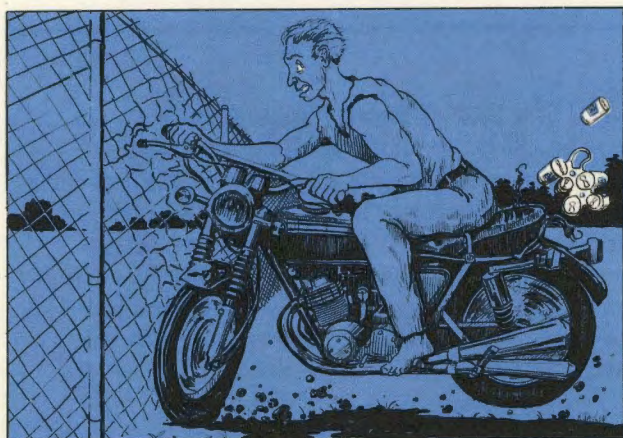
"Some people never learn."

"Yeah. But no one tried to stop him either. They were good buddies all right. When they found out he'd had an accident, they finished up the hamburgers and beer, then went home. Just like nothing had happened."

"Maybe we should teach people how to be good buddies first, then show them how to ride bikes."

* * *

Operator number one left the road and traveled approximately 70 feet before losing control while trying to take a 25-mph curve at 60 mph. Operator



number one had never driven a bike before and was drunk. The operator and motorcycle traveled another 70 feet before impacting a six-foot chainlink fence where both operator and motorcycle came to rest.

Keep it down to a roar or say it again, Sam

By Col Rich Pilmer
AARS/SG
Scott AFB, Illinois

Unwanted sound is noise. It may be disagreeable if it's loud, confusing, indistinct, or in a language that you don't understand. Any physical disturbance that reduces the clarity or quality of a signal is noise.

Traditionally, the Air Force has emphasized

the danger of hearing loss in people exposed to high noise level environments. This is as it should be because hearing disability caused by overexposure to noise can be permanent and expensive.

Most aircrew and maintenance workers have become well disciplined in the use of protective hearing devices. This is less true for passengers and observers. Whenever sudden noise occurs, bystanders should take steps to temporarily mask the sound intrusion. Longer exposure should motivate them to seek protective devices. The simple use of fingers, hands, plugs, and/or muffs in sudden high-intensity noise situations can prevent costly inner ear damage.

A decibel (dB) is a physical unit that measures relative sound levels. Aircraft mechanics are constantly exposed to levels of 80 to 125 dB. If aircraft noise is *painfully* loud, it is at the 140 dB level. By comparison, a sound at the 10 dB level is just barely audible. At a distance of fifty feet, heavy trucks can produce noise levels above 90 dB. In a prolonged exposure, this can be psychologically disturbing; after eight hours or more, some permanent hearing loss could result.

The louder a noise, the more likely it will interfere with verbal communication, which increases stress. The more unpredictable a noise, the more stressful its effect. While evidence is not conclusive, medical studies have shown that humans continually exposed to high noise levels without ear protectors are more prone to ulcers, heart disease, allergic reactions, and digestive disorders. Expectant mothers should also avoid the unnecessary stress of high noise levels.

Drugs and medications, such as antibiotics, alcohol, and aspirin, may also cause an individual to be slightly more vulnerable to noise-induced

DOWN TO EARTH

hearing loss.

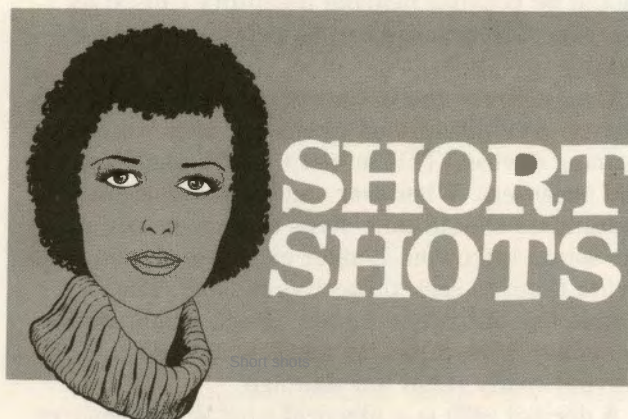
For complex motor or intellectual tasks, noises that distract attention will cut performance. Additionally, any noise that increases arousal (gets your attention) will increase the intensity of aggressive behavior. It will also tend to decrease informal interaction among neighbors or workers and decrease their attention to notice that someone needs their help.

On the positive side, morale, productivity, and health have been found to average higher in industrial and government activities where noise is

controlled.

One very practical thing that has come out of many psychological studies of the effect of noise on safety behavior of humans is this: workers who have the ability to control the noise levels (by using protective devices) and who are confident that they are working in a safe noise level environment, have less stress, narrowing of attention, and constraints on normal behavior.

Knowing how to protect yourself from noise, as well as confidence in dealing with it, is extremely important to mission performance and safety. Of course F-4s, F-15s, F-16s, and A-10s don't produce noise. That's the sound of freedom. Maintain your ability to hear *all* the sounds of freedom.



Got a Leg Cramp? Acupinch it. Dr. Donald L. Cooper, former U.S. Olympic team doctor and director of the student hospital at Oklahoma State University says that he doesn't know how it works, but after using it for several years, he's found it works about 80 percent of the time. At the first sign of a leg cramp, pinch your upper lip with your thumb and index finger. Hold the pinch for about 30 seconds. He also says, "Don't knock it 'til you try it."

Your Child's First Hot Dog — could be the last. They are the food most often responsible for choking deaths among young children, according to doctors at Johns Hopkins University. That's because of their size which almost perfectly fills the throat. If you want to feed your child hot dogs, first cut them lengthwise, then into small pieces. Other foods that may cause choking are apple pieces, carrots, cookies, biscuits, grapes, and peanuts.

Can't Get Rid of Strep Throat? Stuart Coperman, M.D., a suburban New York pediatrician, recently discovered that in families with repeated strep throat infections, 40 percent of the family pets (dogs, cats, and birds) had active strep organisms. The pets didn't show any symptoms (wonder how a bird with strep throat would act?), but when the pets were treated, the strep throat in the families cleared up.

Worried About Your Teenage Driver? Have him or her write a *will* before allowing them to drive. A driver education teacher has found that getting his students to prepare a will gets them thinking about the reality of dying behind the wheel. And a healthy respect for life produces a better attitude in the young, new driver.

There's Nothing Better Than Cold Peas. If you sprain or strain something, the best thing to put on it right away is something cold. An ice pack is certainly convenient, but not everyone has one. So try a bag of frozen peas—not only is it cold, but a bag of frozen peas can be easily molded around the strain or sprain. Now, if you don't have a bag of frozen peas . . .

Prescription Nicotine Chewing Gum. It's called *Nicorette* and sells for about \$20 a box (96 tablets per box). Although it contains two milligrams of nicotine per piece, it doesn't eliminate the desire for a cigarette, but it can provide a short term alternative source of nicotine if you're dependent on cigarettes. The next step after the gum could be freedom.

TAC Special Achievement in Safety Award

MSGT FLOYD W. BABER, MSGT STANLEY C. PAGELER, TSgt RANDALL S. DOBBS, and SSGT WINSTON B. BELFRAGE were performing a "full power" maintenance check on a TF41 engine in an enclosed engine test cell. During the test, the electric throttle control mechanism failed leaving the engine stuck at full military power. Even with the screen covering the engine intake, the tremendous suction forces are dangerous with the engine running at full military power. They realized they had to find another way to manually retard the throttle. They also knew that if they turned off the electric fuel pump, the sudden absence of fuel would cause extensive engine damage.

Calling on years of experience and professional knowledge, Sergeants Baber, Pageler, Dobbs, and Belfrage carefully and slowly shut off the fuel at the main supply line.



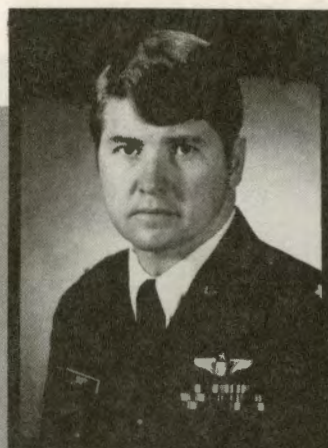
MSgt Floyd W. Baber
MSgt Stanley C. Pageler
TSgt Randall S. Dobbs
SSgt Winston B. Belfrage
185 CAMS, 185 TFG (ANG)
Sergeant Bluff, Iowa

When the engine reached 80 percent rpm, and the suction decreased, Sergeants Baber and Dobbs entered the test cell and manually retarded the throttle. They saved a valuable piece of Air Force equipment.

MAJ WILLIAM A. SCOTT displayed sound professional judgment and aggressive leadership as the supervisor of flying (SOF) handling five aircraft emergencies at the same time.

First, an F-16 lost hydraulics in flight requiring an emergency gear extension. After landing, the aircraft would have to be shut down on the runway closing the field. Then a second F-16 declared an emergency for a flight control malfunction. Meanwhile, an F-86 and two F-16s were all returning to base with a low fuel state. Because of the impending runway closure, the aircraft with low fuel were initially diverted to the nearby commercial airport. During this time a communications failure between the SOF and approach control further complicated the problem.

Major Scott immediately recognized all



Maj William A. Scott
72 TFTS, 56 TTW
MacDill AFB, Florida

problems and took control. He directed the recovery sequence of the emergency aircraft and coordinated with emergency response crews to safely recover all five emergency aircraft at the air base.

CHOCK TALK

chock talk incidents and

INCIDENTS AND

The second stage

By SMSgt Michael J. Hess
474 TFW/FOD Monitor
Nellis AFB, Nevada

If you perform engine inspections, you are keenly aware of how it feels to be in a sweltering intake, having to touch blades that feel like they're searing your fingertips, while sweat blurs your vision and stings your eyes. Inspecting intakes can be both arduous and suffocating. No one argues the importance of the job, but once into the intake, it can



become difficult to remember how meticulously you had intended to look at the engine. Enthusiasm has a tendency to dissipate in direct proportion with the intensity of the heat.

Troops inspecting an engine installed on F-15 or F-16 aircraft face yet another obstacle—poor visibility of the second stage fan rotor blades. Remember attempting your first view into the second stage? Were you just bewildered or completely overwhelmed? The task seems impossible, but it can and must be done.

Why is the inspection of the second stage fan so critical? Simple. An object entering the engine may leave only a slight telltale nick on the first stage while leaving major impact damage on or even disintegrating part of a second stage blade. Centrifugal force will then push the material to the blade tips where it can exit the fan and safely by-pass the core and remaining modules. Should this happen, little or no damage will be present on the first and third stages while the real danger lays half-hidden on the second.

The longer a nick remains undetected, the deadlier it becomes. If you choose to blend out first stage damage without reporting it and fail to properly inspect the entire second stage, you unwittingly increase the chances for failure. Separation of a second-stage blade can be serious in a two-engine bird. In a single-engine aircraft, it can be lethal.

You must take the time to inspect every blade on both the first and second stages of the F100 engine fan module; it takes self-discipline and more time, but the results of not doing it can be a smoking hole.

INCIDENTALS WITH A MAINTENANCE SLANT

Keeping the lid on

An F-5 Aggressor pilot's troubles began even before he was airborne. Just prior to brake release for takeoff, when he ran the engines up to military power, the left engine Fire light came on and the left EGT (exhaust gas temperature) gauge wound up to 850 degrees. The pilot shut down the engines, called over the radio to tower that he was abandoning ship, and egressed the aircraft. Smoke was coming from the tail section of the left engine and both intakes. Fortunately, the fire department was there in a heartbeat and put out the fire.

The fire and smoke isn't surprising—an unsealed oil cap allowed oil from the pressurized engine oil system to be vented into the engine bay and into the hot sections of the engine. Three-quarters of the oil supply was depleted.

It turns out that this particular oil cap could be put on in such a way that it looked and felt secure but wasn't properly sealed because of a missing internal locking washer. But the same effect could be produced if someone was distracted (or called away from the job) and simply forgot to replace or secure the cap.

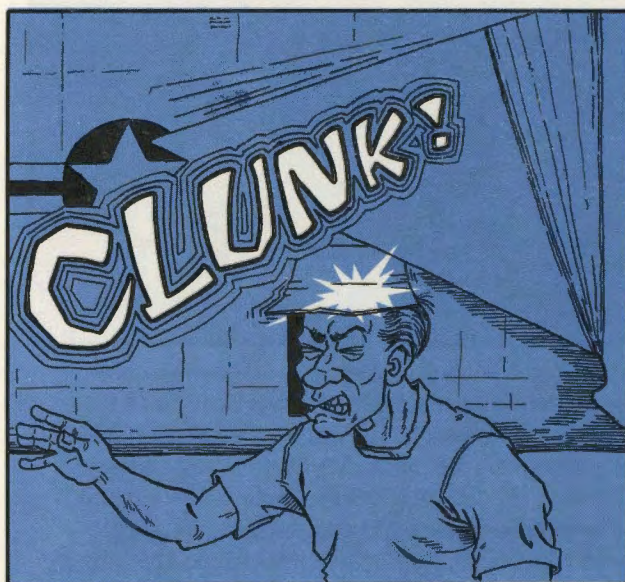
Helpful hands

After an F-15 pilot had started both engines, he noticed the Eagle's ramps hadn't come down. So he called over the radio for a redball.

While he and the crew chief were waiting for the

experts to come help, the crew chief suggested he shut down the left engine, which he did. The crew chief and his assistant opened panel 10 to see if they could spot the trouble. They were trying to speed things up for the redball team that was still en route.

But when they opened the panel, the crew chief saw several popped circuit breakers. Now he thought he could really speed things up and not have to wait for redball at all. Without saying anything to the pilot over the intercom, the crew chief reset the circuit breakers. Clunk. The left ramp dropped suddenly. When it fell, the ramp hit the open panel which struck a couple of workers on their heads. Ouch. The crew chief either didn't



CHOCK TALK

notice they were standing beneath the inlet or didn't know the ramp would fall when he reset the circuit breakers.

Teamwork beneath the aircraft is sometimes difficult since we're not all hooked up by intercom and since it's much too noisy to yell. But it's imperative. We all have to work hard to insure that what we're about to do not only helps the situation—but also doesn't hurt anyone.

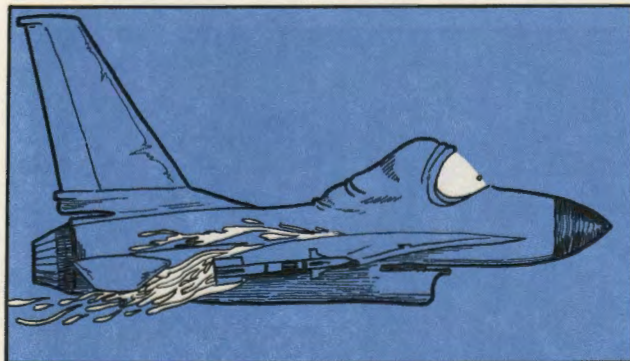
Although the chief couldn't talk with the other workers, he could have asked the pilot to select Emergency on his ramp switch (to lock up the ramp) before he reset the CBs. But if he didn't understand what the ramps were going to do when the CBs were reset, he missed a great opportunity to leave them alone.

The sad part of this story is that it didn't have to happen. Whoever had done follow-on maintenance on the ramps hadn't documented the pulled CBs in the Afto 781. He or she also didn't reset them when the work was complete.

What you don't know *can* hurt you.

When Wiggins is loose

A flight of F-16 Falcons were polishing their air-to-air skills in a warning area on an air combat training sortie. When one of the Falcon pilots managed to get behind his mock-enemy, he noticed fuel streaming from the right wing root of the adversary's aircraft. The flight immediately stopped



fighting and headed home, only sixty miles away. The mishap pilot declared an emergency and made an idle power descent. Because of the wingman's early discovery of the leak and their expeditious recovery, the leaking Falcon landed uneventfully.

Troubleshooters found the Wiggins coupling clamp (that holds the sleeve of the main fuel line in

place on the main fuel manifold) unlatched about 18 inches from its normal location. Without the clamp, fuel under pressure can leak through the sleeve of the main fuel line as it did in this case. Worse, under G-loading, an unclamped main fuel line sleeve can slip off; then the engine will flame out with no way to restart it.

The clamp is adjacent to the fuel shutoff valve. It's a popular area. Each time maintenance workers perform a ground engine run, adjustments are made in this area. Apparently, a worker accidentally bumped the locking mechanism of the Wiggins clamp while safety wiring the main fuel shutoff valve. That's enough to unlock the clamp or even disconnect it. Sounds like a good idea for us to check the clamp's security anytime we've been working around the fuel shutoff valve area.

What's a half-inch among friends

During a night air refueling mission, an RF-4 crew was unable to close the IFR (in flight refueling) door after refueling. They thought the reason might be the popped IFR circuit breaker—but it wouldn't reset. Then, the pilot noticed the fuel gauge was frozen at a reading considerably below what he expected after just refueling. The crew followed the checklist procedure for a broken receptacle actuator and recovered at the home base. But during the descent, one of the outboard tanks partially collapsed.

Troubleshooters found that someone had used an improper screw in the light assembly within the IFR door. The screw that the worker used to hold down the hot wire lead was about a half-inch too long. So whenever the IFR door was opened, the door made contact with the screw and caused an electrical short in the light circuit. The short caused the CB to pop and also prevented external tank pressurization during the descent.

The screw *almost* fit. But since it wasn't designed to do that *particular* job, it didn't do it as well.

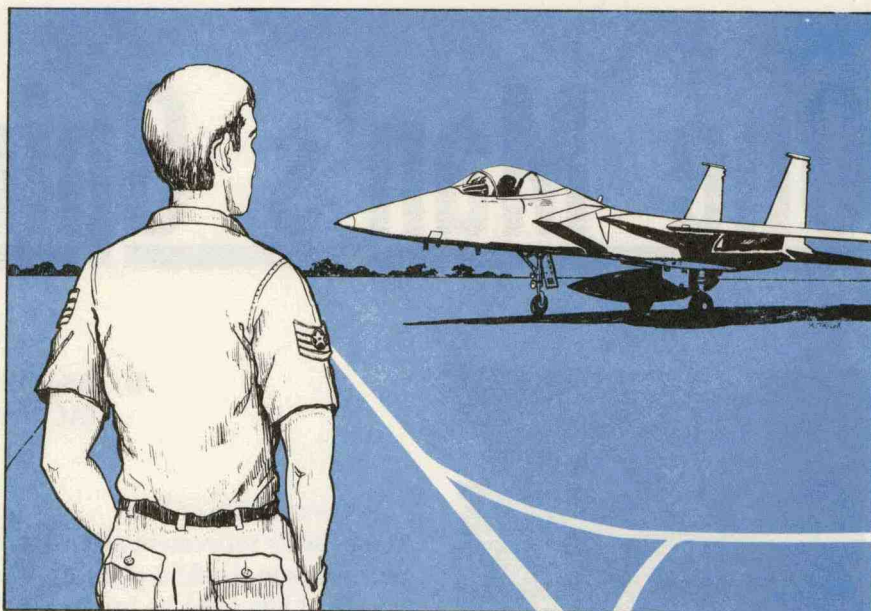
Each of our aircraft are put together with literally thousands of parts. Each part is specifically designed and tested for the functions it must perform. Each one of us who earns his pay working on aircraft can disturb the normal function and operation of a number of aircraft systems—simply by using imagination in substituting parts. Now that we know the potential, let's not let it happen.

BIRDS OF PREY

By SSgt Steven M. Lausten
366 CRS
Mountain Home AFB,
Idaho

A few years ago I changed career fields—from the hot, cold, wet, and dry, I entered the comfort of the shop. The other day I was invited to return to the line for a short stay. Once again I walked on the perch of our birds of prey. Like all great fighting birds, they sat restless on the concrete, waiting to be released to the sky. The maintenance personnel (keepers) were busy about their duties caring and feeding these birds. It wasn't long before I heard some very explicit language. It seems one of the keepers had become careless, and without warning, the bird struck out. The keeper had been safety wiring one of the feathers when the wire entered the skin. Anyone who has worked with it knows the shooting pain that follows when safety wire violates the body. This quick reminder brought back memories of other common mistakes we make around our birds of prey.

Take for instance the keeper that finds out the hard way that rain can hide hydraulic fluid on a dark flight line faster than a kid can hide bubblegum at a theater. This keeper then picks up lesson number two: our birds' surfaces are round. Add wet, slippery shoes to round surfaces, a dash of height, and you have a fall. Or, have you ever tried to lift the bird using nothing more than your head? You thought you were out from under that bird



when you tried to stand up. Speaking of the head, ever have the hair and scalp parted by a Dzus fastener that just so happened to be hanging down from a panel? Words alone cannot express the pain. And just when you thought it was safe to go back in the cockpit, some engineer has placed a bolt in just the right place where you can't get at it without the maximum loss of skin from your hapless knuckles.

These types of injuries (when our birds prey on us) have no safety warning in the tech orders. Nowhere will it state, *Don't puncture the skin with safety wire; Rain and hydraulic fluid and round surfaces may cause falls; Don't attempt to lift bird using only your head; Parting your hair and scalp with Dzus fasteners may mean stitches; If wrench slips off nut, skin will slip off knuckles.* These are only a few of the commonplace safety practices we forget.

So how do we keep from making these same mistakes over and over again? Easy—well, almost easy. First, think about what you're working on. This is no

common everyday bird. This machine was designed with only one purpose in mind: this is truly a bird of prey. And like all wild animals, it deserves a lot of your respect. A second of indifference can spell disaster. My first flight line boss told me, "Airman, every time that bird bites you, be real quiet. You'll hear that beast snicker, and if it was a good bite, you might hear it laugh." Well I didn't hear it snicker or laugh at the airman with the safety wire in his finger, but for just a moment the airman was quiet as if he and he alone could hear the bird say "Gotcha."



Sergeant Lausten has had assignments with the 58 TTW, Luke AFB, AZ, and the 57 FIS, Keflavik, Iceland, as a Weapons Control Systems Technician. He was also a master instructor at the 51st School Sq at Lowry AFB, CO, teaching weapons control systems in the F-4 and F-111 and integrated avionics in the F-111. He is currently assigned to the 366 CRS at Mountain Home AFB, ID, as Swing Shift Team Leader for Transmitter Modulator Test Stations, and will soon pin on Tech.

One Man's Opinion

By MSgt Phil Henriksen
TAC Ground Safety



On the occasion of Phil Henriksen's retirement after 20-plus years in the field of safety, we asked him what he had to say about it. This is what he said.

A safety man is a jack-of-all-trades with an excessive amount of courage and an unholy gift of gab and all of the persuasiveness of a champagne salesman.

Sandwiched tightly between top brass and the teeming masses sits a wide-eyed individual, madly singing a safety tune. He's the most misunderstood, maligned, underpaid, underestimated, unappreciated, underestimated, unheralded, and unsung guy in all the world of business. He's the safety man.

This fellow's a little bit of all strata; a member of none. To the troops he's a tool of management; to management he's just another troop.

He finds his job interesting; but speaking for management from the ivory tower and then running out to the work area and flight line to hear how it sounds makes the job a bit tiring.

He has the curiosity of a cat, the tenacity of a mother-in-law, the determination of a taxi driver, the nervous system of a truck horse, the digestive capac-

ity of a goat, the simplicity of a hammer, the diplomacy of a wayward husband, the hide of a rhinoceros, the speed of a rocket, and the good humor of a hound dog.

He has the activist, busiest, shrewdest, plottingest, worryngest, most washed out brain in the force. His mail basket is the fullest, his desk is the messiest,

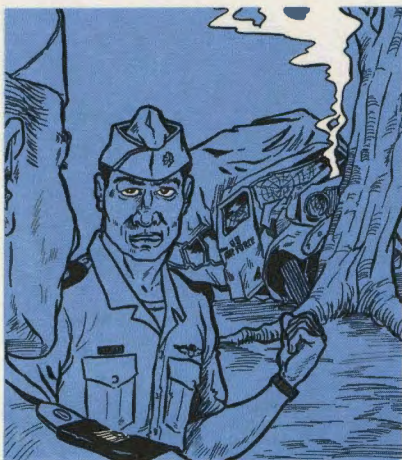


and his calendar the memoist. Nobody has been given the run-around as often, has been passed so many bucks, is left holding so many bags, has cut his way through so much red tape.

The safety man keeps the coffee plantations, aspirin plants, and the midnight oil companies in business. He must tread lightly

over mountains of eggs, and, of course, must know where to tread; but most important of all, when and where not to tread. You'll find him everywhere—shouting loudly over the den of a bunch of jet engines, whispering softly in the hallowed precincts of thick carpets.

Whenever there is an accident, the safety man is called in to explain why. He's expected to pull rabbits out of nonexistent hats. When the job is thankless, he



gets it. He must engender interest in good housekeeping to people who think their house is clean, promote responsibility to men who have been responsible for years, encourage good attitudes, and preach safety to people who think they don't need it.

Despite all of the careful planning, he's usually found dangling on a deadline. He's the original cat-on-the-hot-tin-roof—in the middle of a muddle and late. The master of understanding, he must make fire protection sound as essential as religion. The master of the overstatement, he must make the accident cost sound like the national debt.

He's supposed to be a specialist who can breathe new life into committees, leadership into man-



agement, cooperation into supervisory personnel, responsibility into employees. He must inspire without propagandizing; propagandize without being obvious. He parks his 1971 jalopy between the boss's 1983 Continental and the janitor's 1979 Ford. When



he's clever it goes unnoticed; when he stubs his toe the world knows about it.

To him a headache is normal; he'd have ulcers if he could afford them. He has more critics than he can afford. He meets more people who think they know more about safety than the Air Force has Dzus fasteners.

He can never be right. When he simplifies, he's writing down.

When he gets a little technical, he's over their head. Half the people wonder what he does; the other half knows what he does but thinks he's doing it wrong. When an idea turns out lousy, and after the blame has been thoroughly kicked among the troops, supervisor, and commander, it winds up in his lap.

More people bend his ear than anybody else's. Everybody thinks he always has time to stop and listen to a joke, hear a gripe,



attend a meeting, serve on a committee. He does, and winds up taking most of his work home.

He has no peer in the realm of praise, propaganda, and procrastination. He knows he's right; only the world thinks he's wrong.

If he has an idea it was stolen. However, a stolen idea, is research. Where else do you think the background material for this sad tale of woe of a safety man originated? ➔

Sergeant Henriksen received two very prestigious awards upon his retirement: the Exceptional Performance in Ground Safety Award for his aggressiveness in setting the standards for the command's safety program and for his personal involvement in the development of new ground safety specialists. He was also inducted into the Directorate of Aerospace Safety Hall of Fame, an honor that only five other NCOs outside the Air Force Inspection and Safety Center have earned.

WEAPONS WORDS

Links

By Maj Nick Basler
Chief, TAC Weapons Safety Division

Just about every mishap can be broken down into a chain of events; breaking any of the links can prevent the mishap or lessen its effects. Here is one such mishap:

A unit had deployed to a realistic training site. To take advantage of an opportunity for pilots to expend self-protection flares, operations requested maintenance load flares on the aircraft for the next day's training missions.

The next morning, flares and chaff were uploaded on 11 aircraft. The weapons expediter's AF Form 2432 showed the proper munitions configuration. And the armament placard on each aircraft correctly showed chaff and flares internally loaded. But no one made the configuration change to the daily flying schedule.

All weapons systems on the mishap aircraft functioned as designed on the first sortie. However, after the second mission, the pilot made a write-up in the AFTO 781A: "ALE-40 flare system Inop (no flares came out)."

It was late, and the weapons folks were too busy doing other jobs to download the mishap aircraft. So the line expediter sent two electronic warfare system (EWS) specialists to download the ALE-40s and then troubleshoot the system. The specialists downloaded the two wing-mounted ALE-40s containing chaff, but didn't check the dispensers in the landing gear pod since they normally weren't loaded at home station.

As the troubleshooting progressed, the two flare dispensers in the gear pods expended 58 M-206 flares onto the ramp. The flares provided plenty of



lighting for the flight line—but caught the aircraft on fire as well. The jet received some nasty burn marks—about \$128,000 worth.

Now, about those links I mentioned:

Link 1—not changing the aircraft configuration on the master flying schedule so everyone would know about it.

Link 2—not briefing all oncoming shifts that the aircraft were carrying flares, a munition not dispensed at home station.

Link 3—not completing an AFTO 349 after the pilot debriefing. This led the swing shift expediter to transfer the AFTO 781A write-up as, "ALE-40 inop."

Link 4—not assigning qualified people to download the ALE-40 system, or not admitting lack of certification to perform the task.

Link 5—not following tech data.

A contributing factor may have been complacency. The previous day, the EWS crew had

corrected a *chaff* write-up. Perhaps they were still thinking chaff instead of *flares*. Since they didn't check the AFTO 781 or visually check the dispenser, they missed the clues that flares were aboard.

We had an opportunity to break the mishap chain at several places. But we failed in three basic areas: supervision, training, and tech data. Instead of recognizing the hazardous potential of the situation—a new procedure involving a recently introduced munition while working in a new operating environment—the focus was on the urgent, not the important.

Our own worst enemies

Anybody who works around jets knows how busy it can get between flights. Let's face it, there's a lot of hard work and a little magic performed to get some of these beasts in the air. We're talking about inspections, refueling, oil samples, new drag chutes, up or downloading weapons, minor repairs, and more inspections. Some jobs are done in isolation — as a rule we wouldn't want to be loading bombs during refueling (unless we have special mission requirements like integrated combat turns). Other jobs may be done at the same time. But just because some jobs are approved to be done concurrently doesn't mean there aren't hazards.

A three-man load crew was beginning to download the 30-mm gun on an A-10 when a four-man



ECM (electronic countermeasures) team arrived at the aircraft to work on some chaff dispensing equipment. While the load crew was waiting for a correctly configured ammunition trailer, two of the ECM troops climbed up on a B-4 stand and reached inside the recess of the left wingtip. One worker was pulling down on the aileron counterbalance so his partner could remove the screws on a bracket that needed replacing.

When the ammo trailer arrived, the load crew had to start the aircraft's auxiliary power unit (APU) to get power to rotate the gun barrel for unloading. The load crew chief made sure all the workers on both teams were wearing ear protection before he climbed up and into the cockpit to start the APU. But no one remembers him also saying to stand clear of the aircraft. So the ECM workers put their ear protectors on and resumed work.

When the chief called for clearance to start the APU, a load crew member checked that the APU's intake and exhaust areas were clear and gave him a thumbs up. When the APU started, it supplied hydraulic power not only to the gun, where it was intended, but also to the flight controls. As the aileron counterbalance was drawn back into the wingtip recess well, it crushed one of the ECM worker's hands and amputated the tip of the other ECM worker's little finger.

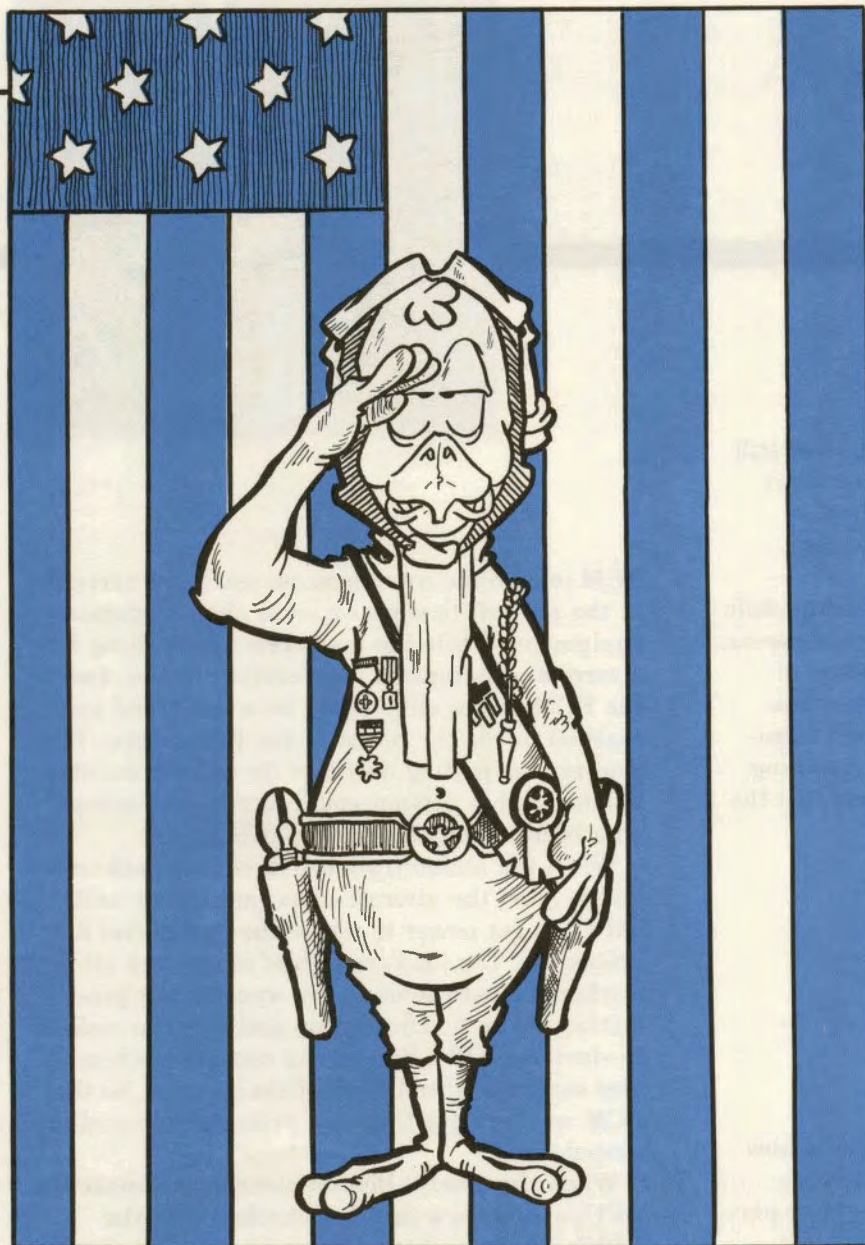
When the workspace around an aircraft is inhabited by two or more teams trying to do separate jobs (like during ICTs), the chances of someone being hurt are magnified. That's a time when we need to be especially careful — of everybody.

FLEAGLE SALUTES

to detail and persistence in performing his duties prevented the possible loss of a valuable aircraft.

SSgt Sherrill J. Ryan, 1 CRS, 1 TFW, Langley AFB, Virginia, is a nondestructive inspection (NDI) technician who has developed a very good unit safety program. She makes sure that everyone in her unit is aware of the hazards associated with X-raying aircraft. She instituted educational programs designed to improve work efficiency and safety awareness. And she conducts daily safety briefings that point out hazards on and off the job. Sergeant Ryan's concern for safety has contributed to the overall success of the NDI operation.

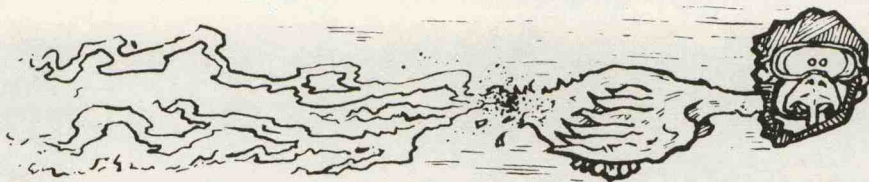
Mr. James W. Brooks, 354 Supply Sq, 354 TFW, Myrtle Beach AFB, South Carolina, established an effective ground safety program. Seat belt use in squadron motor vehicles has consistently been at 100 percent; private motor vehicle seat belt use has been 99 percent. Mr. Brooks also initiated safety contests, posters, lawn maintenance safety practices, and spot inspections. Through Mr. Brooks' initiative, inventiveness, and attention to detail, the 354th Supply Squadron is a safer place to work.



A1C Stewart W. Prigge, 549 CAMS, 549 TASTG, Patrick AFB, Florida, was performing a walk around inspection on an O-2A when he discovered an unknown substance in the drain cup as he drained the fuel sump on the left main fuel tank. At first he thought the substance was water since the airplane

had been washed the previous day. So he drained five more cups; the contaminant was still present. After draining at least 50 more cups, it was still there; so Airman Prigge notified the expeditor. Fuel analysis showed the contaminant to be JP-4 jet engine fuel, poison to an O-2 engine. Airman Prigge's attention

TAC TALLY



CLASS A MISHAPS	▶
AIRCREW FATALITIES	▶
TOTAL EJECTIONS	▶
SUCCESSFUL EJECTIONS	▶

TAC		
AUG	THRU	
	1984	1983
2	15	20
2	12	7
1	11	20
0	9	17

ANG		
AUG	THRU	
	1984	1983
1	4	8
0	2	6
1	3	7
1	3	4

AFR		
AUG	THRU	
	1984	1983
1	1	1
0	0	1
2	2	0
2	2	0

TAC's TOP 5 thru AUG 84



TAC FTR/RECCE	
class A mishap-free months	
36	58 TTW
29	4 TFW
25	405 TTW
23	27 TFW
19	1 TFW

TAC AIR DEFENSE	
class A mishap-free months	
139	57 FIS
92	5 FIS
89	48 FIS
48	318 FIS
39	87 FIS

TAC-GAINED FTR/RECCE		
class A mishap-free months		
148	188 TFG	(ANG)
140	138 TFG	(ANG)
139	917 TFG	(AFR)
117	114 TFG	(ANG)
112	112 TFG	(ANG)

TAC-GAINED AIR DEFENSE		
class A mishap-free months		
122	177 FIG	
88	125 FIG	
71	119 FIG	
55	107 FIG	
46	147 FIG	

TAC/GAINED Other Units		
class A mishap-free months		
181	182 TASG	(ANG)
165	110 TASG	(ANG)
161	USAFTAWC	
153	84 FITS	
95	552 AWACD	

CLASS A MISHAP COMPARISON RATE

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

TAC	1984	3.4	3.4	2.8	2.0	2.6	3.5	3.0	3.0				
	1983	6.9	5.3	3.4	3.8	4.0	3.8	4.5	4.1				
ANG	1984	0.0	2.3	1.5	2.2	2.6	2.1	1.8	2.1				
	1983	9.1	7.0	4.4	4.3	3.4	4.2	4.8	4.2				
AFR	1984	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0				
	1983	0.0	0.0	0.0	0.0	0.0	0.0	3.6	3.1				
		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC



**BY THE BOOK...
or BUY THE FARM.**

By the Book... or Buy the farm.