TAC ATTACK

OCTOBER 1986

Flight leadership... Pg. 4

ANGLE OF ATTACK

Not long ago I was invited to spend some time with a group of dedicated troops that have a very important, but somewhat lonely, mission. Their training and equipment is high tech. Some of it has the air and mystery of a 007 movie.

In fact, I was checked out in the left seat of a machine that would have been a show stopper in "Star Wars." It was awesome. It climbed almost vertical at 60–70% power. During a steep descent, the monster handled like a sports car. The auto-throttle helped maintain a solid energy state. Engine response was immediate—no need for afterburner at all. My most impressive maneuver was a 45-degree climb with a 180-degree slice back. I did it on a dime and the handling characteristics were superb.

Almost sounds as if I was flying, doesn't it? Well, not exactly; but the terrain they use for training the operators of the Maschinenfabrik Augsburg Nurenberg (M.A.N.-thought I was kidding about Star Wars?) tractor really gives you and the machine a thorough workout. You feel about the same as you do after a good dissimilar air-to-air engagement. The only difference is the enemy. For these troops, the main threat is the environment. However, the hazards and risks they face are definitely in line with the ones we face in the air today. They also train for other threats we are very familiar with-aggressors-but this threat comes on the ground and in the silence of darkness rather than out of the sun or from deep six.

These folks must also be prepared for the enemy air threat and use concealment very effectively. Their mission is too important to the security of our country for them to react to a bothersome gnat. Their tactics are sound—they



work hard at being the best and they are.

They don't get to share the limelight as much as some of us because of the nature of their work. But, as always, the real measurement of P^3 (pride, performance and professionalism) comfrom within. They know they are good and I can certainly vouch for their readiness. But then, sometimes we don't want to let everyone know how good we really are—just to keep the other side guessing. Our reputation, tradition and philosophy of excellence as a command is all our potential enemy needs to know—and, believe me, he does.

One very important indicator of readiness is the mishap rate. Show me a unit with increasing mishap trends and I'll show you a unit that has a weakness in structure and readiness. You just don't find one without the other. The Training and Operational units of these missileers have established a record for working the smart way and achieving excellence. And, as in all excellent units, their safety record follows suit.

If you're not sure who I'm referring to, check In The Center (pp. 16 and 17). These troops have the right angle of attack. What's yours?

Golul J. R.

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

TAC ATTACK DEPARTMENT OF THE AIR FORCE



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FLIGHT SH

recent aircraft mishap highlighted the need to emphasize the role of the flight leader. We've all heard how it used to be. The wingman had four things to say: "Two," "Bingo," "Mayday" and "Lead, you're on fire." Well, things have changed a lot and we've given the wingman more latitude. But we need to remember that the flight lead is still in charge and responsible for the flight. We need to look at four basic guidelines that will help our flight leads run a mission more effectively. They are to-

- 1. Take charge.
- 2. Have a plan.
- 3. Be directive.
- Consider your wingman's ability.

1. First, *Take charge*—as the flight lead, you are responsible for what happens during the

flight. You need to let your flight members know from the start that you are in charge. How do you do this? Begin the flight by being a leader on the ground. Be prepared to start your brief on time. Know what is required for the mission. Pace your briefing. Set a step time and stick to it. Taking charge continues through check in, taxi out, takeoff, etc. If you accept below standard performance once, you will see it again and again during your mission. I once flew with a flight leader who, after an extremely sloppy channel change as we approached the active runway, kept his fourship on the ground until everyone checked in on the same frequency, in order and without delays between calls. After properly performing the check-in four times in succession, we took of He had briefed that he wanted everyone to sound sharp on the



radio, and he wouldn't accept less. The rest of the flight went well because he took charge and showed that he expected the flight members to perform as he had briefed.

Have a plan. Know what needs e done on the mission and an how to best accomplish it. If you're in an RTU, check the syllabus and review the students' grade books, not just for the student with whom you are flying, but the grade books of any other students in the same flight, even if they are flying with another IP. Before your first flight with a student, review several earlier grade sheets and look at his background sheet to review his flying experience. In an operational squadron, check your wingman's training book to see if he is in MQT or upgrade training (which is about 99 percent of the

Begin the flight by being a leader on the ground.



time in some units). Also, look at your squadron's training requirements sheet for the half. This will let you plan the events that need to be done in the area, on the range or the type of approach to fly during recovery.

When your plan is formulated, write it down on the board before the briefing begins. This does several things for you. It shows the wingman that you are concerned about him. With the information in front of him, your wingman will be able to better grasp the "big picture" of what you're trying to accomplish during the mission. It also gives the wingman more time to copy critical information onto his lineup card rather than having it read to him.

3. Be directive. Tell your flight members in clear terms what you want from them. For example, when you brief a step time, let everyone know where you want them when that time arrives: in the crew bus, at the desk, in the chute room, etc. Having part of your flight go lost wingman before you leave the building is embarrassing. Think about that same confusion factor in the air. Are you briefing items that will

LIGHT LEADERSHIP

Tell your flight members in clear terms what you want from them.

be open to misinterpretation by your wingmen? If they have to guess what you meant, your directions are not very directive. If a situation occurs in the air that is out of the ordinary, don't leave your wingman wondering what he is supposed to do. Your briefing should have covered his actions during an emergency, but use the radio to guide him before things get out of hand. Remember, "Knock-it-off" if you need to get him re-oriented or to follow the prebriefed course of action.

4. Consider your wingman's ability. If you're flying with a new guy, a simple, concise briefing and plan of action are worth much more than trying to dazzle him with a lot of hot air. If your wingman is experienced, cover the basics and then press on to the meat of your brief or he'll be asleep before you ever get to it. The four principles I've covered are relatively simple and easy to remember, but they won't do any good unless you put them to use. If you don't make the effort, your flight members will know it as soon as you open your mouth, and you'll lose your credibility for the remainder of the mission. If you invest the necessary time and effort, it will show in improved mission accomplishment and mission safety.

AIRCREW OF DISTINCTION



Captain Frank Strasburger, an F-15 instructor pilot, had just finished the first engagement of a dissimilar air combat tactics mission against the Aggressors when a flight member noticed fuel streaming from Captain Strasburger's aircraft. An immediate fuel check showed 4600 pounds remaining. An emergency was declared and the flight turned toward Tyndall as a climb was initiated to conserve the remaining fuel. Fuel was streaming from both sides of the aft fuelage, and a fuel check three minutes after the sak was discovered showed only 2200 pounds remaining with the aircraft still 55 miles from Tyndall.

Captain Strasburger shut the left engine down in an effort to isolate the leak and jettisoned the centerline fuel tank to reduce drag. The shutdown engine had no effect on the loss of fuel and he made the decision to attempt a landing at an inactive civilian airfield 35 miles southeast of Tyndall.

As Captain Strasburger made the turn to final approach for the 5200-foot runway, his fuel gauge

showed 300 pounds of fuel remaining.

He made a difficult single-engine approach over trees and touched down 400 feet from the runway threshold. After touchdown, Captain Strasburger immediately lowered the nose wheel and began maximum wheel braking. The aircraft stopped with 1500 feet of runway remaining and was shut down just as the right boost pump light iluminated, indicating imminent flameout from ael starvation; and his fuel gauge read zero.



Capt Frank Strasburger 2 TFTS, 325 TTW Tyndall AFB, Florida

Total time from discovery of the fuel leak to shutdown on the runway was less than 8 minutes.

Captain Strasburger's calm professionalism and superb flying prevented the loss of a valuable combat aircraft.

tips interest items,

Tell somebody

A two-ship was practicing intercepts one morning under GCI control. During the second intercept at FL260, the attacking pilot noticed he was having trouble visually acquiring the target aircraft. He'd been airborne about 40 minutes and was beginning to notice his personal hypoxia symptoms, so he selected 100-percent oxygen. His symptoms persisted despite that, so he told GCI to make the next set-up a rejoin to RTB.

The pilot's vision began to blur and he began to have trouble analyzing instrument readings. He told GCI to forget about the rejoin; he wanted to go home immediately, single ship. En route he cruised back at FL190.

Once established on ILS final approach, the pilot was still suffering the residual effects of hypoxia because he couldn't keep the ILS indicator from wandering from side to side. He could only see about



half of any instrument and he had trouble correlating the readings.

About seven miles from the runway, RAPCON told him he was too far left for a safe approach and proceeded to give him vectors for a GCA. The pilot had just as much trouble following the controller's instructions as he had in chasing the ILS. Finally, the controller issued gyro-out directions. Three miles out, the pilot saw the runway and landed successfully.

While taxiing back, he switched the radio to maintenance control and tried to relay the aircraft's flying time. He couldn't compute it and finally gave up. He also called the aircraft Code III but couldn't say what the malfunctions were. Later, maintenance found a leak in the oxygen system.

This fellow started in the right direction when he selected 100-percent oxygen but he didn't follow through. By not declaring an emergency or telling either the other pilot or GCI that he was having a problem, he didn't get any help. And, as you can see, that's exactly what he needed. Recognizing our personal hypoxia symptoms is important. We spend time and Uncle Sam spends money every three years refreshing our memories in the chamber. Recognition, however, isn't enough. Follow-through must include things like declaring an emergency, checking your equipment, asking the other aircraft to join on you as you head home and descending rather than cruising home at FL190. The point: tell someone, no matter how insignificant the problem may be or seem to you at the time. It could be the key that r vents a smoking hole.

MISHAPS WITH MORALS, FOR THE TAC AIRCREWMAN

What's a mask for?

An F-4 crew was in a flight of four cruising at medium altitude to a range complex. After flying for a while at FL230, one of the pilots (who had been flying with his mask off) noticed that he was feeling symptoms of hypoxia. When he

ecked, the cabin pressure read 20,000 feet; so immediately put his mask on and selected 100percent oxygen. After informing flight lead of the problem, the crew declared an emergency, descended below 8000 feet and returned to home base.

Prolonged flying at any altitude without your mask on isn't smart. Besides preventing an insidious hypoxia problem such as this, your mask is also your only means of communication both inside and outside the aircraft. You don't want your first indication of a problem to be like your last chamber ride, so don't get caught with your mask down.

Why didn't you tell me?

The F-4 crew was late stepping to their aircraft because refueling following the first sortie wasn't quite finished. Now they were pressed for time. The pilot reviewed the forms and did the aircraft preflight while the WSO focused his attention on the weapons preflight. After he strapped in, the WSO turned the radar on to perform his air-toground BIT checks and then left it on for the

round BIT checks and then left it on ht.

bout 10 minutes after takeoff, the WSO noticed



smoke beginning to come out of his radar scope. Both crewmembers immediately went to 100-percent oxygen as the backseater turned his radar off. The smoke dissipated as they returned to base and landed.

It wasn't until after they first noticed the smoke in the cockpit that the pilot recalled a small writeup in the aircraft forms about the radar. The last line was written in red pencil stating "DO NOT TURN ON RADAR."

What are some of the things you would do to prevent this kind of problem? You don't need to be a technician—good judgment and working smart is all it takes.

The radar technician could have-

1. pulled the radar circuit breaker

2. further explained the writeup-"Serious damage will occur to aircraft."

The crew could have prevented the mishap by-1. an aircraft status briefing by the AC prior to strap in

2. not rushing their preflight routine 3. or . . .

Cutting corners and taking shortcuts never pays off.

Unauthorized entry onto the flight line ... Unauthorized boarding of aircraft ... Intentionally severed aircraft wire bundles ... Sabotage ? Terrorist ? Sound interesting ? Read on .



Maj Harley Davidson TAC Flight Safety

We knew they were around. We even knew they occasionally entered the flight line during the hours of darkness. But, their actions seemed so innocent that no one really suspected their sinister intent; that is until strange things began to happen.

A crew chief was walking around an A-10 aircraft when he thought he heard movement inside the right wing. When he tapped on it, the noise immediately stopped. When he could no or oper hear any noise or get a re-

nse to his taps, the crew chief ...st shook his head and went on about his business. Around that same time, electrical components on several other aircraft started malfunctioning. When maintenance teams opened up the wing. they found several wires severed and the insulation removed from other wires. But, more importantly, they found evidence to identify the intruder. The wire bundles had obviously been chewed and there were paw marks and fur in the immediate vicinity.

OK, Sherlock, what do you think? Gremlins? Not this time. These problems were caused by raccoons. A number of them had entered the wings of A-10s through the landing gear pod where they proceeded to chew up the wire bundles. How serious was the problem? This particular 0 unit suffered wire bundle lage to 8 of its 25 aircraft.

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While raccoons may be a new twist to the story, the problem of small animals damaging electrical wiring has been around for a long time. Birds and mice often enter aircraft looking for protected areas to hide and nest. This in turn invites larger animals such as rats, snakes, raccoons and even skunks to enter the aircraft, foraging for eggs or smaller animals. In one incident a cat entered an F-4, presumably looking for rats or mice. Once inside the jet, the cat caused an electrical short and inadvertently morted itself in the process.

Exactly why these small animals like to chew on electrical wiring, I don't know. The fact is they do and the results can be disastrous. As wires short out and stray electrons begin to travel along the wrong wires, things can begin to fall off the aircraft (bombs, TERS) or critical components of the aircraft, such as control actuators, won't work right. Problems may pop up days, weeks or months after the initial damage occurred.

What's the answer? When I first heard about the raccoon problem, I immediately had a great idea: Replace current military working dogs with more versatile "multi-role" coon hounds. OK, maybe it wasn't a great idea, but how about considering the following:

1. Pilots and maintenance personnel, especially those working at night, should be on the lookout for small, wire-chewing creatures. If you see such animals around the aircraft, chances are some of them will be inside the airframe as well. Be particularly alert if your ramp and maintenance areas are near wooded areas that might provide a habitat for such small animals.

2. Small animals normally avoid entering jets that fly often. They seem to have an inherent distaste for high "G" tactical maneuvering. But what about the hangar queen? The hangar queen is a perfect target for any and all small creatures that might be looking for a home. These aircraft deserve special attention.

3. If animals are entering the aircraft, consider the possibility of blocking access openings with permanent plates/screens or temporary "remove before flight" plugs.

4. Everytime the aircraft is opened up for maintenance, look for telltale signs of unwelcomed guests. Report such findings.

5. Finally, consult the base environmental specialists. These folks may have the answer for temporary or permanent removal of such unwanted visitors.

Be alert to the hazards posed by small animals entering your aircraft. We have enough normal maintenance activity to keep our tactical aircraft mission ready. We don't need gremlins of any type.

Mr. Cal Faile TAC Ground Safety Division

The beginning of this story is not unusual to personnel in the 431X0 career field. Roll call, assignment of tasks and duties, and the day-to-day business of a busy flight line set the scene for this episode in one assistant crew chief's life.

He was characterized as being outgoing, eager, happy and helpful. He consistently tried to please his friends and coworkers. The young airman's responsible nature and "can-do" attitude sometimes made it necessary for his instructors and co-workers to hold him back so he could take a more thought-out approach to accomplish a task. He was trained by-the-book; however, his "can-do" attitude sometimes caused him to forget his training. But he had the potential for a great future; and, at age 19, he had time to improve.

After reporting for duty at 1500, he performed various tasks at his assigned aircraft. At approximately 2000 he asked the flight line expeditor, who was accompanied by the young crew chief's supervisor. for a nitrogen cart (nit-cart) to service the aircraft's nose tire. When the expeditor and supervisor delivered the nit-cart, the supervisor explained that he had another problem to work on that would take a couple of minutes; and that he was to wait for him to return before servicing the tire.

After the supervisor departed, the airman proceeded to the AMUSS where he checked out a tire gage and nitrogen hose valve assembly. The first mistake he made was not checking out the tire servicing kit required by the tech order available at the aircraft.

After returning to the aircraft, he positioned the nit-cart and, using a six-inch crescent wrench, connected the nitrogen hose valve assembly to the nitcart servicing hose. He made another error when he connected the nitrogen hose valve assembly with a high-pressure air chuck to the valve stem of the aircraft nose tire and tightened the air chuck on the aircraft valve stem with the crescent wrench. He should have been using the tire servicing kit that was required by the tech data.

He then selected a highpressure instead of a lowpressure setting on the nit-cart regulator and positioned himself on the right side of the aircraft nose tire, again violating tech data—he should have been in front of the tire. He opened the nitrogen hose valve assembly and applied over 970

SHORT CUT TO DISASTER

to the nose tire assembly.

e nose wheel assembly expided from the over-pressure into two halves. The right half struck the young airman, killing him instantly.

The formal investigation revealed common mishap factors: Failure to follow tech data, failure to follow supervisor's instructions, taking a short cut in task performance and placing oneself in a danger zone. But the factor that caused this crew chief to lose his life was being in the danger zone, beside the tire, instead of being in front of the tire. He could have survived if he had been in the safe zone.

We all take a short cut now and then, but we cannot afford short cuts in critical/hazardous operations, especially when working with both low- and high-pressure systems. It's your bice to follow the tech data or take a short cut to disaster.



DANGER ZONE

DANGER

ZONE

DOWN TO EARTH ITEMS THAT CAN AFFECT YOU AND YOUR FAMILY

Keeping your child hearing well

Young children often cannot communicate their discomfort during the early stages of a cold, fever or earache. But one of the most prevalent childhood infections—*otitis media*, or inflammation of the middle ear—is also the most common cause of preventable hearing loss in children, affecting approximately one-third of all children before age three. Many children don't receive their first hearing exam until they enter grade school; but by then, untreated *otitis media* may have already caused significant hearing loss.

According to the American Academy of Otolaryngology—Head and Neck Surgery, parents may not associate the warning signs, sometimes as simple as a child tugging on his ear, with this potentially serious ear infection.

Earaches can be caused by numerous problems in the head and neck region and may affect different parts of the ear, such as the outer ear canal, inner ear, and in this case, the middle ear. *Otitis media* occurs when there is a bacterial or viral infection of the middle ear accompanied by retention of fluids in the middle ear. The Eustachian tube, the passageway from the middle ear to the back of the throat, is blocked by swollen, inflamed membranes.

If the fluid is unable to drain, it prevents the eardrum from catching sounds properly and transmitting them to other structures needed for



hearing. Inflammation of the eardrum causes the severe earache that accompanies this condition.

The muffled hearing is usually a temporary condition, but without proper treatment, these earaches can lead to hearing loss. Parents should be alert if a child complains of these symptoms of *otitis media*—they warrant a trip to the doctor: A feeling of pressure or blockage in the ear; persistent pain; frequent tugging on the ears; fever nausea and vomiting; and muffled hearing.

Military family housing fires

Mr. Frank L. Denny TAC Fire Protection Division

Since 1985, two-thirds of reportable fires in TAC have occurred in military family housing. Major causes of these fires have been unattended cooking (49 percent), children playing with flame-producing devices (18 percent) and electrical (13 percent). Although TAC's goal to reduce fire incidents by 5 percent each year has been met, the percentage of fires in military family housing continues to rise.

Fires in family housing are usually small and the loss is kept to a minimum; however, each fire still poses a threat to the lives of occupants as well as the loss of personal items that can't be replaced or are difficult to duplicate: legal records, titles and registrations, family mementos, pictures and birth certificates.

Another factor that is often overlooked is the member's responsibility for the quarters. Although it is recommended to purchase fire insu

October 1986



HERE ON THE GROUND

ance (and it is available at minimum cost), many members still don't have fire coverage and must bear the financial burden when found negligent. For example, unattended cooking, the number one cause of fire in military family housing, is considered negligent; and in almost all cases, the sponsor has paid for the damage.

Our fire departments provide fire information/ cientations to occupants within 30 days after .ving into military family housing; that's your .ne to get specific with your fire protection expert.

Taking a close look at contacts

Eye specialists are worried by a small but significant number of corneal ulcers among users of extended wear contact lenses. Ophthalmologists explain that the lenses can normally be worn up to 30 days at a time because they absorb water and allow oxygen to pass through. But ophthalmologists say the lenses can also absorb bacteria and debris and hold them against the eye, leading to infections that cause the corneal ulcers.

Some ophthalmologists point out, however, that many of those who have suffered these infections didn't wear their lenses according to directions. Some wearers kept the lenses in their eyes for six months without removing them. If the lenses are properly fitted and cared for, the risk of infection is very small.

If you wear contact lenses and your eyes suffer from redness, pain or impaired vision, you should see your eye specialist immediately.

HEADS UP

Next month, in the

NOVEMBER

issue of TAC Attack, you will see Sgt Kelvin Taylor's stipple rendition of the CH-3E Helicopter IN THE CENTER.







(GROUND LAUNCHED CRUISE MISSILE)

CAN YOUR FAMILY ESC

By Tom Naughton

The 4-year-old boy knew he shouldn't play with matches because his father often told him so. But curiosity got the better of him, so he sneaked under his bed to play with the matches and a candle he'd found.

Suddenly the mattress was on fire and the flames were spreading to nearby drapes. The boy's father rushed in to rescue him and his 6-month-old brother, who was asleep in his crib.

After the fire department put out the fire, the father went back to look at the charred bedroom. "There was a smoky outline of the baby in the crib," he recalls. "Another minute and my little boy would have been dead."

The father knows what he's talking about. He's Mike Kerrigan, a 17-year veteran of the Chicago Fire Department, and he tells this story to make a point: "People all have the same attitude; they think they're never going to have a fire. Believe me, if it can happen to me, it can happen to you."

As a member of Chicago's Fire Prevention Bureau, Kerrigan gives daily presentations to the city's school children. He



APE A FIRE?

tells them that fires can and do happen, and that families are more likely to live through the experience if they plan and practice how to get out of a burning home safely.

Your own home can become a confusing place during a fire, Kerrigan explains. "Most home fires start at night, so when that smoke alarm goes off, you're going to be groggy. The room might be filled with so much smoke that you can't see your hand in front of your face.

re. We've had people who ve lived in a house for years try to open a door the wrong way during a fire." Planning the proper escape route will reduce this confusion, Kerrigan says.

Of course, to get out safely, you must first know a fire exists, and that is why every home should have smoke detectors. Kerrigan recalls people who died of smoke inhalation in upstairs bedrooms while the fire was still smoldering downstairs. Good smoke detectors, installed in hallways outside bedroom doors, will be triggered by even the smallest fires, which can often be extinguished before they grow out of control.

Keep Doors Closed

You should sleep with your room door closed, Kerrigan 3, especially if you don't have smoke detectors. A closed door will help block smoke and should resist burning through for 15 to 35 minutes.

Each member of the family should also have a whistle within reach of the bed, Kerrigan says. "That way when you wake up and smell smoke, or when the smoke alarm goes off, you can blow the whistle. You wake up everyone else, and you let them know you're awake and getting out. When they blow their whistles back, you know they're also getting out."

To choose the right way to get out ahead of time, Kerrigan says, you should sit down with your family and draw a diagram of your house that includes all doors, windows and stairs. Discuss the ways out of each room (there should always be at least two) and when to use them, and choose a place for everyone to meet outside.

It's especially important that you teach children to get out, Kerrigan says. "Little children think they can hide from the fire, so they crawl under their beds or into a closet. But the smoke will find them."

Once the escape routes are drawn on paper, everyone in the family should practice the actual physical motions of getting out, starting with the right way to get out of bed: "You should roll out of bed onto the floor," Kerrigan explains. "If you stand up into the smoke and gases, it can knock you out or even kill you."

Crawl Along Floor

After you've rolled out of bed, you should crawl along the floor to find your escape route. Smoke rises, so any good air should be close to the floor.

The first way out you should try is the normal one, the door. But you must feel it with your hand before you open it, Kerrigan says. "If it's warm, don't open it. Almost everything that burns will give off gases, and many of them are poisonous. If you open the door without feeling it, you can get blasted with a mixture of these gases, smoke and superheated air."

If the door is not warm, then you can open it just a crack. If the hallway looks clear, you may be able to get out that way. If there is smoke, close the door quickly and crawl to the window.

If bedrooms are on an upper floor, you should prepare a safe way down. Kerrigan recommends the chain ladders with arms that hook on window sills. These ladders are light and compact, and are usually available at hardware and department stores. If you can't afford ladders, you should at least get a ¾- or 1-inch diameter rope, Kerrigan says. Ropes are much harder to climb than chain ladders, but they are bet-

CAN YOUR FAMILY ESCAPE A FIRE?

ter than nothing. "Tie one end to a bedpost or a dresser, then tie a knot every three feet so you won't burn your hands sliding down. You can coil the rope into a loop and put it under the bed or dresser so it's out of the way. If you have a fire and can't get out the door, all you have to do is open the window, throw the rope out and slide down."

If you have to go out a second-floor window and have not yet installed a ladder or rope, there is still a way to jump that will reduce your chances of being hurt. "Back out the window, then hang down by your hands from the window sill as far as you can," Kerrigan explains. "By the time you do that, you're not very far up. Then push away from the building as you let go."

If you live in a high-rise apartment building and can't get out through the door, you may have no choice but to wait for firefighters to get you out. But that doesn't mean you stand little chance of surviving the fire. As Kerrigan explains, the materials used in high-rises have to meet codes that make



it difficult for a fire to spread through a building. And you can take steps to keep from being overcome by smoke. "I tell everyone who lives in an apartment building to get a roll of 2-inch masking tape for each bedroom. If you can't get out during a fire, take the masking tape and go right around the door to seal it. Then take a towel or shirt and stick it under the door to keep smoke from coming in. Kneel down near the window and open it at the bottom to get fresh air. If you can also open part of the top, any smoke will go out there." You will get more fresh air if you take blankets from vour bed and make a tent over your head at the window.

Once you have done this, your best bet is to yell for help until firefighters can rescue you, Kerrigan says. You should never jump from a third floor or higher.

Go To Meeting Place

When you have gotten outside—either by yourself or with the help of firefighters go to your prearranged meeting place and stay there. Kerrigan says this cannot be stressed enough, because it lets everyone—including firefighters at the scene—know who is safe and who may still be inside. He recalls a fireman friend who died after going into a house to look for a missing boy. "It turned out the boy wasn't ev in the house. He was out in the alley, watching the fire."

It should be obvious that it's not worth going back into a burning house to save possessions, and yet people do it, Kerrigan says. "We pulled up at one fire, and a guy was hang-jumping from the second floor. He hit the ground, dusted himself off, and he was fine. Then while we were leading out the hoselines, this guy ran right by me. I tried to grab him and he said, 'I have to get my stereo.' We found him a few

inutes later, dead. People nk they can run through snoke and fire because they see it done on TV. It just doesn't happen that way."

Wait For Firefighters

It's even more difficult for parents not to return to rescue a missing child, but Kerrigan says the child stands a better chance if parents wait outside and tell firefighters where to look. "We're trained to go into burning buildings. Parents aren't. We also have our equipment, our air masks and tanks, so we're somewhat protected." Parents who run back into burning houses leave firefighters with the double duty of looking for both the child and the parent.

If, when the smoke alarm goes off, you crawl to your door, feel it, and open it to find the

h is clear to your children's rooms, then it's all right to help them out, Kerrigan says. But if the path is blocked by smoke or fire, get out, stay out and wait for firefighters to rescue children.

Practice The Plan

Obviously, there is quite a bit to remember about escaping from a burning house. That's why it is important to practice. "Schools have fire drills once a month," Kerrigan says. "I tell the kids they should do the same thing at home. They're at home more than they're at school."

Practicing fire drills at home

FIRE SAFETY CHECKLIST

A fire escape plan is like a life insurance policy—you should have one, but do everything possible to avoid needing it. Follow these tips to prevent fires in your home.

• Keep your home, both inside and out, free of all loose combustibles, such as rags, papers and dried leaves.

• Store all flammable liquids paint, varnish, gasoline and kerosene—in their original containers or in UL-or FM-approved containers.

• Keep all cooking appliances free of grease and food buildup.

• Never start a fire in a stove or fireplace with gasoline, kerosene or any other flammable liquid.

until the motions become second nature may prevent someone from making a fatal mistake, such as standing up into a layer of smoke or opening a door without feeling it first. If nothing else, practice will make the escape go more quickly. That alone, as Kerrigan explains, may make the difference. "By knowing what to do ahead of time, you give the kids a chance. In a smokefilled house, seconds really do count."

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• Keep curtains, drapes and furniture away from any heat source, such as a stove or space heater.

• Make sure all your electrical appliances are labeled by Underwriters Laboratories, the Canadian Standards Association or another reputable testing agency.

• Don't overload electrical circuits by using multiple attachment plugs.

• Have all chimney and flue connections checked by a qualified service person at least once a year.

• Keep all matches out of children's reach.

• Keep plenty of ashtrays in the house when smokers are around.

• Never smoke in bed, and don't light up if you are drowsy—careless use of cigarettes is a leading cause of home fires.



INCIDENTS AND

Where did it go?

The F-4 Phantom had a 600-gallon fuel tank on the centerline when it launched on the sortie, but there was nothing there when the jet landed. The



crew hadn't touched the centerline jettison switch during the flight, but the tank was gone just the same.

During troubleshooting, the maintenance troops found the centerline tank breeches had a constant 28 volts applied to them with the cockpit switches in a safe position. The maintenance technician also found four wires in the centerline wire bundle which were spliced adjacent to each other instead of being staggered according to tech data guidance. Vibration and gradual deterioration of the insulation material eventually allowed contact between two wires, and the closed circuit caused the centerline tank to jettison.

Following tech data is never something to be taken lightly. A few more minutes to splice the wires properly would have prevented the loss of a \$3000 center line tank and a dropped object incident.

Watch those fingers

A worker was assigned to move two, 55-gallon drums that weighed 470 pounds each. He loaded both of them on the forklift tines and headed for the new storage area.

At the new warehousing location, the worker stopped to ask where they wanted the drums to be placed. Before he jumped back in the forklift, the worker checked the drums to ensure they were still centered. Noticing that the front drum was slightly off center, he took his leather workman's gloves off to "get a better grip on the drum," bent down and lifted the drum approximately 3 to 5 inches off of the right tine and pushed it back into position. As he laid the drum back down, he pinched the tip of his left middle finger between the underside of the drum and the right tine. He felt pressure and a little pain but did not realize his finger was jammed tightly between the drum and the tine. When he stood up, he ripped the tip of his left middle finger completely off. The amputated tip of the finger was crushed beneath the weight of the drum and

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INCIDENTALS WITH A MAINTENANCE SLANT

efforts by the hospital to save it were unsuccessful. You work around a lot of heavy and sometimes sharp objects that can cause serious physical damage if you're not careful. If you're doing some insive physical moving, take extra care to make that you're not going to suffer either damage or loss to one of your fingers or toes.

There-take that

A n F-4 had just been topped off with fuel at one of the hot pits, and one of the technicians disconnected the refueling nozzle and handed it to his assistant. The second man raised and swung the nozzle, trying to swing the hose clear of an AIM-9 missile on the aircraft. Unfortunately, he was unable to control the momentum of the hose and the nozzle struck the missile, shattering the radome.

Using a little more brain and not so much brawn can take a few more seconds but usually prevents a costly item, such as a missile, from having to go back to the depot for repairs. Think about it. If we do it smart, safety takes care of itself.

No safety pins

n INS technician was dispatched to an F-4 to work on an optical sight writeup. After checking the aircraft for safety devices, he applied external power to the aircraft. As soon as he did that, he heard a pop and found that one squib of chaff had discharged.

When the night supervisor inspected the aircraft after the incident, he found that no chaff/flare dispenser safety pin was installed. None of the appropriate technical data for accomplishing the task was readily available. The young man doing the maintenance had recently received his 5-level certification but wasn't being supervised on this particular job. The working area around the aircraft wasn't properly lighted.

We severely damaged an A-10 not so very long ago in a similar situation. In this case, flares were inadvertently dispensed during ground maintenance and the Warthog caught fire.



TAC ATTACK

HAVE EVER BEEN ARRESTED? more concerned with the cab

Maj Bill Barber **TAC Flight Safety Division**

lo rephrase an old adage,

rectional control, runway condition, heavyweight takeoff abort, etc.) there's bound to be some pucker factor. The best way to make your first engagement a successful one is take an advanced look at the factors involved and form a plan before you need it. Each aircraft has specific flight manual procedures, but here is a review of the general principles.

The first step is deciding whether or not to take the cable. In the case of a takeoff abort, the decision must be made quickly. Fortunately, I've never known or heard of a unit where there was any penalty for putting the hook down and then finding it wasn't needed.

the other hand, delaying

"hook-down" step can allow the cable to get to your deep six o'clock where it does you no good at all. The same logic applies to landing rolls if there is any question about your ability to bring the aircraft to a stop in the remaining runway. Put the hook down, then see if you need it. Communicate your intentions to the tower as soon as conditions permit. If you'll be using a BAK-14 type cable system and it's in the down position, it may take up to 7.5 seconds to raise and lock.

If you're airborne when the possibility of an engagement arises, you'll have more time to make the decision and plan the engagement. Should you take the cable? There are many things to consider such as the nature of the problem, cable configuration, cable engagement speed limits, weather, winds, ordnance jettison, etc. Again, if your ability to stop the aircraft or just stay on the

Many pilots landing with serious emergencies have been more concerned with the cable engagement than with their immediate problem. runway is questionable, you probably need to take the cable.

Calculate the approximate speed and weight with which you'll be hitting the cable and be sure that the arresting system available is adequate. Sometimes, in order to make an approach-end engagement, it is necessary to land downwind. Don't forget to add the tailwind into your engagement speed. If you have time, it's helpful to reduce your gross weight; but be sure to save enough gas so you can go around if necessary.

Be sure to bring the SOF into the loop early. He can provide a lot of information on the status of the airfield as well as the benefit of his experience. Once the SOF knows there is going to be a cable engagement, there are several other things he can begin to do. He can announce the anticipated runway closure and plan the recovery of other aircraft. He can get the fire department in position, and he can have the cable system inspected to be sure it is ready for you. However, if you need to get your bird on the ground right away,



HAVE YOU EVER BEEN ARRESTED?

don't delay for these actions.

Planning what you'll do if you miss the cable is also an important consideration. The hook can skip over the wire anytime, and it seems to be a particular problem for F-4 aircraft taking BAK-14 cables. Again, there are many factors to consider: but if you had a good reason for taking the cable in the first place, you may be safer flying than rolling, so a go-around is often appropriate. The important thing is not to wait until the hook skips to decide what to do. Make a plan while you're still airborne so you'll be ready if it happens.

OK, so you've decided to take the cable, completed all checklist items, and here you are on final with the hook down. You'll want to touch down far enough in front of the cable to make sure that all three gear are on the ground before the engagement. Steer to engage near the center of the runway (or just slightly off center if the runway has centerline lights imbedded in the surface). How far off center is acceptable is specified in each aircraft's flight manual. Be off the brakes as you roll across the cable. Once you're in the cable you'll find that the deceleration is smooth and gradual and not as big a deal as you may have expected if you've never done it before. Normally you'll come to



a complete stop 500-1000 feet past the point where you engage the cable. You'll know you've missed the cable if you find yourself 1000 feet past the cable with no deceleration, or you may be alerted by a radio call from the SOF, runway operations monitor or fire chief. Execute your missed engagement plan as soon as you're sure you're past the cable and not in it.

Once the forward motion of the aircraft stops, all is not over. First, there's the rollback you may experience as a result of stretching the cable. Use flight manual procedures to control this. The F-16 may tilt backwards onto its tail if brakes are used while rolling backwards, so use the throttle

What you do after the engagement depends on the nature of your problem. Several options are immediate ground egress, shutting down on the runway, disengaging the cable to taxi clear of the runway or taxiing back to parking. The marshaller (normally the fire chief) is now in the best position to see what's going on around your aircraft. Unless you feel it would compromise safety, follow his instructions and signals for shutdown or disengagement and hook retraction. You may be able to talk directly to the fire chief on the radio or the SOF can relay messages.

A well planned and executed cable engagement is really not a big deal. A poor one is. With advanced thought and planning, all of yours will be suc cessful.



WEAPONS WORDS

They functioned as designed

SMSgt Ed Hartman TAC/SEW

One of the most often performed operations on the flight line is the functional check of weapons systems. The checks are performed hunreds of times a day; and when properly per-

ned, no significant hazards are involved. The phrase is "when properly performed." One or two missed steps in the checklist could lead to disastrous consequences. The steps "Check ejector carts are removed from all stations" or "Insure safety pins are installed in all loaded stations" were not performed in any of the following eight mishaps. The jettison systems worked perfectly each time; unfortunately, the ejector carts were installed and the aircraft was still on the ground. Damage was limited to the jettisoned items this time. We could have lost an aircraft and came very close to losing a load crew member. Take the time to perform all steps in your checklist and don't assume someone else has already done it. It's your responsibility.

0530 hours—Load crew performed functional check of external stores jettison system. Carts in both 370-gallon tank pylons fired.

1100 hours—During troubleshooting for a hung bomb problem on one station, CCU-44 carts were inadvertently fired on another station.

2100 hours—(same unit) During troubleshooting for a hung bomb problem on one station, CCU-44 carts were inadvertently fired on

other station.

300 hours—Technicians performed functional ...eck of centerline pylon. Prior to shutting down

aircraft power, one technician began installing ejector carts. As cart liners were tightened, the carts fired, ejecting the pylon to the ground (safety pin was not installed). Technician in cockpit said he may have hit the jettison button during switch safing.

2030 hours—Technicians installed outboard pylons on aircraft which was in a hangar. During functional check of the pylons, the centerline pylon jettisoned on the hangar floor.

1730 hours—Load crew installed outboard pylons on aircraft. During functional check of the pylons, the 600-gallon centerline tank jettisoned on the ramp.

0900 hours—During jettison and stray voltage checks on an aircraft, the 600-gallon centerline tank was jettisoned on the ramp; 600 gallons of fuel spilled.

1330 hours—During troubleshooting of a missile arm problem, the centerline fuel tank was jettisoned on the ramp.





There's no doubt about it: drugs are a big problem in the United States today. And you might not be aware that some "over-the-counter" products contain controlled drugs or are being used for a drug-related "high." Health food stores are selling a Peruvian tea under the brand name Health Inca Tea, or HIT. Although HIT is advertised to be "decocainized" coca leaves, lab tests show that the cocaine has not been removed and has the same concentration as untreated coca.

Adolescents have found a new way to get "high" by sniffing typewriter correction fluid. The solvents in the fluid cause an "alcohol high" that lasts about 15 minutes, followed by a "down," but not unpleasant feeling. Inhaling the fumes can cause cardiac arrest, confusion (could be hard to detect in an adolescent), loss of consciousness, central nervous system depression and kidney poisoning. Some deaths have been reported. Doctors found that kids who were sniffing correction fluid didn't know it was dangerous.

If you are confused about the many different types and have safety concerns about infant/ child safety seats, you can do two things. First, the American Academy of Pediatrics has developed a free pamphlet, "A Family Shopping Guide to Infant/Child Safety Seats," that lists brand names and suggested retail prices of more than 50 approved safety seats. For a free copy, send a self-addressed, stamped business envelope to FS Shopping Guide, American Academy of Pediatrics, P.O. Box 927, Elk Grove Village, IL 60007. The second thing you can do is call the United States Department of Transportation's toll-free auto safety hotline at 1-800-424-9393 (Washington, D.C. area, call 366-0123). If you're interested in learning more about medication tampering and related safeguards, the United States Pharmacopeial Convention is offering a free pamphlet titled "Tips Against Tampering." Just send a self-addressed, stamped business envelope to USPC, 12601 Twinbrook Parkway, Rockville, MD 20852 to receive it.

If you are one of those organized people who start Christmas shopping early, the Consumer Product Safety Commission (CPSC) wants you to know that toys killed 33 children in 1984 (latest statistics) and hurt more than 500,000. Most frequent sources of injury were bicycles, small toys, skates, sleds and skateboards. For up-to-date information concerning toys, call the toll-free CPSC hot line at 800-638-2772.

Mr. Tom Dodds, a writer for the National Safety Council's Family Safety and Health magazine, came across this list of rules "guaranteed to make life [and being safe] easier." If you open it close it. If you turn it on, turn it off. If you unlc it, lock it up. If you borrow it, return it. If you make a mess, clean it up. If you move it, put it back. If you break it, admit it. If you don't know how to operate it, leave it alone.

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Child safety seat recall. Century Products and Kolcraft Products, Inc., are recalling two child safety seats that didn't pass the simulated crash test by Standard No. 213 when the seats were tested in the infant (rear facing) position; however, there have been no reports of injuries to date. Century is recalling about 167,800 seats. models 100, 200, 300 and 400XL and can be identified by one of the following lot numbers stamped on the label on the seat: 8504, 8505, 8506, 8507, 8508, 8509, 8510, 8511, 8512, 8601 and 8602 and the number 1 molded into the back of the car seat shell. Owners can call Century's toll-free number, 1-800-222-9825, to receive a nocost modification kit. Kolcraft is recalling approximately 31,000 Model 131123 Rock n' Ride infant seats that were made from February to June 1985. The affected seats can be identified by tl date stamped on the back of the seat. Owners can call Kolcraft, toll-free, at 1-800-453-7673, to receive a free replacement seat.

TAC SAFETY. WARDS CREW CHIEF SAFETY AWARD



SSgt Raymond A. Kazmierczak 4 AGS, 4 TFW Seymour Johnson AFB, North Carolina

ccording to his supervisors and squadron commander, SSgt Raymond A. Kazmierczak been a consistently outstanding crew chief and a superior flight line performer.

Sergeant Kazmierczak's devotion to duty and concern for flight safety are evident on a daily basis. As a specific example, after his aircraft had returned from an air-to-ground mission, Sergeant Kazmierczak found a broken gun belt in the nose section which caused several rounds to become dislodged. The gun was subsequently replaced. Yet, when he conducted his own postinstallation inspection, he noticed that powder residue was left in the compartment. He then helped the weapons troops clean and reinspect the system to prevent any possibility of ignition and fire.

On several other occasions he has stopped aircraft from taxiing with boarding steps down, removed external tank pins that had been overlooked, found various foreign objects in cockpits and even stopped an aircraft that was about to taxi with its gun door open. These incidents, while minor in scope, are major contributions in terms of safety awareness and flight line leadership.

As shown by these examples and his excellent rd on quality verification inspections, Ser-

ant Kazmierczak is extremely dedicated, sets a fine example and is an excellent role model for other crew chiefs.

INDIVIDUAL SAFETY AWARD

As NCOIC of the 21 AMU Weapons Flight, TSgt David G. Hulgan has consistently demonstrated his outstanding ability to supervise and direct all flight line munitions operations.

While assigned as the NCOIC of the Loading Standardization Section, Sergeant Hulgan developed two new programs that earned his section an excellent rating on a recent TAC MEI. His first program, the Load Crew Incentive Program, was developed to recognize and reward deserving people for outstanding performance. He developed his second program, Squadron Load Crew Certification, because he wanted the squadron's load crews to exceed minimum standards. The in-depth task certification and monthly proficiency evaluations now required have ensured all assigned load crews exceed the standards.

Sergeant Hulgan's work has had excellent results. His squadron was tasked to provide munitions support for the largest rocket firing competition-TURKEY SHOOT-ever attempted by his unit. Sixty-eight sorties were scheduled and flown involving aircraft from Shaw AFB and Patrick AFB. Although no 0-2A squadron had ever attempted to fly this number of sorties in one day. Sergeant Hulgan and his crews met the challenge. Working with such agencies as the fire department, munitions storage area and wing safety, he was able to designate additional aircraft parking locations for forward firing ordnance, to establish accelerated turn procedures and to coordinate munition delivery times to ensure aircraft were safely turned in the minimum amount of time.



TSgt David G. Hulgan 4507 CAMS, 507 TAIRCW Shaw AFB, South Carolina

TAC Special Achievement in Safety Awa





SMSgt John B. Roberts MSgt Robert L. McLain 56 CRS, 56 TTW MacDill AFB, Florida



Senior Master Sergeant John B. Roberts and Master Sergeant Robert L. McLain, Jet Engine Intermediate Maintenance Section, received an F100 engine for a high-pressure turbine time change. The turbine was removed and replaced and the engine was run on the test cell. Joint Oil Analysis Program (JOAP) tech order guidance states that teardown for exceeding the trend limit is not required when the trend value is based on wearmetal readings before and after a module change. The post-module change sample in this case showed 10 parts per million (ppm) titanium and represented an increase.

The engine was returned to the test cell, the oil was changed and the engine was run again. After this run, the JOAP sample titanium content was only 4 ppm, well under the tech order limit of 15 ppm. Sergeant Roberts and Sergeant McLain discussed the earlier JOAP results and decided they weren't satisfied that the 10 ppm reading was erroneous nor that whatever caused the problem was cured. They decided against issuing the engine and directed disassembly down to the number 5 bearing are

Once the bearing was removed it showed severe wear on all the rollers and the outer bearing race. An inspection of the damaged bearing indicated a possible failure during the next one to two hours of operation.

Although this engine could have been reissued, Sergeant Roberts and Sergeant McLain decided against it. Their years of experience told them to look beyond the minimum requirements. That decision prevented serious engine damage and the possible loss of an F-16 aircraft.

FLEAGLE SALUTES

Lt. Col Allen J. Kennedy, 19 TFS, 363 TFW, Shaw AFB, S.C., struck a red-tailed hawk while flying his F-16C low level at 400 feet and 480 knots. The bird was ingested down the engine intake and the impact ruptured the engine nose dome. As the engine rapidly lost all oil and the cockpit filled with thick smoke, Lt Col Kennedy climbed and turned toward the closest emergency airfield. Barely able to see his cockpit instruments, he informed his leader that he needed to be led to the nearest airfield. Unable to maintain his aircraft at 6200 feet with the optimum power setting, Lt Col Kennedy jettisoned his external stores as they passed over a lake. Aware that his engine could seize from lack of oil at any moment, he accomplished a simulated flameout approach at the emergency airfield and brought his crippled aircraft to a safe stop on the runway. Lt Col Kennedy's outstanding flying skill and response to a serious emergency saved a valuable TAC combat resource from further damage or loss.

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CLASS A MISHAPS
AIRCREW FATALITIES
TOTAL EJECTIONS

SUCCESSFUL EJECTIONS

	TAC		Г
AUG	THRU 1986	AUG	A
0	16	13	
0	7	8	
0	11	9	
0	11	7	

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	THRU	AUG							
100	1986	1985							
0	4	10							
0	0	6							
0	6	7							
0	6	7							

/	AFR								
THRU AUG									
AUG	1986	1985							
0	0	0							
0	0	0							
0	0	0							
0	0	0							

TAC'S TOP 5 thru AUG 1986

lst AF	9th AF	12th AF				
class A mishap-free months	class A mishap-free months	class A mishap-free months				
177 84 FITS	42 33 TFW	40 366 TFW				
113 48 FIS	21 4 TFW	24 355 TTW				
72 318 FIS	15 507 TAIRCW	22 479 TTW				
-72 49 FIS	14 23 TFW	22 27 TFW				
USAFADWC	13 56 TTW	21 37 TFW				
ANG	AFR	DRU's				

	ANG		AFK	100	
clas	s A mishap-free months	cla	ss A mishap-free months	clas	s A
205	182 TASG	102	926 TFG	185	U
189	110 TASG	72	482 TFW	119	2
164	138 TFG	71	301 TFW	64	2
146	177 FIG	62	924 TFG	6	U
141	114 TFG	60	419 TFW		

DRU's								
class A mishap-free months								
185	USAFTAWC							
119	28 AD							
64	24 COMPW							
6	USAFTFWC							

CLASS A MISHAP COMPARISON RATE

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

TA	1986	4.8	6.8	5.4	4.4	4.1	3.7	3.6	3.1				
~C	1985	3.2	3.4	2.7	2.4	2.9	2.7	2.5	2.6				
AN	1986	4.3	2.4	3.1	2.3	2.7	3.0	2.5	2.2				
NG	1985	4.8	4.8	3.0	4.3	4.2	4.9	5.4	5.2				
	1986	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
FR	1985	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	ENTRE			
-		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ОСТ	NOV	DEC

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