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TAC ATTACK

NOVEMBER 1986



K. TAYLOR

ANGLE OF ATTACK

If I were able to describe to you the type of pilot most likely to be our next *self-induced* crash victim, what would you do? If you fit the description, would you be able to prevent the mishap? The answer to the second question is yes, absolutely. The answer to the first question is up to you. However, if I can heighten your awareness of who the next pilot might be, it might be enough to get you involved in making sure it won't happen.

Do you know someone who fits this description: He was a flight commander, an instructor pilot in both air-to-air and air-to-ground and a SOF. Rarely did he work less than an 11- to 12-hour day. Following his duty day, the mishap pilot spent most evenings mission planning, studying for a masters degree and attempting to complete a PME course.

Sure sounds like the average IP/flight commander in our squadrons, doesn't it? Herein lies my concern. Since January 1984, 44 TAC pilots were found to have made the critical errors that resulted in an aircraft crash. Many of these aviators made honest, but fatal errors in judgment. A few committed intentional acts of stretching or outright violations of established rules. One disturbing fact was that over half—that's right—over half of these mishap pilots were instructors.

When our top pilots end up in smoking holes, it's time to take a hard look at how we go about doing our jobs, as supervisors, as leaders and as individual crew members. Even Blue 4 can help turn things around, but first we have to recognize the problem.

I firmly believe we are not looking into the eyes of our IPs/flight commanders/supervisors with the same scrutiny as we do our younger troops. I'm not referring to the *amount* of supervision, I'm speaking of the *quality*. Just because someone has good hands and lots of experience doesn't mean he won't make a mistake. Surprisingly, the fatal mistakes often involve the routine; but under normal circumstances, i.e., a "normal" flight with a few "minor" anomalies, we thought it might be a cheap shot to bring it up



during the mission debrief so it was never mentioned/discussed. Or perhaps it's something in his behavior around the squadron that would have been a good indicator. A change in attitude, small mistakes, things—small things—go wrong but we press on with other business.

Someone once said (author unknown): "We should all bear one thing in mind when we talk about a troop who rode one in. He called upon the sum of all his knowledge and made a judgment. He believed in it so strongly that he knowingly bet his life on it. That he was mistaken in his judgment is a tragedy, not stupidity. Every supervisor and contemporary who ever spoke to him had an opportunity to influence his judgment, so a little bit of all of us goes in with every troop we lose."

Any loss of life is a tragic experience; our recent losses highlight the sad fact that the best people can and do make fatal mistakes—errors in judgment. These losses also indicate that had we paid a little more attention; had we taken the time to debrief and discuss things that weren't quite right; had we been a little tougher and really looked at the man, then maybe a few more fighter pilots would be standing around the flight shack telling war stories. The ones that we've lost had some great ones.

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

TAC ATTACK

DEPARTMENT OF THE AIR FORCE



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We may be tempted to take the "standard" parts of the mission for granted, but they can get us in as much trouble as the more complicated phases of a sortie.

21 Hunting Tips

No matter what your motivation for going hunting, make sure you and your friends are around to enjoy it again next year.

TACRP 127-1

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NOVEMBER 1986



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

GEN ROBERT D. RUSS
COMMANDER



COL "COUPE" DE VILLE
CHIEF OF SAFETY

MAJ DON RIGHTMYER
EDITOR

STAN HARDISON
ART EDITOR

MARTY DILLER
WRITER-EDITOR

SGT KELVIN TAYLOR
STAFF ARTIST

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COLD CLIMATE CLUES





Mr. Bobby L. Moore
McAir Senior Engineer
Langley AFB, Virginia

Cold weather is upon us whether we like it or not. But winter isn't just a matter of plummeting temperatures and overcast skies because the way we work is certainly affected as well. I'd like to share some of the lessons I've had to learn from necessity during assignments in extremely cold environments.

Survival—Maintaining and operating high performance aircraft in cold weather are major problems, but the aircraft isn't your biggest challenge. When the temperature is well below freezing, your biggest problem is you. The easiest jobs become difficult. You spend twice the normal time and effort just to make a routine inspection of your aircraft. Wind, snow and ice only complicate the situation. When the temperature drops, you can't keep your aircraft operating if you're unable to function because you're either dressed too heavily or half frozen.

The first key to working well in subfreezing weather is to protect yourself. Keep warm by wearing proper clothing and protective devices. Wear warm clothing that fits well and doesn't restrict your movements but don't dress too heavily. Wear at least two pairs of socks, but don't put on a third pair if it makes your boots tight and stops your blood circulation. Wear thermal underwear underneath your normal clothing and a parka with a hood, or an overcoat and pile cap, for your outermost layer against the elements. Protect

your face, ears and hands from wind and snow by wearing a mask, ear muffs and gloves. Wear sunglasses to protect your eyes from the bright glare of the sun's reflection off a blanket of snow.

For maximum warmth, wear clean clothing and gloves. Dirt and grease make fabrics stiff and cause them to lose their insulating qualities. A stiffly starched and pressed pair of fatigues looks great, but excessive starch will defeat the insulating qualities of your clothing. Remember that your heavy boots, parka and gloves make you clumsy. You have trouble with such normally simple tasks as holding tools and small parts. To make the problem worse, goggles and earmuffs impair your vision and hearing. Being aware of those winter limitations is half the battle.

Walking and working on an icy flight ramp or an aircraft wing are especially hazardous. Climbing icy steps can also be tricky. One fall can ruin your entire day or maybe your career. Watch out for icy patches and other spots that freeze quickly, such as painted areas.

Watch for frostbite. Frigid temperatures alone can cause frostbite or death. With wind, however, chilling causes exposed body parts to freeze much faster. For safety, whether working or playing in frigid weather, use a "buddy" system whenever possible and occasionally check your partner's face and exposed flesh for the gray or white evidence of frostbitten skin. Have your partner do the same for you. If you remotely suspect frostbite, get medical attention as soon as possible.



COLD CLIMATE CLUES

Take frequent breaks to rest, to secure clothing and to warm up exposed flesh for good blood circulation. Exhaustion causes deeper breathing that results in a greater possibility of frigid air being inhaled into the throat and lungs. This can quickly cause throat frostbite. As wind speed increases, the freezing time of exposed flesh is rapidly decreased. So acquaint yourself, associates and family members with the "chill factor

index."

A special warning when working around cold soaked aircraft is to refrain from touching cold metal surfaces or tools with your bare hands. Even if your hands feel dry, they still may freeze and stick to the cold metal surfaces. Keep your tools covered and clear of blowing snow which could later freeze to your touch.

Don't underestimate the seriousness of a cut or minor skin

puncture in sub-zero temperatures. Bleeding may not occur until later when you get back into a warm area.

If you get fuel on your bare hands in cold weather, evaporation of the fluid may freeze your skin. Remember, deicing fluid is toxic and can be harmful if you breathe in the fumes or get the fluid in your eyes or on your skin.

Stay alert around aircraft with engines running. You're

WINDSPEED		EQUIVALENT CHILL TEMPERATURE CHART																				
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WINDS ABOVE 40 HAVE LITTLE ADDITIONAL EFFECT		LITTLE DANGER					INCREASING DANGER (Flesh may freeze within 1 min)					GREAT DANGER (Flesh may freeze within 30 seconds)										
		DANGER OF FREEZING EXPOSED FLESH FOR PROPERLY CLOTHED PERSONS																				

working under serious handicaps and can't afford to get careless. Your gloves, goggles, or tools can easily be ingested into the engines.

Danger at the rear of the aircraft is even greater on icy ramps because jet blast can loosen ice chunks and hurl them at great velocities. Loose ice also may be ingested into the engine intakes if screens are not used.

An additional danger exists in front of aircraft parked on icy ramps. Aircraft can move unexpectedly with much less engine power than on dry ramps.

Aircraft Problems—Air and hydraulic fluid leaks are amplified as the temperature plummets. Hydraulic cylinders and actuators may leak fluid because O-rings, seals and gaskets are less pliable and become deformed at lower temperatures. In addition, ice crystals in hydraulic fluid may cut seal materials. Air leaks develop as seals and line connections contract at different rates.

Mechanical and hydraulic controls become sluggish in cold weather. Use of unauthorized lubricants that seemed to work properly in warm weather will stiffen up and cause bearings to require added force to move as the temperature increases.

Moisture condensation causes water to accumulate in fuel

tanks, especially in tanks that are not kept filled. If the water freezes, it may clog filters, fuel lines and valves.

General Recommendations—You can avoid most aircraft problems and personal survival problems during frigid temperatures by following some simple, basic rules:

- Be aware of current weather conditions and keep updated on immediate and long-range weather forecasts, then dress accordingly.

- At work, when you make frequent trips from the outside cold to an inside warm area, be sure to remove outer clothing upon entering the warmer area

and donning the outer garments just prior to braving the cold weather. This helps prevent perspiring in warmer areas with too much clothing on and later going back out into the cold with damp clothing on.

- Be sure to keep your feet dry and use proper footwear.

- Finally, realize that everyone else will also be functioning under the same handicaps as you. Their reactions will be slower and their response may try your patience. That's the key to survival—*patience* and *common sense* in all that you do. With proper precautions and patience, you and your airplane will be around when the flowers bloom again. ➤

A few tips from the Flight Surgeon

Dr. Tom Koritz
USAF Regional Hospital
Langley

This advice obviously came from someone who has spent some time in cold weather operations and learned from experience.

I would only like to add a couple of ideas regarding frostbite. Remember that signs and symptoms of frostbite include gray color, numb feeling and a stiff waxy-to-solid feeling to the touch, depending on the depth of freezing. Afflicted individuals are often not aware of

the problem, so check each other frequently.

As described in the article, the best treatment for frostbite is *prevention*. But when frostbite does occur, the only treatment is rapid rewarming. **Do Not** rub with snow. **Do Not** massage with hands. This only causes further tissue injury and will worsen the results after the tissue thaws. Also, don't walk on frostbitten feet, except in emergencies; and don't allow frostbitten areas to refreeze.

Remember, prevention is the key.

TAC tips

INTERESTING ITEMS,
MISHAPS WITH MORALS,
FOR THE TAC AIRCREWMAN

Who's in charge?

A recent incident occurred in which a TAC aircraft departed the end of the runway during an aborted touch-and-go landing. There were no injuries or aircraft damage as a result of the incident, but it highlights the need to re-emphasize who is in charge during flight operations—the aircraft commander.

In this incident, the crew attempted to comply with the tower controller's instructions to change a VFR "cleared for the option" approach into a full stop. The tower controller changed the clearance due to slow moving traffic on departure but not until just prior to the aircraft's touchdown. The pilot took the controller's instructions as law and attempted to stop despite the fact that they had advanced the power for the touch-and-go, making a stop on the paved surface doubtful.



The lesson from this incident applies to all pilots in all aircraft. The aircraft commander has the responsibility to determine what his aircraft can or cannot reasonably be expected to do. ATC controllers provide an invaluable and vital ser-

vice: they control airspace, runways, taxiways and so forth; but they do not always know the capability of our aircraft. If they issue instructions or clearances that cannot be complied with or compromise safety, the pilot has the responsibility to let them know so another option can be exercised. If time does not permit, the pilot should exercise a safe option and sort the details out later.

Then suddenly it's gone

On his third bombing pass, an A-7 pilot was told by the range tower that he had a no spot. The cockpit indications had shown a good release signal, but he could see in the mirror that the bomb was still on the TER. After making a second pass to get the bomb off, to no avail, the pilot remained in the pattern, intending to try a manual release. When he rolled out on final for the manual jettison, he noticed that the bomb was gone. He checked the area just overflown and saw the bomb had impacted about a mile off-range.

Back on the ground, a complete check of the aircraft release systems didn't turn up any electrical or mechanical problems that could have caused the hangup and subsequent uncommanded release. The TER was also dismantled, but no problems were found. The final conclusion was that a slow burning impulse cart only partially opened the TER release hooks; which, after several turns, allowed the bomb to fall off.

Seems like a good reason to avoid populated areas when you have to RTB with a hung bomb.

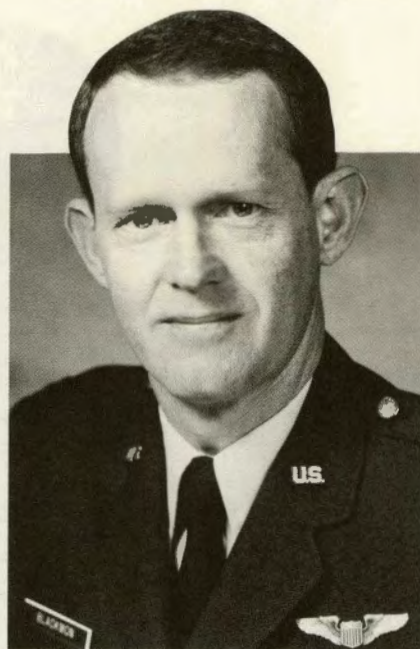


AIRCREW OF DISTINCTION

Captain James E. Blackmon was rolling out on inside downwind in the overhead pattern when he felt and heard a large explosion in the rear of his F-15 followed immediately by failure of the control augmentation system. Shortly after that, the right engine fire warning came on and the aircraft began an uncommanded right roll to 90 degrees. He immediately brought the right throttle to idle, attempted an unsuccessful reset of the CAS and applied left stick and rudder to correct the sudden roll. As the aircraft slowly returned to wings level, he shut the right engine down and discharged the fire extinguisher.

Captain Blackmon advised tower that he would extend his pattern for a left base turn to final. As he approached an extended perch point, the aircraft again began an uncommanded right roll followed by illumination of the AMAD overheat, right engine bleed air and nu-

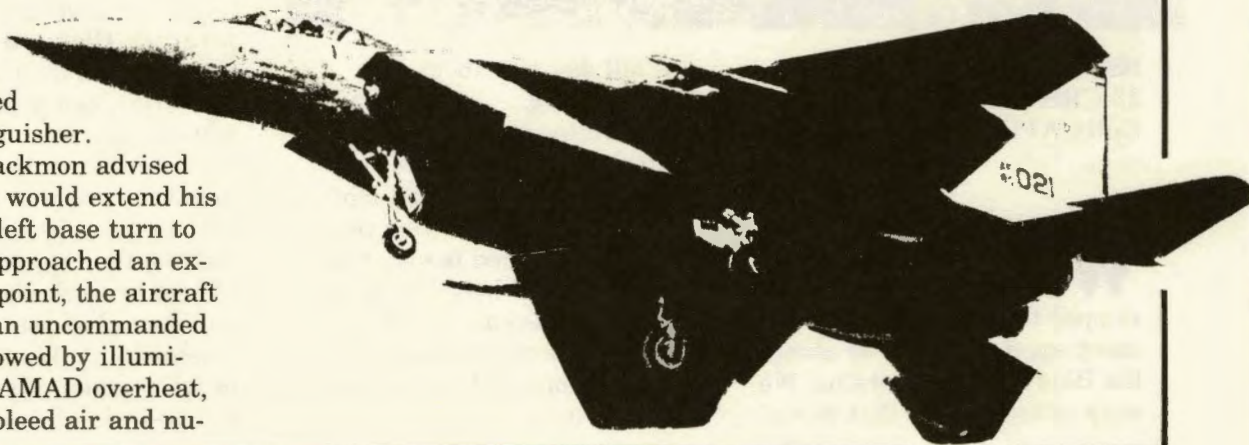
merous other caution lights. Captain Blackmon's wingman also informed him that fire was visible burning through the top of the right engine. Captain Blackmon considered ejection but rejected the idea since the aircraft would crash in a densely populated area. Making a left base turn to line up on a two mile final, he flew the aircraft to a precise touchdown in the first 500 feet of the runway and brought it to a stop in minimum distance. He then quickly shut down the left en-



Capt James E. Blackmon
7 TFS, 49 TFW
Holloman AFB, New Mexico

gine and ground egressed.

Through this emergency, Captain Blackmon demonstrated exceptional flying skills while maintaining his composure and saving a valuable combat resource. ➤



AUTUMN RIDING



SSgt Leroy D. Willis
33 CRS/MACD
Eglin AFB, Florida

While out riding last fall, my riding partner and I stopped to enjoy one of the many spectacular views along the Blue Ridge Mountains. We were talking about that beauti-

ful fall day and about motorcycling.

My riding partner was new to motorcycling and she had never attended a formal motorcycle training class. Our conversation covered many of the things that I'd learned through my own experiences and through the motorcycle rider training courses I've attended. I would like to share some of

that conversation with you. I think it will help make your autumn ride troublefree and more enjoyable.

The first area of concern was staying warm. In relatively warm weather, constant exposure to the wind while riding a motorcycle may reduce body temperature. This condition is known as hypothermia, and it can cause you to lose your ability to concentrate and react properly to changing traffic conditions. For example, on a warm day (65°F), a motorcyclist riding between 45 and 55 mph experiences a chilling effect equal to 33°F—only one degree above freezing. If a rider is not properly dressed for that chill, he or she could become a victim of hypothermia.

The best way to protect yourself against hypothermia is to have a large frame-mounted fairing, but it's expensive. (A Plexiglas fairing is cheaper and will still do a good job.) Dress in layers of clothes: if you get too warm you can always remove a layer. I suggest that you wear good sturdy boots, warm (wool) socks, good denim jeans and even long underwear or ski pants. For the upper body you could wear a flannel shirt or a wool sweater with a lightweight or warm winter jacket depending on the temperature. Gloves should be worn, with a liner if necessary. A rainsuit can provide protection from both the wind and from the elements. A $\frac{3}{4}$ -style helmet is warm in the summer but can be a little cool in the fall months. A good full-face helmet is much warmer but it will fog up; so use a no-fog faceshield. A thin ski mask can be worn under a helmet and will provide warmth for your

neck as well.

Next, when do you stop riding a motorcycle due to winter weather? You'll have to use common sense on this one. Most motorcyclists don't ride on roads covered with ice and snow. You can ride late into the fall months, but you could run into scattered patches of ice, usually found on low or shaded areas and on overpasses and bridges. You also have all those beautiful falling leaves; and if they're wet or on an oily patch of pavement, you can be sure they will be as slippery as ice. If you can't avoid ice and leaves, try to keep your motorcycle as upright as possible and proceed straight across, not making any sudden movements. Above all, brake before the slippery surface, not on it.

There's also a lot of fog in the fall; so wear brightly colored clothing and avoid riding early in the morning or late in the evening. Be cautious

near low-lying areas around lakes, swamps, creeks and rivers because that's where you'll most likely run into fog. If you do run into fog, slow down, ride with your lights on low beam and increase your following distance.

We discussed two other subjects that apply year-long. One topic was drinking and riding a motorcycle. Alcohol affects your coordination and sense of balance, your judgment and your ability to see accurately. Riding safely is more of a mental task than a physical task. I'm sure no one wants to lose the ability to make quick and correct decisions. Even with one drink in your bloodstream, that decision process is affected.

The other topic we talked about was crazy drivers. She was surprised to hear me say they weren't crazy, they're just not looking for motorcycles. You can help other vehicle drivers see you by riding with

headlights on at all times and by wearing brightly colored clothing or a reflective vest. You should always treat the driver like you want to be treated out there. Traffic survival is a matter of attitude, a good attitude toward others and maintaining a cool head.

That pretty well ended our discussion on that day's ride. Later, I remembered all the areas that we never got around to talking about: those little hunting dogs that dart out after rabbits, potholes, loose gravel, maintaining a two-second following distance, slow-moving vehicles, twelve-second visual lead, intersections, curves. I'll talk to her about them on another weekend. You can learn about them in a motorcycle safety course. ➤

SSgt Willis rides a 1983 BMW R80RT and is a Motorcycle Safety Foundation Chief Instructor.

TAC Individual Safety Award



A JP-4 fuel spill on the flight line was being neutralized by a P-19B crash fire truck. Airman First Class Jay A. Kirk, a fire protection specialist assigned to another crew, was watching the process when he saw that the truck had malfunctioned and was moving toward an A-10 aircraft. He ran to the truck and applied the service brake just as it hit the right wing of the aircraft;

then he shut off the engine.

Airman Kirk's quick action significantly reduced the seriousness of this mishap. He prevented major damage to the A-10 and crash fire truck. It was also probable that the truck would have gained speed and become a runaway vehicle among numerous A-10 aircraft, vehicles and personnel on the flight line. Airman Kirk prevented that, too.



A1C Jay A. Kirk
354 CSG, 354 TFW
Myrtle Beach, AFB,
South Carolina



DOWN TO EARTH

ITEMS THAT CAN AFFECT YOU AND YOUR FAMILY HERE ON THE GROUND

Ways to fall-proof your home

Man has been falling ever since he stood up on two legs. He falls off ladders, on ice, into holes, from trees, over pets and out of bed.

Usually he is lucky. He gets up, yells, brushes himself off and goes about his business. But sometimes he isn't lucky. Falls are the second leading cause of accidental death—only traffic accidents kill more people—and more than half occur in the home.

There are ways to fall-proof your home. The following suggestions are based on what has caused people to fall in their home.

In the Bathroom, skid-proof the tub and shower stall. Water, soap and smooth surfaces make a slippery combination. Use suction-type rubber mats or safety decals in the tub and shower. Tubs can now be purchased with slip-resistant bottoms. If you in-

stall grab bars, fasten them securely into the wall studding, not just into the plaster. Use the soap holder; if the tub doesn't have a soap holder, install one—stepping on the soap is dangerous. Wipe lotion, shampoo and water spills up immediately, and if you hang clothes in the bathroom to dry, make sure they drip into the tub, not on the floor.

In bedrooms, arrange children's rooms carefully. Never place a child's crib or bed in front of a window, and don't allow youngsters to sit or play on window sills. Straighten the bedroom before going to sleep. You might get up during the night and stumble over clothes, shoes or objects left lying around. Have a lamp or lightswitch within reach of the bed. That way, you can see what you're doing if you must get up at night. If nothing else, keep a flashlight handy. Clear the pathways. Keep access to the bathroom clear of furniture and use a night-light. Wear proper footwear—floppy slippers can fall off. Get up slowly. If you get up too quickly, you could become dizzy.

In the kitchen, keep the floor clean. Wipe up all grease and spills at once. Arrange the cabinets so that heavy utensils are stored on low shelves to avoid off-balance or awkward reaching. Keep lighter, seldom-used items on high shelves.

In the living room, keep traffic areas clear. Don't force people to make detours around furniture. Pick up toys, books, magazines and newspapers. Likewise, don't trail extension cords or telephone wires across traffic lanes. Mend tables and chairs that are wobbly. Try not to rush to answer the phone or doorbell.

On stairways, keep them clear. Don't use them for temporary storage. Stairways should have handrails on both sides. Don't camouflage the steps. Choose a carpet pattern that doesn't obscure the

edges of the steps. Be extra careful if you're wearing socks—socks are slippery against wood or carpet. Don't block your vision by carrying so much that you can't see the stairs. Use light switches. You can't avoid what you can't see; so make sure there are light switches at both ends of the stairway. Beware of single steps and changes in step level. Ideally, all stairs should have at least three risers and all the same height.

Other walkways, buff floors well. Some people think a highly polished floor is slippery; in fact, buffing makes wax less slippery. Better yet, use no-skid polish. Keep rugs flat. Smooth out wrinkles and folds. If the corners curl, secure them with carpet tape or turn the rug so the curl is out of traffic. Use skid-proof rugs. Small scatter rugs can slide and are especially hazardous near stairways. If you use area rugs, make sure they have slip-resistant backing.

Outdoors, use the right ladder. Check for loose or broken rungs first, and don't stand on the top rung or step. Keep walkways in good condition.

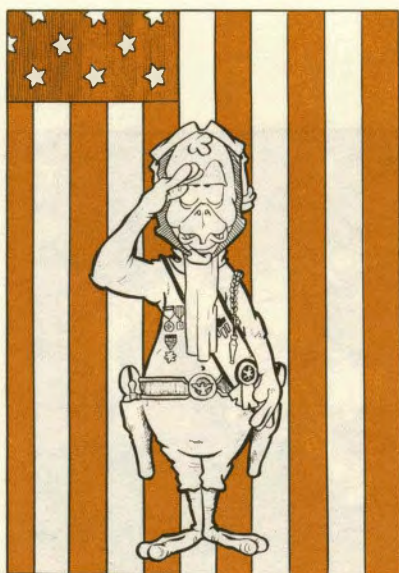


Patch or replace broken concrete and fill in uneven spots. Put tools, toys and the garden hose away. Don't leave them where people can trip over them. Likewise, don't leave the garden hose stretched over the lawn. Dress properly. Wear comfortable, well-fitting shoes and clothes for outdoor work. Mind the weather. Remove ice and snow from side-walks and porches and wear boots. Use salt or sand to reduce slipperiness. Equip balconies and porches with railings and keep them in good repair.

Courtesy, National Safety and Health News

PASS IT ALONG...





FLEAGLE SALUTES

Maj Roland J. Vandenberg, 31 TFW, Homestead AFB, FL., has averted potential flight mishaps because of his meticulous pre- and post-flight inspection of aircraft. His attitude and attention to detail have enabled him to detect numerous unsafe conditions which might have resulted in serious flight mishaps. For example, Maj Vandenberg noted some minor bubbling of the paint on the top and bottom of the right inboard leading edge flap. Suspicious of this, he requested a more detailed inspection which revealed a 4x4-inch blown out area in the boundary layer control duct running through the wing. This duct carries 600-degree F air from the engines to the wings to help maintain lift at low airspeed while the flaps are down. The damaged area was only inches away from a hydraulic line in the wing. Had this damage gone undetected, the heat from the

bleed air could have caused severe damage to the wing and/or resulted in hydraulic failure.

Capt Karl R. Von Kessel, 4450 TG, Nellis AFB, NV, was at 20 feet altitude and 165 knots while leading an A-7 night formation takeoff when his engine's high pressure turbine self-destructed due to internal FOD. Capt Von Kessel, unaware of the spectacular explosion behind him, felt severe airframe vibrations and noted the Engine Hot caution lamp illuminated. Knowing that his engine no longer provided enough thrust to sustain flight, Capt Von Kessel immediately brought the throttle to idle and landed with only 3000 feet of runway remaining. Maintaining his side of the runway as he had briefed, Von Kessel began heavy antiskid braking and lowered his arresting hook. Even though the hook skipped the BAK-14 cable, Von Kessel brought his A-7 to a full stop just into the overrun. He shut down the engine and ground egressed. Capt Von Kessel's rapid assessment of his emergency and cool-headed decisiveness in a time-critical situation resulted in the safe recovery of a seriously crippled aircraft.

Capt Allen A. Matter, 21 TASS, Shaw AFB, S.C., was leading a redeployment of 5 O-2As when, without warning, a failed piston rod caused his front engine to explode. Several fuel injector lines were severed, allowing fuel to flood the engine compartment. Fuel and oil covered the windscreen and smoke began to fill the cockpit.

Within seconds, Capt Matter shut down his failed engine and headed toward a nearby uncontrolled airport. While his wingman watched for any outbreak of fire and confirmed that his gear was fully extended, Capt Matter set up for a steep straight-in approach to the airfield. In winds gusting up to 35 knots, he flew a flawless forced landing pattern to a touchdown where he and his passenger both emergency ground egressed. The timely decisions and superior airmanship of Capt Matter averted the loss of a valuable TAC asset.

MSgt Terry W. Cook, 23 TFW, England AFB, La., defused a potentially devastating situation by taking fast, appropriate action to notify authorities and evacuate a building adjacent to a severed natural gas main. His quick action and level-headed decisions averted a major accident that had the potential for loss of life and property.

While working as a munitions maintenance crew member, **A1C Gregory M. Jung**, 1 EMS, 1 TFW, Langley AFB, Va., was to insert the firing pin assembly and spring loaded safety block into the nose of BDU-33 D/B practice bombs that contained CXU-3 spotting charges. The operation was proceeding smoothly and in accordance with the tech order when Airman Jung noticed a small amount of smoke escaping from the nose of a bomb he had just begun to assemble. Realizing the high toxicity of the titanium tetrachloride smoke that makes up the

BDU-33 (coldspot) spotting charge, he immediately sounded an alarm to his crew chief and began to don the protective equipment required by AFR 127-100. Then, with the safety gear on, Airman Jung quickly placed the smoking BDU-33 in a nearby 55-gallon drum of water. There were no injuries. Airman Jung's quick, level-headed reaction to this tense situation prevented serious respiratory tract injury to numerous personnel.

Majors Gary Teeter and John Gaydeski, 4 TFW, Seymour Johnson AFB, N.C., were on a 500-knot final run-in for a loft delivery in their F-4E when they hit a bird. The windscreen shattered but was held together by the vinyl layer in the middle of the safety glass. As a result of the collision, forward vision was completely obscured and glass fragments were sprayed throughout both cockpits. Major Teeter initiated a climb

as Major Gaydeski, the WSO, assumed control of the aircraft and continued the climb in accordance with their prebriefed birdstrike plan. While both crewmembers had their visors down when the birdstrike occurred, Major Teeter did have some glass particles blown into his eyes. After cleaning his eyes out and assessing damage to the aircraft, Major Teeter resumed control of the aircraft. Following a controllability check, the crew made a smooth wing formation landing.

The superior crew coordination and aircraft handling displayed by Majors Teeter and Gaydeski resulted in the successful handling of a difficult situation and safe recovery of their aircraft.

Maj William A. Tillman, 56 TTW, MacDill AFB, Fl., was leading a two-ship surface attack tactics mission. His aircraft was configured with a 300-gallon centerline tank and 2 TERs with 4 inert Mark 82

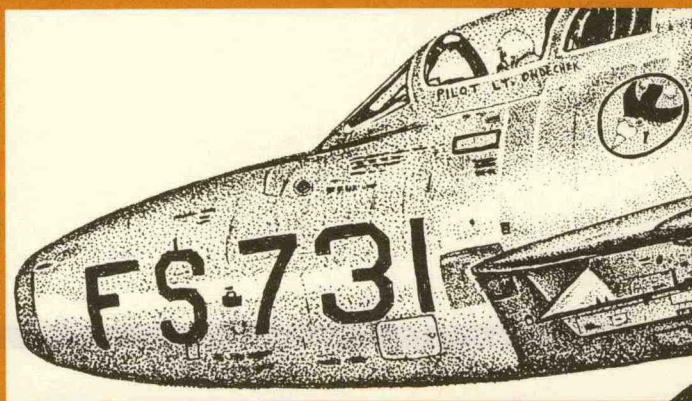
bombs. Approximately 20 minutes after takeoff, while flying a low-level route, the flight initiated the first of two low-altitude tactical maneuvers for student familiarization. At the completion of the first maneuver, Maj Tillman was at 500 feet AGL, 450 KIAS and military power when he sensed a deceleration of the aircraft. Quickly checking his engine instruments, he observed decreasing RPM and FTIT and the engine warning light. Immediately and correctly concluding that the engine had flamed out, he initiated the proper emergency procedures: zooming the aircraft, jettisoning his external stores, selecting JFS start 2, shutting off the throttle, selecting BUC and initiating a BUC airstart. The aircraft apexed at only 5100 feet AGL, but Maj Tillman's reactions to this critical emergency were so swift that the engine was restarted and the aircraft leveled off by 3900 feet AGL. Subsequent recovery of the aircraft was uneventful.

HEADS UP

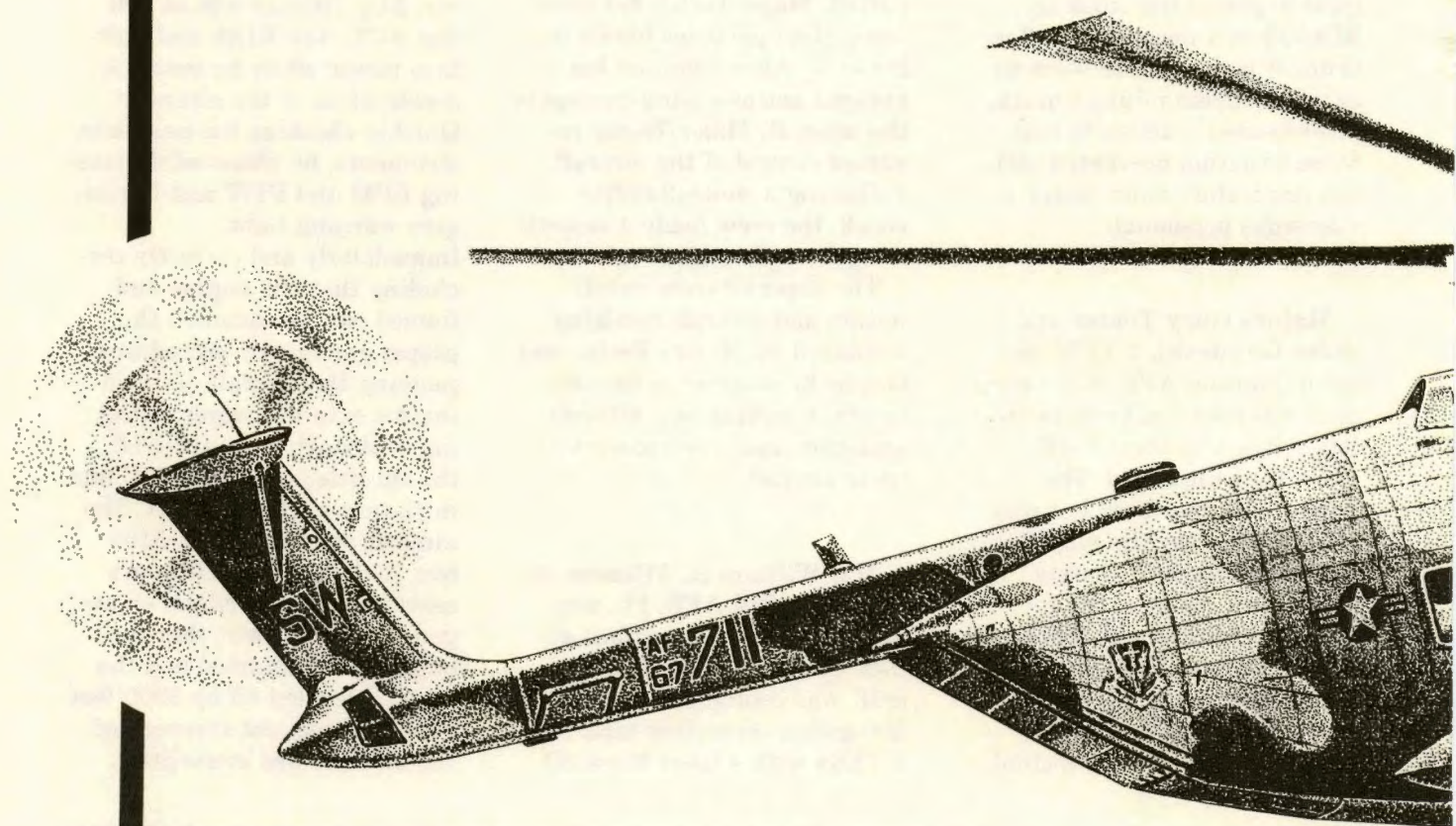
Next month, in the

DECEMBER

issue of *TAC Attack*,
Sgt Kelvin Taylor
remembers the jets
of yesterday,
IN THE CENTER.



HH-3E JOLLY GREEN GIANT





STANDARD

Maj Dave McGraw
TAC Flight Safety

In this particular scenario, the type of fighter you're MR in is not important; the mission considerations are. Use your imagination and visualize that less than 24 hours ago your quiet day at the squadron erupted into a web of tactical planning and preparation.

18 HOURS before takeoff—the rest of the day's schedule was cancelled. The squadron commander ordered selected crews to the main briefing room and the AMU began preparing the jets for something “other than training sorties.”

14 HOURS—You depart the fix for home; a solid meal; spend time with the family; get some sleep to meet crew rest requirements.

6 HOURS—Back to the squadron and you notice a very different atmosphere. Everything's businesslike with little or no joking around. In the mass briefing, you receive word that the President has ordered a strike on another nation's soil. Those with you in the briefing are a portion of the players. Everyone perks up! You receive a detailed weather brief; Intell briefs known threats, their locations, ranges, and associated weaknesses. The commander briefs the ROE for both air-to-air and air-to-surface engagements. Targets and who's paired against them, tanker support. RESCAP, radio procedures, allied and sister service involvement are all covered. The mass briefing breaks up and you notice a lot of the younger troops asking questions of those pilots with

gold stars on their flight suit sleeves.

2 HOURS—Flight briefings are drawing to a close. The flight lead has briefed (at a minimum): ordnance preflight, fuzing options, emergency procedures, visual signals, rejoin points, target area tactics, bail-out considerations, tanker rendezvous and refueling procedures, radar responsibilities, commit criteria. IFF/SIF use/nonuse, etc. Finally, you head for a quiet place to crew brief (if you fly a fighter with more than one bucket).

15 MINUTES—The ramp is alive! All players and spares are being armed/quick checked at EOR, you are mentally re-



viewing the plan for the entire package, your flight and then your fighter. All is on schedule, as planned, and the comm-out orchestration is proceeding flawlessly. The strike is well on its way to being a success.

Every reader knows that the precedent for this scenario is the Libyan strike this spring (and others throughout history). However, instead of the successful results experienced then, visualize that the package loses:

- One aircraft from ground collision as the pilot focuses his attention on lead while entering the low altitude environment.

- One CAP asset through

ground collision as the pilot attempts to split S (in military power) on a bandit from 10,000 feet MSL and 500 knots.

- Two aircraft because of a midair collision during the weapons/radar check on departure.

- Two aircraft from break turns in the target area that resulted in departure/spin.

- One aircraft from a midair during the battle damage check.

- Two aircraft at home bases because the pilots failed to lower the gear or landed short of the runway.

- One striker who mis-managed his fuel.

- Two aircraft that collided

with Migs during slow speed, target area BFM.

So how do these examples relate to the title chosen for this article? If you glance back through the list of "losses" for the package, you'll notice that *generally* they occurred during "standard" portions of the mission—rejoins, weapons and battle damage checks, RTB, and/or in the pattern. All but one of these mishaps have occurred in TAC in 1986.

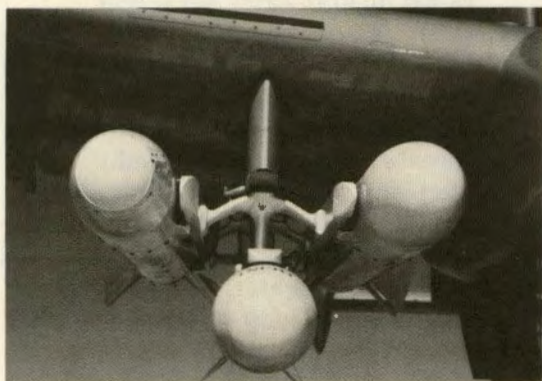
Numbers can be crunched and mishap summaries organized to reach a lot of conclusions. But one thing's for sure, our ops factor track record suggests that we must focus harder on the standard portions of our training flights. We don't need longer briefings that routinely tell aircrews how to taxi to the runway, fly a SID or rejoin a four-ship. However, make sure the confidence you have in your flight is well placed when you brief the term "standard."

This confidence can be nurtured (and the number of operator caused mishaps decreased) by emphasizing the following:

- Demand excellence and discipline from the start. It begins in fighters at LIFT and doesn't stop until you've shut down the motors for the last time. A special trust is placed in our LIFT and squadron IPs, flight commanders, supervisors and flight leads to teach/reteach the basics.

- Be tough! On yourself and your comrades. Take the time to debrief those seemingly meaningless mistakes that caused a past mishap listed in your appropriate Crash Book.

- Let every act you perform while airborne pass the Farmer's Test . . . i.e., does this





STANDARD

feel right? Examples: Should I bury my head after getting the lead or watch the changing of the guard, or . . . Does a high speed, mil power split S from ten grand make the hair on my neck stiffen?

● Put unit standards in print if you haven't done so and ensure those already in print are sound and enforced. Many of us have been assigned to units where the book of squadron standards was interpreted in different ways by different aircrews. The product should be readable, consistent with established procedures and aligned

as closely as possible with what we'll do sitting on the ramp 15 minutes prior to a real combat mission.

● Guard against complacency. The "system" is not to blame but it can make it harder. The necessary influx of rookies to the unit, an average turnover of about 2½ years for fighter aircrews, and a constant requirement for MQT, TX and upgrade training can all contribute to an "I've been here before" attitude. It might be the umpteenth time you've briefed it, but if it's a first for someone in the flight, talk

about it. He has a right, a commitment, to learn the standards of the fighter business and to learn them correctly.

These are just five considerations to ponder for those portions of the mission that are sometimes considered benign or less demanding. They're usually briefed as standards but the ingredients of recent crashes show that many of us need to revisit our perception of them. Glance down at the wings on your uniform and consider what is expected of you in wearing them. We're all expected not to hit lead or run out of gas; to lower the gear before landing, and land on the runway. It's one of the reasons we get flight pay. In the last six years though, we operators have answered our supervisors faith by crashing about twelve jets per year doing things that are tactically unsound and forgetting the basics of flying that those wings represent.

Remember the focal point of all that we do in TAC. That is, to make sure that when we're called upon to carry out a real world attack; when there will be no knock-it-offs because the Migs employed head-on heaters inside of 9000 feet or the SAM threats are more than friendly electronic signals, our training will not have fallen short. In that environment, the standards of the fighter business should be the least of our concerns. Good Hunting! ➤



Mr. Cal Faile TAC Ground Safety

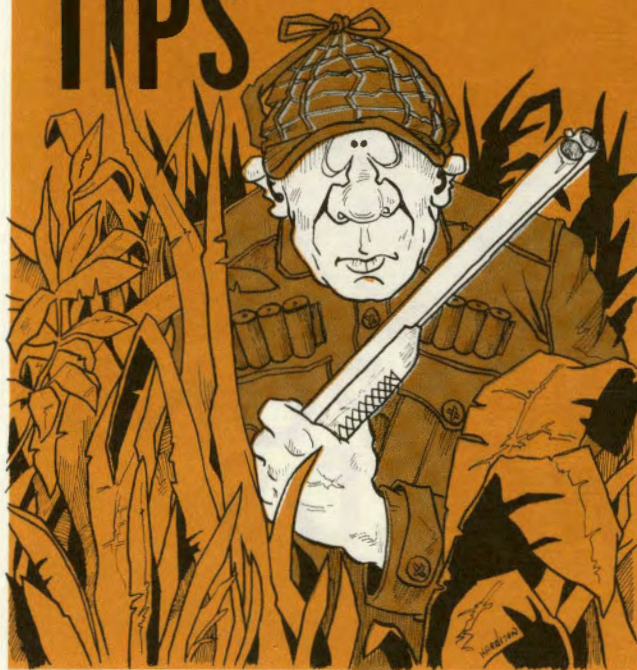
Why do hunters hunt? Some will say, "I do it for the sport and recreational aspect." Others will say, "I like the taste of various game and it puts food on the table." Some like it because it gives them a chance to be alone, to soak up the wilderness, to enjoy the outdoors. To others, it's an ego trip or a chance to get together with their hunting buddies to relax and unwind after a hard week's work. But no matter how many hunters you ask, you'll never find one that intentionally goes out to injure himself or someone else. The large majority of hunters are very safety conscious and obey the rules of safe hunting. Then why do we continue to have people killed and injured each year through hunting mishaps? It's not only the novice but the experienced hunters who are affected. We don't have all the answers, but here are some tips on how you can keep from becoming a statistic.

Unsafe weapons handling—Never point a weapon (loaded or unloaded) at anyone. In fact, don't point a weapon at anything you don't intend to shoot. When you shoot, be sure of your target. If you don't have a clear shot, don't pull the trigger.

Unsafe weapons—Before each hunting season, break your weapon down. Then thoroughly clean and inspect it for defects. Replace all worn parts. If your weapon's condition is in question, take it to a reputable repair shop. Before reassembly, check the barrel to ensure it is clear.

Unprepared—Practice firing the weapon in a safe area. Practicing in a forest full of other hunters is just not smart; especially when some big ugly fellow comes looking for you after you've nearly shot him. Prepare yourself in other ways. Check your hunting clothing and equipment, including footwear. You can be miserable when your rain gear leaks and your feet get wet from worn out shoes. A compass, a sealed container of matches, nonperishable food snacks and a good canteen of water are life savers if you get lost on a hunt. Good hunters don't get lost if they prepare for the hunt properly. Most successful hunters scout the area they intend to hunt before the

HUNTING TIPS



actual hunt begins. Knowing the hunting area thoroughly can keep you out of trouble. If possible, avoid heavily hunted areas. You never know who might be in a tree stand or in the brush right next to you.

Deteriorated Stands—You've heard the old saying "It's not the fall but the sudden stop that hurts." Ask any one of several Air Force members whose stands collapsed from 20–30 feet up a tree how it felt. Check and repair stands before the hunting season begins. This also includes portable stands.

Reminder—You can't obey your state's hunting laws if you're not familiar with them. Hunting laws are subject to change annually and most states publish them in booklet form each year. Ignorance of the law is no excuse and violations can carry severe penalties. Before you leave home, don't forget your hunting license. Choose your hunting partners with care; they can be an asset or liability. Be careful out there. ➤



WEAPONS WORDS

Let me push it

A senior airman crew chief and his two airmen team members were tasked to move several cans of 30mm combat mix ammunition from a maintenance bay to an earth covered igloo. The storage stack was near the door of the igloo with limited room to maneuver. Since the angle of approach and close quarters prevented placing the last two cans flush with the stack, the crew chief decided to push the cans into position with the forklift. While pushing the cans, the forklift tines punctured two separate holes in the side of one of the ammunition cans.

The investigation of this mishap revealed that the SRA crew chief had recently transferred from the maintenance section to the storage section. He had started training on warehouse procedures only two days before the mishap and had not completed qualification training. Although the two airmen were qualified for the task, they were hardly in a position to be training their "supervisor."

Supervisors should never assume that there are "simple" tasks where explosives are involved. All personnel must receive the appropriate level of training prior to performing any task unsupervised. It is especially important if the person is being trained to become a supervisor. This mishap could have been prevented. Does your training program prevent mishaps?

If it moves

SMSgt Ed Hartman
HQ TAC Weapons Safety

We do a lot of "check this—check that" when preparing to load weapons on aircraft. With the increased quality of maintenance being performed these days we seldom find anything wrong with the jet. These checks may seem to be a waste of time, especially in time critical actions such as integrated combat turns (ICT). But things still go wrong from time to time as a Phantom load crew recently discovered during an ICT.

With aircraft engines running, the number three man began to perform stray voltage checks on the AERO-7A launchers. He connected the P2 tester to the launcher and began connecting the meter to the test box. The negative lead was connected first. As he inserted the positive lead in the test box, he observed a spark and a slight meter deflection which quickly dropped to zero. He repeated the test on the station two more times with no meter readings. He then completed the checks on the other missile launchers to be loaded and stowed his equipment.

A fellow crew member began the task of installing the ejector carts. He grounded himself, placed the MK-9 cart in the retainer and installed it in the aft breech of the launcher. He did the same with the forward breech. As the liner was being tightened, the cartridge fired. The aircraft engine was shut down and the ICT terminated. Luckily, no one was injured.

Investigation revealed that the forward breech had a constant 115 volts present at the firing pin. A check of the meter used in the incident revealed that the .5 volt AC scale was shorted out and

would not indicate any readings. That explains why the two additional checks performed by the crew member read zero.

This mishap highlights two important items. The first is that the safety precaution to stay away from ejector feet and pistons is still valid. Secondly, when technical data procedures say "Check for stray voltage . . ." and you get a reading (even a deflection) on your meter, stop the operation immediately. It is an indication of a serious problem. Don't compound it by ignoring that warning. In this mishap, the ICT should have been terminated and the meter removed from use immediately after the needle deflection and spark. When it comes to stray voltage, "If it moves . . . reject it."

AIM-9 umbilical blocks... and the story continues

Here is a classic situation in which five different individuals all missed an inspection item resulting in \$3000 damage and some wasted upper-level assistance.

A 30-day inspection was completed on a captive AIM-9P missile by a 7-level munitions technician and inspected by a 7-level munitions supervisor. This AIM-9 was subsequently loaded on an F-16. After the download, the loading crew noted that the missile umbilical was separated from the guidance and control section.

Three different inspections were missed: the munitions personnel who failed to detect that the shear block was not properly installed; the loading crew who loaded the missile also failed to detect the improperly installed umbilical block; the loading crew who removed the missile failed to investigate the cause of the unusual resistance felt during the unloading.

All three inspection items are referenced in the applicable tech orders . . . and the story continues.

There's a difference

A weapons load crew was sent out to download captive AIM-9P missiles and was working on the fourth one when they ran into problems. As they tried to move the missile off the rail, it only went about one-half inch then suddenly stopped.



The obstruction was the umbilical retainer which was still connected to the missile. After they completed disconnecting and downloading the missile, they found that the missile umbilical was damaged as well as the guidance and control unit.

On the three missiles downloaded before this incident, the umbilical retainers had all been disconnected according to the TO for training flights. The fourth missile was a different situation, however, because it had been involved in an integrated combat turn requiring the umbilical retainer to be connected. When the load crew chief didn't ensure that all of the missile connections had been properly undone, the missile damage resulted.

Complacency has an insidious way of sneaking up. Sometimes it disguises itself by making us think we're "on a roll" when we've done several jobs that are similar. We can prevent that by viewing each job as a separate task to be accomplished. Go through the checklist completely for each task. That way, the steps that didn't apply for a previous assignment won't be missed on the next one where things may not be quite as they seem.



If you're using a **snow blower** this winter, keep children and pets away from the area you're cleaning. Turn the engine off and disconnect the spark plug wire or unplug it if it's electric before cleaning the chute and read the owner's manual.

Buying a **home gym** for Christmas? For maximum safety, it should be made of heavy steel and strong bolts instead of lightweight tubing and thin screws and pins. All moving parts should be guarded and make sure it has a testing laboratory label.

Whether this winter is your first time skiing or you're an old pro, besides falling down and breaking bones, there's another danger: **snow blindness**, or a sunburned cornea. Snow reflects 85 percent of the sun's ultraviolet rays (UV) even on an overcast day; quite a bit more than grass, only 5 percent, and water, 10 percent. Skiers get double doses of UV rays because the atmosphere on the top of a ski slope doesn't filter as much UV light as it does further downhill. Snow blind-

ness can rob you of 50 percent of your night vision and it could take up to a week to recover normal night vision. Mild symptoms include a sandy, gritty feeling in the eyes, 6 to 8 hours after being on the snow. All you have to do to prevent snow blindness is wear a good pair of sunglasses. Look for a label on the sunglasses that tells you how much protection from UV light the lenses offer, ideally they should block 95 percent; or take your sunglasses to an optical company for a coating of an UV inhibitor solution.

V-shaped, accordion-style baby gates, usually used to keep a baby or toddler away from stairs, pose a threat of strangulation if the baby gets caught in the folding unit. Gates with a straight top edge and a rigid mesh screen or with vertical slats don't present a hazard.

If you believe **Kretek**, or clove cigarettes, are tobacco-free or if you know someone who thinks they are, sell him a bridge. **Kretek** are Indonesian import cigarettes and may be causing severe lung injuries. Over 150 million are sold each year. They are a mix of 60- to 70-percent tobacco and 30- to 40-percent cloves; and produce twice as much tar, nicotine and carbon monoxide as ordinary all-tobacco cigarettes. At least two people have died from using **Kretek**. If you or someone you know has the choice, take the bridge.

When was the last time you had your **home heating system** checked by a professional? If it hasn't been recent, this could be the year your heater malfunctions. Even if the system is putting out heat, it could also be putting out carbon monoxide, a gas that's produced when fuels are burned. Symptoms of carbon monoxide poisoning are similar to the flu: headache, dizziness and nausea. If everyone in your family gets sick all at once, suspect carbon monoxide and get out of the house into fresh air.

To all the physically fit parents in the Air Force, the President's Council on Physical Fitness and Sports says **our children are in worse physical shape** now than they were a decade ago. A recent study on the fitness of 6- to 17-year-olds conducted at 187 schools showed that 40 percent of the boys younger than 13 couldn't do more than one pull-up and 55 percent of all the girls couldn't do a single pull up; nearly half the boys

younger than 15 and 55 percent of all girls couldn't hold their chins over a raised bar for 10 seconds; and half the girls and 30 percent of the boys younger than 13 couldn't run a mile in less than 10 minutes. George Allen, a former professional football coach, says these findings put the United States' youth fitness at number 19, worldwide.

If you use **natural gas** in your home to heat or cook with and you suspect a leak—don't use the telephone or turn a light on or off. They could cause a small spark and could ignite the gas fumes. If it's a faint odor near an appliance, it's

probably the pilot light. If the odor is strong, leave your home and call your gas service company.

Tabletop air cleaners (from 10 manufacturers) will now display their clean air delivery rate. The ratings will show the machines' ability to remove dust, pollen and tobacco smoke particles from the air in a 120-square-foot room.

According to a General Motors researcher, Dr. Leonard Evans, if all vehicle drivers and right front passengers who don't use seat belts now started **buckling up**, accident deaths would drop 43 percent.

TAC Special Achievement in Safety Award

Two transient F-4 aircraft had stopped for cross-country services at Mountain Home AFB, Idaho. Due to locally heavy winds with gusts in excess of 50 knots, all nonessential equipment had been removed from the flight line. Normal aircraft recovery operations were still in effect with a logistical support L-188 aircraft due to land within 10 minutes. A transient alert crew member prepared a parking area for the L-188, complete with the required external power unit (in this case a dash 60). He then left to provide escort for the landing aircraft.

Winds gusted to greater than 50 knots and the prepositioned dash 60 generator set started to roll directly toward the F-4s that were being refueled. At this point, A1C Steven A. Johnson, who was patrolling an adjacent ramp area, noticed the unmanned generator's movement and raced toward it. In



SSgt Allen M. Trump
366 EMS, 366 TFW
Mountain Home AFB, Idaho

the same instant, SSgt Allen M. Trump saw the situation from his section's observation deck. He also ran to stop the unit.

Together they stopped the 4000-pound unit just 50 feet from the F-4s. Had this dash 60 power unit continued on its course, the outcome could have been disastrous.

Investigation of the power



A1C Steven A. Johnson
366 SPS, 366 CSG
Mountain Home AFB, Idaho

unit's brake system revealed the automatic brake cable assembly's designed tension had backed off. Hence, full engagement of the unit's brake system was not possible and proved ineffective against 50-knot winds.

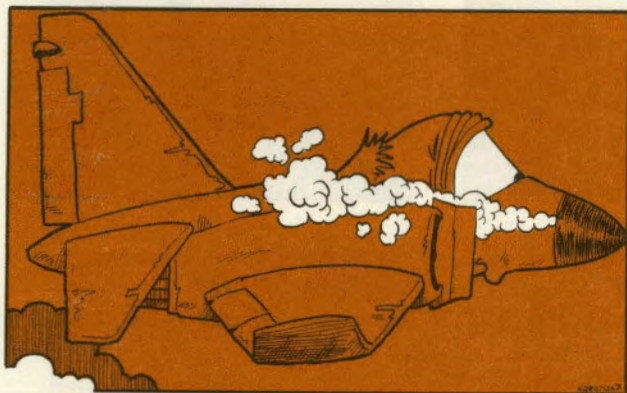
Thanks to a "heads up" reaction by Sergeant Trump and Airman Johnson, this story had a happy ending.

CHOCK TALK

INCIDENTS AND INCIDENTALS WITH A MAINTENANCE SLANT

Check it out first

An RF-4 crew was doing a TERE mission when the WSO noticed a strange odor. About 5 minutes later he saw wispy smoke coming from his forward looking radar (FLR) scope; so he shut it off and both crewmembers went to 100-percent oxygen. The smoke increased for a few seconds before it gradually started to dissipate during the return to base.



Prior to this flight, the FLR had been worked on by a specialist. Because the aircraft was parked facing a concrete wall, the specialist didn't turn on the radar or ops check it because he knew he wouldn't get any radar returns. While he waited for the aircraft to be repositioned, the specialist was called off the aircraft for the preflight and then sent to another jet before he could complete his original task. The aircraft was released to the aircrew with the forms

annotated "Ops check not accomplished. Request inflight check." The ops check, which the specialist should have performed, would have required the FLR scope cooling fan to be checked. Because the cooling fan wasn't working, the scope overheated when it was turned on in flight.

Don't ask somebody else to do your job. When a bent jet returns from a mission, complete the task of getting it mission capable again instead of leaving the job half done. The maintenance supervisor should have either allowed the specialist to complete the ops check on the FLR or released the jet for flight with the clear stipulation that the radar not be turned on.

Pilot-maintenance trust

MSgt Thomas Palmer
325th Aircraft Generation Squadron
Tyndall AFB, Florida

The men and women who maintain aircraft bear a responsibility greater than they usually realize: A pilot's life depends upon the thoroughness of an inspection or quality of a maintenance action.

My responsibility to the pilot became a vivid reality on takeoff roll as I grasped the rear cockpit canopy rails on my first jet fighter ride. I hope those in charge of the aircraft incentive ride program understand its value and maintain it. There is no other training program that could better

strengthen the bonds of trust and understanding between pilots and maintenance people.

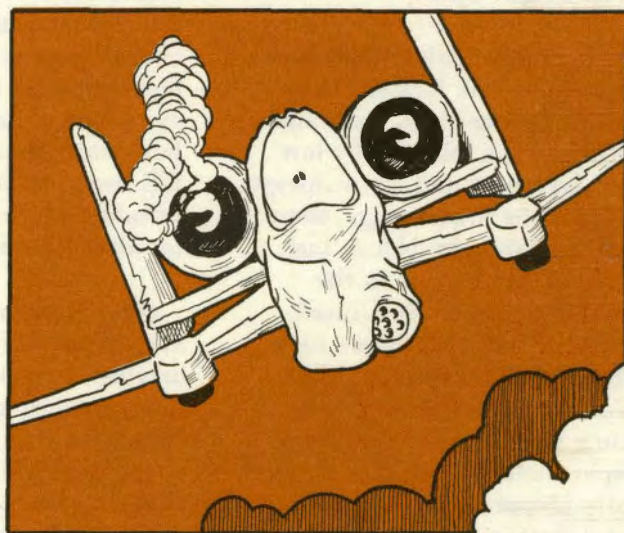
The pilot has to trust his maintenance people. I believe the knowledge and understanding of this trust causes maintenance people to maintain a safe and reliable jet.

In June 1984, I experienced firsthand a case of pilot-maintenance dependency. I was flying back seat in a flight of six T-33s being delivered to Ecuador. About halfway between the Bahamas and Jamaica, one of the jets began dumping fuel from its dump mast. The pilot immediately called for my advice. I felt a tremendous pressure as I reviewed the fuel system in my mind. *It could only be a sticking fuselage float valve.* I was very relieved when the negative "G" I suggested to the pilot succeeded in clearing the problem.

When I compare our excellent safety record to the high number of sorties we fly, I know that aircraft maintenance people do realize the importance of their job.

For want of a twist

As he pulled off the target after a strafe pass, an A-10 pilot noticed that the start cycle caution light was on; so he pulled the necessary circuit breakers. The white smoke that was coming out of the right engine stopped and the start cycle light went out a minute later. Because the right engine oil pressure had started to fluctuate beyond the allowed limits, the pilot was forced to move the right throttle to idle in order



to lower the pressure. As a result, a simulated single-engine approach was necessary to get the aircraft safely back on the ground.

This incident was a result of improper maintenance practices that caused an inflight emergency and FOD damage to over 45 blades in the right engine. During maintenance, 10 sorties prior to this mishap, personnel failed to properly torque the latch tab bolts on the outboard inner cowl door or to replace one of the nutplates that had lost its self-locking feature.

After the incident, the bolts that secure the two latch tabs were loose and one was missing. With the tabs improperly fastened, engine airflow was able to release the latches and airloads then twisted the cowl door which lodged against the starter control valve.

No matter how minor or mundane maintenance tasks may seem, they are all important. Failure to complete what probably seemed like a minor task in this incident resulted in significant damage and almost forced an engine shutdown.

BASIC REMINDER WINTER FLYING

Maj John Bookhardt
TAC Flight Safety

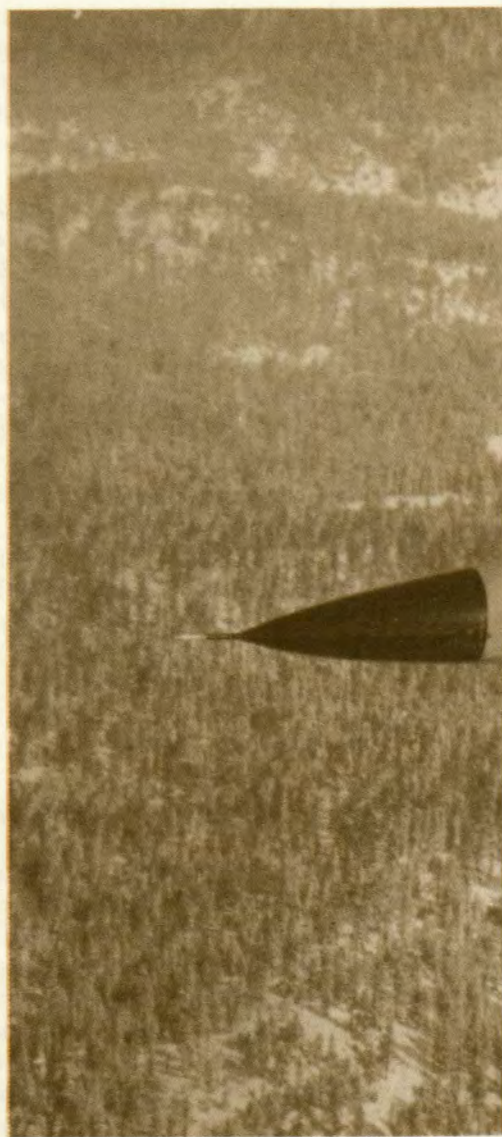
It's winter again! What do we have to look forward to as flyers? Low ceilings, rain and wet runways followed by low ceilings, snow and wet runways followed by low ceilings, snow and icy runways. Not so fast, you say. My base is in the southern part of the United States. It NEVER snows here. That may well be true. The problem is you never know. (How about cross-countries or deployments?) And if you aren't fully prepared, it could be a fatal mistake.

So what do we do? Remember the 5 Ps? Prior planning prevents poor results (OK, so it has an R in it). The point being, if you spend the necessary time in flight planning, preflight and inflight preparation, you can significantly improve your chances for a successful mission. Naturally, you say. I do that every day. I never intentionally rush my preflight or skip steps in the checklist. Yes, but what about the time you left your flight jacket at the "Q" and had to step smartly around the plane due to a 25-knot wind on the ramp (translate chill factor) and an almost frozen backside. Did you miss anything then? Mus' not have—you made it back. But

how long did it take for your bod to thaw out once you got the cockpit heat on? The point is that some similar occurrence has happened to each and every one of us, and no matter how many thousands of hours UE time you've got, we can all benefit from some *basic reminders for winter flying*.

#1—Take more time. This applies not only on the ground, driving to work because of the lousy road conditions; but also in the flight planning room to check NOTAMs, weather (freezing level, cloud types, icing, winds and dew point), status of airfield (runway, RCR, cables, taxiways, ramps and Nav aids) and, last but not least, the old Dash One winter weather info. Allow extra time for the preflight. Remember the hydraulics take longer to warm up when the jet has been sitting in subfreezing temperatures all night. Does the jet need to be deiced? And—if you've taken the time to get it deiced—keep it deiced. Remember the Air Florida 737 (warm weather pilot in cold climate) civilian airliner that had been deiced and then accumulated lots of additional snow and ice waiting for takeoff? Don't be afraid to ask for additional deicing at EOR or to take it back to the chocks.

#2—Think winter. Prepare your body. Stay in shape. Get plenty of rest. Eat foods that are good for you. Remember, colds and sniffles are about 3 to



RS for

4 times more prevalent in the winter than other times during the year. Don't self-medicate. If the bug gets you, get off the schedule and get over to the

flight surgeon. Dress warmly. Winter long johns, watch caps, winter gloves with wool inserts and winter flight jackets are worth their weight in gold

when the mercury starts falling. (And if the worst happens, survival on the ground overnight could depend on just these items.) Watch your step





BASIC REMINDERS for WINTER FLYING

on the ramp. Ice is slippery and HARD. If the aircraft has been deiced, glycol is as slippery as goose grease.

When you're ready to taxi, keep the power down and keep the speed at a walk—10 knots or less. Brake slowly and watch the painted surfaces for the possibility of hydroplaning. During takeoff, expect increased thrust and shorter takeoff rolls; but longer abort rolls, too, if things are slippery. Once airborne, the hydraulics may operate more slowly; watch your gear/flap, slat retraction limit speeds.

Last but not least, be prepared to fly instruments. Make sure your pitot heat is operable and use engine/airframe anti-ice as dictated by your flight manual. Remember—anti-ice is not deice. Once it's there, it may not melt. And any ice is too much. Stall speeds go up, parasite drag goes up, lift goes down and ice does nasty things to engines. When you're ready for landing, double-check the weather (ceiling and vis), runway condition and barrier status. Just asking if the runway is open is not sufficient. Different commands and different aircraft have different rules. A RCR of 5 may be fine for a plane with thrust reversers; not so for an F-15. Also, reported visibility may not correspond to actual slant range visibility due to snow or low scud clouds. Finally, consider the crosswinds: wet or icy

runways tend to make **any** crosswind unacceptable.

#3—Plan on the unexpected. Look for leaking hoses, loose fittings, etc., on pre-flights. Make sure the canopy and windscreens have been cleaned properly (glycol and Plexiglas don't mix) and defrosted (usually 100 to 120°F air only). Double-check your crew chiefs; and crew chiefs, double-check your pilots. Even the most conscientious soul has a hard time staying that way when the temperature is -10°F and a 20-knot wind is blowing, or the rain is pouring down. Don't grab cold metal surfaces (ladders, too) with warm, bare hands. You may not be able to turn loose. Watch for other vehicles on the ramp (snow plows, deicers, etc.) and allow extra room for turns. If in doubt, stop. It's better than a bent wing.

If you get delayed, ensure the cockpit heat is working. Not too many years ago, the crew of a large multiseat airplane sat for several hours on the ramp fixin' the jet with little or no heat in the cockpit. They crashed shortly after takeoff. The accident board concluded that the lack of heat was a major player. If you do get delayed, be sure to recheck the weather. Just because the base you were going to was clear two hours ago, doesn't mean that it is now (as all you SOFs know only too well). While fly-

ing, keep an eye on the wings/leading edges. Ice can form quickly. Change your altitude as necessary.

Finally, don't press the weather. If you don't have the ceiling required for the low level or range, try it another day. The woods are full of guys who thought they could make it. If your aircraft has radar/terrain following equipment, use it. Tactical flying in marginal weather close to the ground is extremely hazardous.

#4—Know your job; be excellent at it. No matter whether you are a pilot/navigator/SOF/flight lead/ops officer/WSO/wing commander/co-pilot/instructor/EWO or duty desk officer, we all have specific rules to know and follow. From command guidance to the old Dash One, you must know what to do and how to do it. Remember, flying the jet is rule number one; flying the jet intelligently is rule number two and knowing when to go on a weather hold, knock-it-off, divert, abort or just plain taxi more slowly is all part of rule number two. Knowing your job and performing it perfectly makes rule number two happen.

Winter flying is hazardous, but remembering the 5 Ps and applying these basic reminders is a significant step in the right direction and can keep you flying for many years to come—**IN WINTER WEATHER.** ➤



TAC TALLY

TAC		
SEP	THRU 1986	SEP 1985
3	19	14
0	7	9
4	15	11
4	15	8

ANG		
SEP	THRU 1986	SEP 1985
1	5	11
1	1	7
2	8	7
1	7	7

AFR		
SEP	THRU 1986	SEP 1985
1	1	1
0	0	1
1	1	0
1	1	0

CLASS A MISHAPS
AIRCREW FATALITIES
TOTAL EJECTIONS
SUCCESSFUL EJECTIONS

TAC'S TOP 5 thru SEP 1986

1st AF	
class A mishap-free months	
178	84 FITS
114	48 FIS
73	318 FIS
23	49 FIS
19	325 TTW

9th AF	
class A mishap-free months	
43	33 TFW
16	507 TAIRCW
15	23 TFW
14	56 TTW
13	1 TFW

12th AF	
class A mishap-free months	
41	366 TFW
25	355 TTW
23	479 TTW
23	27 TFW
22	37 TFW

ANG	
class A mishap-free months	
206	182 TASG
190	110 TASG
165	138 TFG
147	177 FIG
142	114 TFG

AFR	
class A mishap-free months	
73	482 TFW
72	301 TFW
63	924 TFW
61	419 TFG
51	906 TFG

DRU's	
class A mishap-free months	
186	USAFTAWC
120	28 AD
65	24 COMPW

CLASS A MISHAP COMPARISON RATE

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

TAC	1986	4.8	6.8	5.4	4.4	4.1	3.7	3.6	3.2	3.4			
	1985	3.2	3.4	2.7	2.4	2.9	2.7	2.5	2.6	2.5			
ANG	1986	4.3	2.4	3.1	2.3	2.7	3.0	2.5	2.2	2.5			
	1985	4.8	4.8	3.0	4.3	4.2	4.9	5.4	5.2	5.1			
AFR	1986	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6			
	1985	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6			

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

WELL, HERE WE ARE
HEADIN' INTO WINTER.



TIME TO THINK ABOUT
WHAT TH'COLD CAN
DO T'YOU AN' YOUR
EQUIPMENT.



YES, YES... I KNOW SOME OF
YOU WHAT ARE STATIONED IN
TH'NORTH AN' BEYOND ARE
ALREADY IN YOUR THERMAL
JODHPURS AN' CHIPPING ICE.
SO JUS' LISTEN AN' DOUBLE
CHECK, OK?



NOW, FOR YOU FOLKS
THAT'S BEEN ENJOYING
TH'SUN ON TH'RAMP...
START THINKIN' ABOUT
TH'CHILL FACTOR. CHECK
T'SEE IF YOUR PARKA,
WATCH CAP AN'
FOOTWEAR, IS
UP TO SNUFF.



FOR SOME OF YOU,
SNOW REMOVAL
EQUIPMENT MUST BE
IN WORKIN' ORDER TO
KEEP TH' RUNWAYS
CLEAR.



AND DON'T YOU JOCKS
LET ICE ON TH' RUNWAY
CATCH YOU BY SURPRISE.



CHECK TH'
SEALS AN' WATCH
FER LEAKS.



HE SURE DO HAVE
A FLARE FER
PUTTIN' A POINT
ACROSS.

NO, I THINK HE JUS'
FOUND THAT ICE
CREAM I DROPPED
ON TH'RAMP.

