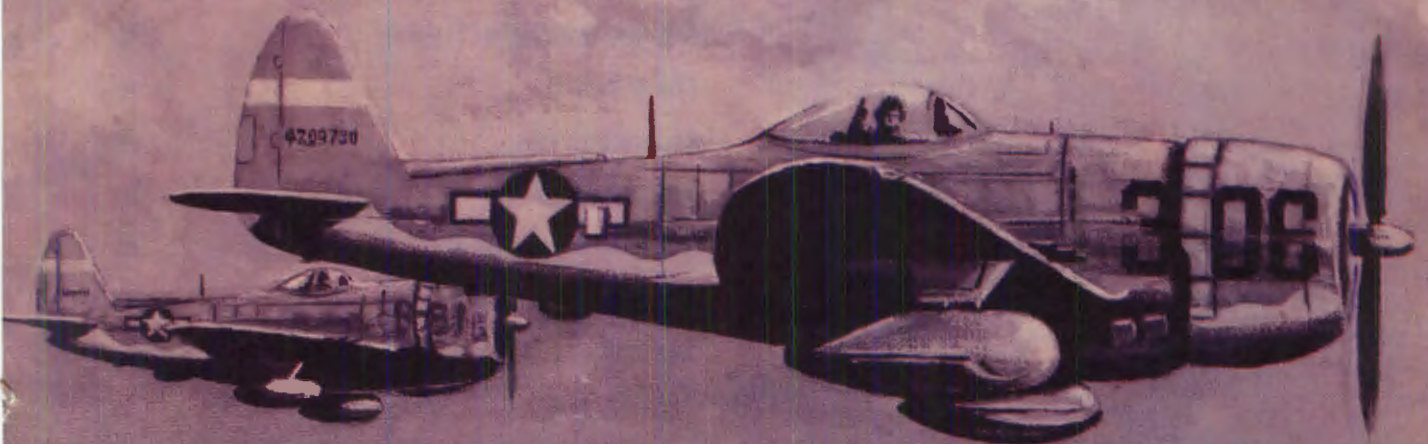


# TAC ATTACK

FEBRUARY 1974



BUSTED JUGS...Pg 4

Tomkowski

for efficient tactical air power

# TAC ATTACK

FEBRUARY 1974

VOL. 14, NO. 2

**Tactical Air Command**

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VICE COMMANDER  
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### TACRP 127-1

Articles, accident briefs, and associated material in this magazine are non-directive in nature. All suggestions and recommendations are intended to remain within the scope of existing directives. Information used to brief accidents and incidents does not identify the persons, places, or units involved and may not be construed as incriminating under Article 31 of the Uniform Code of Military Justice. Names, dates, and places used in conjunction with accident stories are fictitious. Air Force units are encouraged to republish the material contained herein; however, contents are not for public release. Written permission must be obtained from HQ TAC before material may be republished by other than Department of Defense organizations.

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## Angle of ATTACK

# WE NEED A FEW GOOD SAFETY MEN

We had a good flight safety record in 1973 — One of the lowest aircraft accident rates in TAC's 27-year history. Both aircrew and support personnel can be proud of their record. This achievement also reflects the dedication of the guy behind the gun — the safety officer. We need more good gunners.

I believe that young officers looking for a good career-broadening assignment often avoid the safety field. If this is true, I know these people are missing an opportunity to get into a duty that offers responsibility, challenge, and a high degree of job satisfaction.

Many young officers I've talked to feel that once you get that "X" in the computer, you, like Hester, are marked for life. Not true. As a matter of fact, TAC's policy (outlined in TACR 36-1) states that "those officers who have completed three consecutive years in safety... will be considered for assignment to duties which would assist their career development outside the safety field."

There are some other TAC policies that you should know about when considering a tour in safety. For example, we require each wing Flight Safety Officer to maintain proficiency in a UE aircraft. If you are assigned to a Flight Safety staff above wing/division level, you'll be afforded the opportunity for familiarization training in tactical aircraft. In addition, there are other policies

outlined in TACR 36-1 concerning reassignments and OERs. Check them out. While you're looking through the reg, take a look at the qualifications required. If you don't meet all of the qualifications, particularly the minimum rated pilot experience, consider applying anyway. We can always consider waivers.

The regulation has an attached application format, but before you fill it out, give our Flight Safety people here at TAC a call. Contact Col Martin or Lt Col DesJardins, Autovon 432-7031. They would like to talk to you informally, and maybe dispel some misconceptions you may have about the safety business.

The terrible cost in lives and equipment resulting from accidents underlines the importance of the FSO's job and only sharp, dedicated people can handle this responsibility. I know it and so do members of the promotion boards.

We need good men in the safety business. If you think you can handle it, give us a call.

*E. Hillding*  
E. HILLDING, Colonel, USAF  
Chief of Safety



# BUSTED

# Jugs

by William G. Holder  
Aerospace Engineer Wright-Patterson AFB, Ohio

Ask any pilot who ever flew her and probably almost to a man they will tell you that the Thunderbolt was the best fighter during WW II. Initially spurned by many RAF and AAF pilots, skeptics soon became hard to find. Much of the early bad-mouthing concerned the P-47's bulky, ungainly appearance when compared to the sleek, bullet-like Mustangs and Spitfires.

The JUG (an early nickname that stuck) had a squatty heavy appearance which made it seem more like a bomber than a fighter. The broadness of its fuselage was further emphasized by its wide spread landing gear and nearness to the ground.

But no matter how she looked on the ground, in the air the JUG was a veritable tank. Many airmen alive today owe their lives to her structural soundness. Less than one percent failed to return from combat missions — an amazing statistic considering the length of the raids and ferocity of the enemy. With drop tanks, the JUG had a healthy range of 1200 miles.

These pictures are but a sample of the proof of the JUG'S ruggedness. Thanks JUG — for a job well done!



71 P-47s with their pilots and crew chiefs line up for inspection at Bellows Field, Oahu, Hawaii, 16 May 1944.





His crash-landed JUG ready for the salvage dump, Ist Lt. Hoyt Bengé examines the damage resulting from a direct hit by a 88mm shell during a dive-bombing mission over Germany. Despite the severe damage, Lt. Bengé flew the plane back to base and landed unhurt.



Although not a result of combat damage, this clearly shows the strength of the Jug. The caption on the U. S. Air Force photo, 14 June 1944, only informs us that this was a P47 of the "2nd Service Group which crash landed at an air base somewhere in Iceland."



## JUGS



Returning from a mission in the Cologne area, 2nd Lt. Karl Hallberg landed his plane just as a hung bomb rolled from the craft onto the runway. The 500 pounder, rolling down the runway after the plane, exploded under a wing with the unbelievable results as shown. Lt. Hallberg returned to flying status shortly afterward.



This P-47 shows flak damage on its flaps but made it back to base safely.

## TACTICAL AIR COMMAND

### AIRCREW MEN of DISTINCTION



CAPT JUMPS



1LT CLINEHENS

Captain Ronald E. Jumps and First Lieutenant David E. Clinehens, 524 Tactical Fighter Squadron, 27 Tactical Fighter Wing, Cannon Air Force Base, New Mexico, have been selected as the Tactical Air Command Aircrewmen of Distinction for December 1973.

Captain Jumps and First Lieutenant Clinehens were making a night, terrain-following, 1000 feet AGL delivery on the bombing range. With ten seconds to go on their radar delivery, the left canopy suddenly exploded into the cockpit. Captain Jumps was struck a sharp blow on the helmet which disintegrated the visor housing and knocked the tinted visor from its housing. Large pieces of broken plexiglass ripped through the cockpit forcing Captain Jumps to lean far right and forward. This, combined with a dense haze of fine plexiglass particles, prevented him from seeing the primary flight instruments or the terrain following radar scope. Not knowing the extent of the damage, aircraft attitude, or clearance from the ground, Captain Jumps reacted instantly with confidence in his professional ability. Using the small standby indicator and a fluctuating standby altimeter as reference, he selected full afterburner, deselected the TFR and swept the wings forward as he initiated a steep climb to gain altitude and reduce airspeed to achieve a tolerable level of wind blast and noise.

1st Lt Clinehens could see that although Captain Jumps was leaning far out of position, he still had control of the climbing aircraft. After moving large pieces of plexiglass to get at the switches, 1st Lt Clinehens selected UHF Guard, squawked emergency on the IFF/SIF, and turned the volume up on the intercom to re-establish communications. He then placed his hand on the ejection handle, ready to eject the crew module, if so ordered. 1st Lt Clinehens, although stunned and disoriented by the initial blast of air, quickly reacted to provide invaluable assistance to Captain Jumps.

Both crew members had difficulty reading the standby

instruments. Although their clear visors were down, the fine plexiglass in the air caused their eyes to water excessively. 1st Lt Clinehens assisted by reading off airspeed during the climb. When Captain Jumps saw the cabin pressure master caution light illuminate, he knew he was at 10,000 feet MSL. He then initiated a level-off, tapped 1st Lt Clinehens on the hand, the pre-briefed method of saying, "do not eject", and passed the thumbs up signal which 1st Lt Clinehens returned.

With the aircraft under control, the crew dumped fuel and prepared for an emergency straight-in landing at Cannon AFB. Communication was difficult due to wind noise. The situation was further complicated by damage to the left engine from ingested plexiglass. Through expert crew coordination procedures, Captain Jumps and 1st Lt Clinehens determined the controllability of the aircraft and flew the aircraft to a safe landing at Cannon AFB.

Investigation revealed that a bird had struck the canopy causing structural failure. Through professional response, superior airmanship, and crew coordination, Captain Jumps and 1st Lt Clinehens saved a valuable aircraft and readily qualify as Tactical Air Command Aircrewmen of Distinction.





# TAC TIPS

...interest items,

God gave us one "G" and he gave the enemy two.

## IPs BEWARE

An F-100F pilot was given a proficiency check as a result of several mobile log comments of "low final approaches and short touchdowns." On final for the first landing, power was not advanced soon enough and the Hun touched down about 30 feet short of the threshold in a nose-high attitude. The tailskid was knocked off and approximately 95 manhours were required to fix the aircraft. The SEFE had delayed correcting for the flat, nose-high approach until it was too late to prevent the short landing.

In Europe, a KC-135 received extensive internal damage to the boom as a result of a brute-force disconnect. The receiver pilot (RF-4C) failed to remain within the refueling envelope. The IP in the Phantom allowed the front-seater to get out of the envelope.

The next incident took place in another command, but it could happen to any fighter-type IP... local flight... two-ship... formation landing. The student pilot lowered the nose (nosewheel did not touch down) and then raised it for aerodynamic braking. The IP took control as the aircraft broke ground. The right wing dropped to approximately 45 degrees and the wing tip struck the runway. The IP applied corrective aileron, rudder, forward stick, and afterburner. The Talon rolled left, then settled to a normal (?) landing. Power was retarded and landing rollout completed. The IP allowed the aircraft to become airborne during the aerodynamic braking maneuver with insufficient airspeed to prevent a roll and subsequent right wingtip damage.

None of these incidents point at the IP's knowledge of procedures or flying abilities. In fact, the T-38 IP did a damn good job of salvaging a student screwup that was very close to becoming an "aircraft fatal." Awareness of the unexpected is what saves IPs (and airplanes). The key is anticipating the worst at all times. Mentally flying with the student and anticipating his every move are also

necessary. If these things are adhered to, quick reaction comes automatically.

Sometimes an instructional flight goes so smoothly it's unreal. Touch-and-go's... squeak, squeak, squeak... and then it's white-knuckle until you taxi-off or make a go-around. Why? I don't know. The student certainly didn't know or he wouldn't have done it in the first place. You didn't know or you wouldn't have been trying to see who's in mobile or thinking about that party last Saturday night.

Remember, the only thing you can expect is the unexpected — and it's your job to make a quick, safe decision so that the both of you are around to debrief the incident. Keep alert. Anticipate the worst. If it looks the least doubtful, go around... or disconnect... or try it another day.

## FASHION NEWS

The latest in men's fashionable underpinnings may be stylish and contemporary, but it is also potentially hazardous to an aircrew's health. We're referring to the nylon and other slick fabric underwear that's on the market. These items should never be worn under your Nomex flight suit. The reason: Nylon and other similar artificial fibers melt at about 300 to 400 degrees F.

The Nomex will protect you against the heat and delay the heat transfer, but sufficient exposure soon raises the skin side temperature to 300 — 400 degrees F. The artificial fiber then starts melting and severe burns result as the molten material sticks to the skin.

So — a word to the wise! Save those racing silks for after the flight!

Extracted from U. S. Army Aviation Digest



# mishaps with morals, for the TAC aircrewman



## ONCE AGAIN

We recently received two hazard reports concerning near misses. In both cases, the aircraft involved were in VFR conditions. There are only so many ways we can say, "Keep your head out of the cockpit," and that old cliché of see and be seen is still about the best way to say it. So here it is once again — SEE and be SEEN! Remember, IFR flight plans and/or radar control do not, repeat do not, guarantee your separation from all traffic. You may not be able to do much about the "SEEN" part except turn on the proper lighting, but you can sure take care of the "SEE" part. Please do.

TAC ATTACK

## HYPOXIA OR HYPERVENTILATION?

A student AC in an F-4 removed his mask after he failed to get immediate relief from cockpit fumes on 100% oxygen. Shortly after removing the mask, he became lightheaded and felt a tingling in his hands. He replaced the nose-hose and selected emergency but his dizziness only increased. He improved his situation only when he forced himself to breathe at a slower rate. The student later stated he felt that the fumes might have been caused by the oxygen equipment itself since the system had required maintenance prior to flight (to replace the hose leading from the quick disconnect to the harness — no factor in this case).

The fumes had been a result of an oil leak in the left engine constant-drive unit. This same leak also led to the failure of the left generator. These emergencies, combined with the student's apprehension about his oxygen system, ultimately resulted in hyperventilation.

Since this was the second case of hyperventilation in a three-month period for this wing, the investigating medical officer interviewed several of the unit's crew members. His findings? While most crew members had a fairly good understanding of the symptoms and cures for hypoxia, few of them were well acquainted with controlling hyperventilation. In light of this, the wing took immediate steps to give the troops the straight skinny. Briefings and demonstrations were given by the Flight Surgeon's office, emphasizing the importance of knowing the differences between hypoxia and hyperventilation and what to do when your symptoms point to too much, rather than too little oxygen. This unit also suggested that agencies responsible for physiological training reevaluate the adequacy of their training in prevention and cure of hyperventilation.

Don't wait for your next physiological training class to update your knowledge of this sneaky killer. Talk to your flight surgeon — get him to give a spiel at the next safety or aircrew briefing.

As a sidelight here, our F-4 pilot was lucky. If the fumes had been toxic, his mask removal could have resulted in a loss of consciousness or even death.

Think about it.

# FLIGHT LINE ACCIDENTS

*Ed Note: When we saw this series of pictures along with the synopsis, we were struck by the same, "we don't believe it" reaction that we imagine you're experiencing right now. Nevertheless, they did happen and can happen again. It's a helluva way to treat our airplanes!*

## SYNOPSIS

a. 0400 hours — Three airmen were directed by an NCO to move an A-7D aircraft to a run-up pad for an engine run-up. The three airmen were positioned, one on the tug, one in the aircraft, and one walking on the left side of the tug directing the operation. The NCO followed in a pick-up truck. Wing walkers were not used. The right wing tip struck the intake of a parked SLUF. Damage estimate? \$3,500.00.



b. 0600 hours — An NCO delivering an MC-1A air compressor to an F-4, drove a farm tractor between two parked F-4s. He said he was momentarily blinded by lights from an approaching vehicle. The tractor struck the right outer wing leading edge flap and trailing edge of one aircraft. The mishap resulted in \$2,249.00 damage to the F-4 and \$412.00 to the tractor.





c. 2350 hours — A security policeman patrolling the flight line struck the right front side of a parked transient T-37. The weather was clear and the area was illuminated. The driver was alone in the vehicle and apparently went to sleep. Damage is in excess of \$80,000.



d. 0445 hours — An NCO operating an Air Force pickup truck was transporting maintenance personnel in search of two aircraft requiring maintenance. While attempting to spot tail numbers with the vehicle head lights, the canopy of the pickup truck struck the left stabilator of a parked F-4. Damage to the aircraft was \$871.

## THESE ACCIDENTS:

- a. All happened during the hours of darkness (2300 — 0600 hours).
- b. Will cost the Air Force approximately \$100,000 and many man-hours.
- c. Will cause a reduction in our mission capability.
- d. Involved operators ranging in rank from airman to sergeant, all of whom were in the high-risk age category (the average age of the drivers was 21).
- e. Pointed out that we still have ramps with inadequate lighting.
- f. Indicate the need for competent supervision — even at night.
- g. All involved the violation of established flight line procedures.

## COMMANDERS SHOULD:

- a. Take a look at your night supervisors — make sure they are fully aware of their responsibilities.
- b. Assure that only mission essential vehicle traffic is permitted on the flight line.
- c. Establish traffic lanes for vehicular traffic.
- d. Assure that all personnel involved in ground movement of aircraft understand the requirements of applicable TOs and AFM 127-101.
- e. Review vehicle control officer program relative to vehicle inspection and operator control.
- f. Assure adequate ramp lighting, consistent with energy conservation criteria.



# SPO

# COR

## 1973 F-4 SUMMARY: "WELL DONE"

My thanks to all you folks out there who greatly reduced my work load in 1973. In '72, a large portion of this SPO's time was spent with aircraft accident boards and accident reports. 1973 was a tremendous improvement in that only 4 major and 5 minor accident boards and reports were required. All commanders, supervisors, operators, and maintainers deserve a hearty — "Well Done"!



To summarize — Majors: 4 losses — 2 materiel, 1 undetermined, and 1 pilot factor. In the latter, the student crew flew into the ground during a night rejoin after a range mission. Night and night join-up procedures have been reviewed and expanded. The wingfold failure in January resulted in a mod program which will beef up the wingfold section. The other two losses were related to undetermined and uncommanded flight control inputs. The Air Force has a special high level and well qualified "Rivet Gyro" study group looking at the F/RF-4 flight control system. Hopefully, as a result of this group's activities, correctable problems will be identified and solutions initiated. Their final report is due out this month. We'll keep you posted.

Minors: 5 total — 2 birdstrikes, 2 bleed air system overheat/fires and 1 number 4 fuel cell rupture. Birdstrikes continue to be a problem. Additional studies, modified procedures, good information exchange and heads up flying continue to receive/require attention. The bleed air system still harasses our aircrews and machines. Inspections have been increased, BLC valves modified, and stronger ducting will eventually be introduced. In the interim, get it on the ground if you have any indications of bleed air problems. The number 4 fuel cell webbing will be beefed up by depot teams who will also inspect all other cells, top and bottom, for additional cracks. This will take awhile, so again, get it on the ground. TAC hasn't lost one yet, but other commands have.

Now that's the type of year end summary I like to give — let's try to make it even shorter in '74!

Maj Burt Miller



# NER



## F-4 UTILITY FAILURE PLUS...

As of December 1973, USAF has lost 5 F-4s which experienced utility failure with a shutdown engine. The Navy lost 4 aircraft for the same or related causes since they got the F-4. Dual failures are supposed to be remote, but these statistics indicate this combination is not remote enough. Dash one guidance will get you on the ground safely if you know and properly apply it — and if you don't get behind. Additional words of wisdom on this subject were contained in the February 1973 edition of TAC ATTACK under the title: "F-4 Minus Two." Since that date, another MAJCOM lost an F-4 under the same conditions. MACAIR, OOAMA, ASD, the F-4 SPO, and all MAJCOM safety types are working towards an eventual solution which may mean a hardware change or at least expanded flight manual guidance. In the interim, all F-4 drivers may appreciate a few additional words of wisdom gleaned from research of past accidents/incidents and from discussions with various "experts" and experienced F-4 pilots (including a couple who actually recovered aircraft with this type emergency.)

First, a review of past USAF accidents revealed the following common traits:

1. All started as relatively "simple" single emergencies.
2. Simultaneous or near simultaneous engine and utility loss was reported only during combat damage situations.
3. The utility failure usually occurred after the engine was shut down or single PC was lost.
4. Immediate or ASAP type landings were indicated in only two cases — in these the original emergency was a fire/overheat condition.

5. No asymmetric loads were involved.
6. No controllability checks were flown except when system loss resulted from combat damage.
7. All aircraft were lost near the airfield in a landing configuration.
8. Airspeed got too damn slow!
9. Aircraft control was lost — specifically due to an uncontrollable yaw and roll condition.
10. Crew ejected — usually very near the edge of the envelope, in a bad attitude, at a slow speed, with a high



## SPO CORNER

sink rate. All survivors were darn lucky.

We now submit the following comments for your consideration. These words of wisdom as to how the experts would do it merely amplify or are in addition to the present checklist guidance which must be followed.

1. If you have to shut down an engine for any reason, especially fire/overheat or bleed air duct failure, anticipate that "remote" possibility of subsequent utility failure.

2. Start planning accordingly. Get into ye ole checklist.

3. Keep your airspeed up — 230 knots is an absolute minimum airspeed for maneuvering prior to final approach descent — note the word "descent."

4. If and when the utility goes, or if you suddenly get into any of these dual/triple failure situations, get serious — real serious.

5. If possible, and if your original emergency doesn't require an immediate landing, try for two things: (1) Reduce gross weight as much as practical, and (2) perform a controllability check (not at 1500 feet on downwind, either!)

6. Do not hesitate to use all available power, including AB to keep your airspeed. But — anticipate the need for rudder and aileron/spoiler to counteract the asymmetric thrust and yaw of high power settings and — come in with the power early and slowly if at all possible. NOTE: With LH engine out and bus tie open — no AB ignition available.

7. Determine your final approach descent airspeed by the above-mentioned controllability check or by referring to the fuel load/gross weight/approach speed chart in the checklist.

NOTE: MACAIR advises that these listed minimum airspeeds are based on a no flap 3<sup>0</sup> glide slope (descent) approach.

8. OK — so you're close to the field; your gear's down, light weight, have a minimum final approach speed in mind, no asymmetric load, the barrier's ready, airspeed's 230 — 250, you're probably in min burner, and various dignitaries and safety types are watching and waiting.

9. Do not start reducing your airspeed to that final approach speed until you start your final descent and then do it gradually. You only need to reach that min speed on very short final and even then only if it's the barrier's max capability. All the troops who have successfully brought one home touched down at max barrier capability speed — or a little faster.

10. AB go-arounds at that absolute minimum speed, under these conditions, are not recommended for longevity — plan ahead.

11. If you lose it — get out — quick!

One final word — The above guidance was geared toward utility failure with an engine shutdown. The same naturally applies to related emergencies; i.e., loss of utility plus single PC or loss of utility plus single PC plus engine out. It might even be considered if you have a utility failure and one engine that won't go above idle, etc.

**Maj Burt Miller**

## GUEST SPO CORNER

AFISC/SEL has requested that the following be brought to the attention of aircrew members that may need to transport a parachute aboard commercial carriers: "When traveling with a personnel parachute aboard commercial airliners, ensure the chute is boxed or placed in an A-3 bag and checked with your luggage. This procedure also applies to chutes containing ballistic devices. Normal ground safety devices, such as pins, will be installed. If you are challenged by a ticket agent, reply that the parachute is being transported as personal equipment under FAA regulation 103.1(C)(1) and presents no hazard when handled as checked baggage."

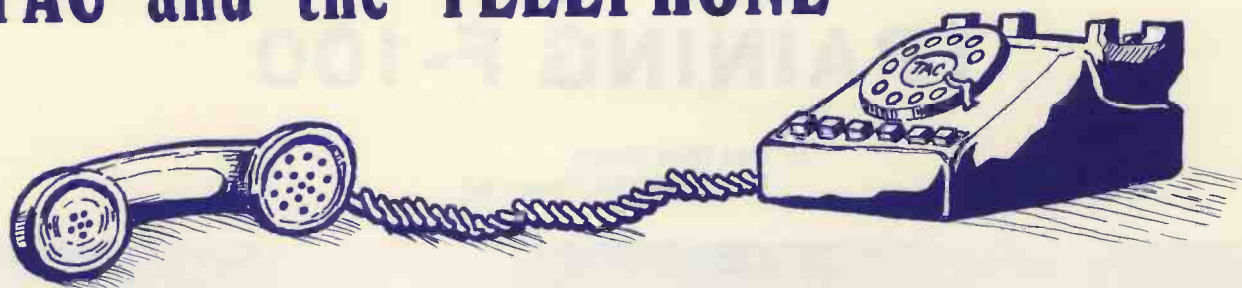
It should be noted that WEARING your parachute aboard commercial airliners is considered by most airline personnel to be in rather poor taste. Anyway, if you feel that shaky about flying, you're probably in the wrong business to begin with.

**Capt. Mike Byers**  
**TAC/DOXBL**





# TAC and the TELEPHONE



**Maj Ron Hardesty**  
**TAC/DOL**  
**Ext. 7941**

This article is aimed primarily at all desk jockeys who have frequent occasion to call TAC Headquarters, whether on accident reporting or mess kit repair. If every time you have gotten TAC on the wire has been a smooth-flowing joyful experience, turn the page. If, on the other hand, frustration has crept into your efforts to get that headquarters weenie to understand your problem, read on. Before you decide the following helpful hints are too obvious, and in some cases, downright insulting to the intelligence, rest assured that the reason you see them in print now is due to repeated frequency of the failure to observe them. Therefore, we humbly offer these little gems of advice in the sincere interest of helping us all to "get it on".

1. Calling TAC direct is permissible, sometimes mandatory, and often advisable. But have a heart; intervening headquarters are due a little consideration. When you pass the information up to TAC, you can often amaze yourself with the overflowing gratitude of the folks in the middle as you touch base with them. It just may be that there is somebody in the chain between you and us who's well versed in your problem. It's worth checking it out.

2. While you're checking things out, look at the TAC office symbol on that piece of paper. There's considerable difference on the Langley campus in what may first appear to be functions of the same shop. For example:

- DOO — Directorate of Fighter Operations, DCS/Operations
- DRF — Directorate of Fighter Requirements, DCS/Requirements
- CRF — Assistant to Commander for Reserve Affairs, Command Section
- DOV — Director of Stan/Eval, DCS/Operations
- SEF — Flight Safety Division, Office of Safety

A quick look at the office symbol can save you a lot of time in finding the right guy to talk to.

3. Another way to reach the right guy is to realize that TAC staff officers, like most people, eat lunch; normally from 1200 to 1300 Local. They also try, with infrequent success, to head for hearth and home sometime after 1700 local time. If you happen to be in another time zone, attention to the time conversion can help you avoid reaching someone other than the regular crew chief.

4. In your attempt to reach the regular crew chief on a question concerning a message or other directives, put that piece of paper in front of you before you call. If you don't have the paper on your desk when you call, it's an excellent bet that the man who answers doesn't have it either. Two guys on the phone, attempting to resolve an issue on a paper neither is looking at, can lead to imprecise results, at best. Look it up, get it in front of you; then call.

5. Believe it or not, we sincerely try to avoid asking for field inputs with a short suspense. Nevertheless, we must occasionally ask for information that we need, if not yesterday, then certainly within a few hours. Please realize that we have not dreamed up the need for a rapid response all by ourselves. So sometimes when we ask for inputs within a very short time frame, be confident that we need it.

6. To call TAC and ask for clarification on a directive is perfectly understandable. To call and ask whether we really meant what we asked is not quite so understandable. Prior to disseminating a TAC directive, it is coordinated, staffed, carefully considered, and, whenever feasible, discussed with affected units. Under those circumstances, "Did you mean what you said when you said what you said?" type questions are seldom useful.

As mentioned at the beginning, these items are offered as a means toward better communication so all can get the job done better. The above items are specific examples of the kind of help the guys at TAC really do need. When you get a job here you'll know what we mean. We're looking forward to your next call. ➤

# EMERGENCY SITUATION TRAINING F-100

by Capt Wiley Greene  
FSO, 162 TFTG, Tucson AZ



*Ed Note: Here's another excellent emergency situation training from our man in Tucson — Wiley Greene. Wiley tells us that the pics of the BF-4's backside were excellent! We're holding the next EST open for an F-4 driver to tell us his side of the story — here's your chance guys!*

## SITUATION:

Boy, what a great flight. You've just taken 16 frames of the back side of a BF-4 and there you are — 30,000 feet, inverted, and flamed out. What you gonna' do now, Kid?

## OPTIONS:

- a. Climb out of the simulator and go home.
- b. Ignore it and maybe it will go away.
- c. Cage the sight and think about it.
- d. Deploy the drag chute.



## ANALYSIS:

Option A is neat but let's believe we're flying. Option B has some merit, and we've all subscribed to that nebulous hypothesis at one time or another, but when the only propulsion force is gravity — something has to be done. Option D fits the F-101 spin recovery and you're NOT supposed to be thinking about that. Oddly enough, that leaves Option C.

A flameout at altitude can be the hairiest experience of your life because you have time to think about it. (A low altitude problem requires quick and accurate response with little time to think.) So let's look at some of the factors relating to a high altitude flameout.

Why should an engine quit? Not enough air? Yes, if you're high enough or have an airflow disruption caused by a bird strike or flying sideways. But birds, drag chutes, and other airflow disruptions quite often cause loud bangs and high EGT; neither of which was mentioned. That leaves fuel.

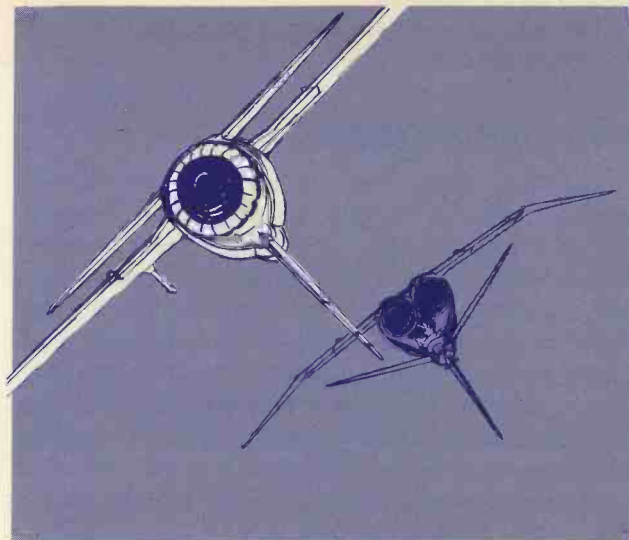
Energy crisis to a single-engine fighter pilot is nothing new. (We've been trying to stretch our gas to get to that super RON or to get back home for years.) But if we let the fuel in the forward tank go bye-bye, then an energy crisis is quickly manifested by the engine quitting. So, how can we use forward tank fuel faster than it is replenished? The quickest way is to go into Passing Gear (afterburner) and forget about it. Can't happen? Want to bet? Let a transfer pump or two go on strike and you'll see the forward tank go to zilch in a big hurry, but more slowly if you're not using the burner. (It's been empirically proven that gravity flow above 25,000 feet is not too swift.) An AC generator failure will give you some interesting fuel management problems. (How many transfer pumps are DC powered? None.) How about losing the single-point refueling door? There goes the wing scavenge pumps. (Drop tank fuel is lost also, but what are you doing chasing BF-4's with drop tanks?) There is also the possibility that there IS fuel in the forward tank and the engine quit anyway. Such a happening could occur if we were pushing negative "G's" (How can you pull negative "G's"?) and depleted that 1.6 gallon inverted flight tank.

Now, back to the situation. You're at altitude, inverted, and flamed out. Of primary consideration is aircraft control. A rapid check of airspeed, pitch attitude, fuel flow and forward tank fuel quantity is necessary so that you will have the parameters necessary for decision making. It's a waste of time to try an airstart if there isn't any fuel in the forward tank. If you've been cavorting with negative "G" and there IS fuel in the forward tank, then swiftly bring the throttle inboard and hit the airstart switch. (There is a quicker start if the engine is still warm.) Pitch attitude is real important if you're interested

in avoiding a spin recovery exercise. The Book calls for a glide speed of 220 KIAS for good airstarts so be gentle with the airplane until you're upside right and trimmed out. It's nice to know that windmill RPM should keep the generators on the line, enabling you to conserve battery power. Without fuel in the forward tank you might as well cage the sight while you are waiting for fuel transfer. It will give you something to do and doesn't require much thought. Don't stopcock the throttle. If you do, the AC generator is shut off — no AC generator, no transfer pumps. You may be on gravity flow anyway, but there isn't any need to make it that way all by your own doing. After you get some fuel into the forward tank, then stopcock the throttle so that the unburned fuel will have a chance to evacuate. Below 25,000 feet the airstart should be a no-sweat deal. Gravity fuel transfer can support the engine and the air is thick enough for a good start. (A good start is one that doesn't go "chug, chug, bang, bang".) When you hit the airstart switch and bring the throttle around the horn, look to see that the ignition light is on and fuel is flowing. Without ignition there can't be a start and there's no sense in waiting the 20 seconds for an EGT rise. You'll want to check the light bulb, and if that's OK, check for a popped circuit breaker underneath the canopy rail on the left elbow side. You can't see it, but you can feel it. If the breaker is popped, shut off the throttle before you reset the dude and you'll keep the quantity of unburned fuel to a minimum.

After the engine is started you will notice a remarkable decrease in adrenalin. That's a good time to turn off the airstart switch and check the RAT off.

"Uh, Lead, Coyote 2 is Bingo. But I splashed that BF-4!"



# CHOCK TALK

chock talk

*...incidents and incidentals*

## **GAS PAINS**

What do you do when your gas station limits you to ten gallons of gas, you can't get it at all on Sunday, and your "Belchfire 9.2 liter" gets about two gallons to the mile? You stick a spare jug of gas in the trunk — right? Wrong! At the best, a gallon of gas in your trunk is a terrible fire hazard — at the worst, it can have the explosive capabilities of 80 pounds of TNT. The most dangerous thing about gas is the fumes and the most dangerous thing about gas fumes is that they are heavier than air and tend to pool — in this case in the trunk of your car. Any spark or excessive heat (tail light wiring, hot exhaust pipe, rear-end collision, etc.) could not only blow that one gallon, but also your car's gas tank. If an emergency dictates you do carry extra gasoline, buy the strongest, safest container you can get — one designed for carrying fuel. Don't use old bleach bottles, plastic milk jugs or other makeshift containers — they're not strong enough and some of these plastics are actually dissolved by gasoline.

A couple of more tips for hauling gas in an emergency: never fill up the container completely — expansion due to heat can rupture the container. If hauling spare gas in the trunk, make sure the trunk lid is left partially open to permit maximum air circulation. To do this you'll probably have to insert a block between the lid and the rim and tie the lid down.

The best tip of all, however, is not to haul gas at all. Try your best not to.

## **C-130 DROPCLOTH**

The TAC C-130 was on initial for an overhead approach when it encountered some moderate turbulence. The pilot retarded some power and calmed down his skittish Herky. When he tried to advance the throttles a few moments later, the #1 throttle was binding. Post-flight investigation revealed a small piece of cloth lodged in the throttle quadrant, binding the throttle. Besides rebriefing all personnel on the hazards of cockpit FOD, this unit is manufacturing a dropcloth to cover the throttle quadrant during the period that maintenance is being accomplished in the cockpit area. Let's see now — what could a dropcloth lodge in ... ?

## **F-4 FUEL FIRE**

An F-4 in another command recently proved once again the old adage that where there is smoke, there is fire. Here's what happened. They were starting the number 2 engine when the crew chief noted an excessive amount of black smoke billowing from the aft end of the aircraft. He then reported to the aircrew that there was a fire in the tailpipe. The AC shut down the engine and had air put back on the engine, attempting to blow out the fire. While he was doing this, the assistant crew chief used the 20-gallon CBM fire extinguisher to put the fire out.

There are several lessons to be learned from this one. First of all, the fire started because of pooled fuel in the lower fuselage. The fuel was there because the engine was motored over with the throttles out of cut-off. This forced fuel through the fuel control unit and spray nozzles into the burner cans. From there the fuel drained down into the fuselage where it pooled. Why were the throttles out of cut-off? Probably because someone accidentally bumped them out of cut-off. When this happens and the engine is motored, fuel will drain and pool in the fuselage. Then, if a start is attempted, there will most likely be a fire.

The second lesson to be learned really has several aspects to it. First of all, the CBM promptly extinguished the fire, just as advertised. Second, although the fire extinguisher worked, it was missing dust caps and valve cover for the filler port and bleed port and shot streams of CBM into two directions — one on the fire and the other into the eyes of the assistant crew chief.

The good news from this incident is that neither the assistant crew chief nor the aircraft was damaged. Lucky.

## **CATASTROPHIC EFFECTS**

The F-4 was on a routine training mission when something very unroutine occurred. The aircrew discovered that it took full left trim, left stick and left rudder to hold the wings level. A visual inspection by the backseater and by another aircraft revealed both ailerons to be down. Needless to say, this makes the aircraft very difficult to handle. The aircrew managed to get the aircraft safely on the ground, but it was a battle.

Postflight investigation revealed that the aileron



*with a maintenance slant.*

actuator was missing a nut and bolt on the control arm. The last maintenance in this area had been accomplished over 100 days prior. Due to the shape of the fittings, the control arm stayed connected to the U-shaped bellcrank for this 100-plus day period. The investigators felt that most probably the actuator had been installed improperly without the nut and bolt.

The unit where this occurred briefed the incident to all maintenance personnel, emphasizing the possible catastrophic effects of failure to perform work properly and for failure to use tech data.

## **GRAPHITE GRAFFITI**

A COMMON source of electrical current is the flashlight dry cell battery. As you recall, the electricity is generated by a chemical reaction between zinc — a negative electrode, and graphite — a positive electrode. Add a small amount of moisture and you have a corrosive chemical reaction. A similar reaction can be unintentionally created on any part of the aircraft by pilots and technicians innocently drawing or writing radio frequencies, course headings, time checks, or inspection notations.

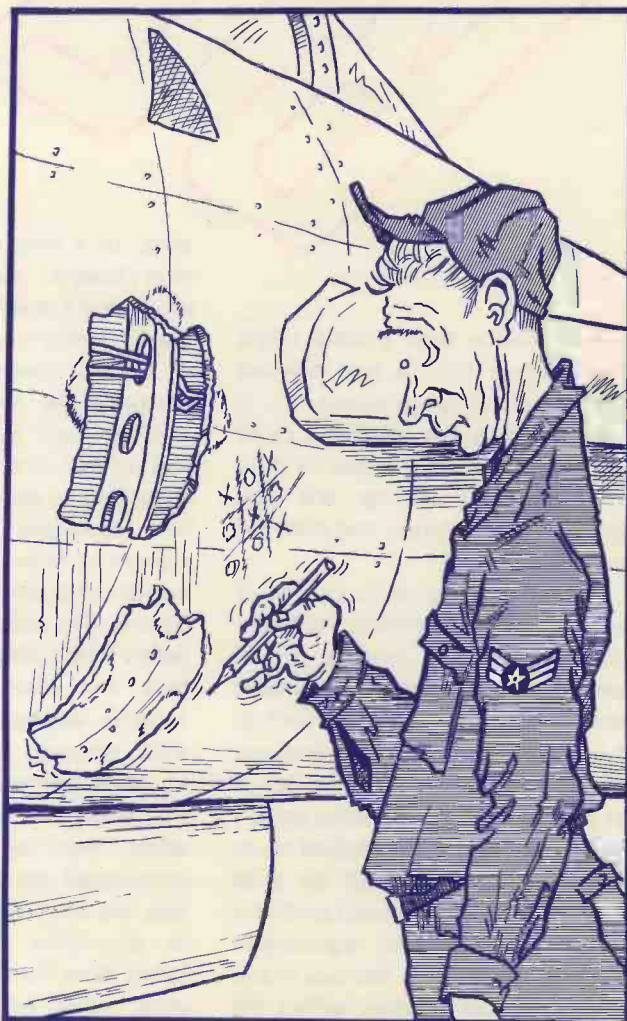
Some time ago, Mr. J. H. Cates, McClellan AFB, reported a case in which an inspector created a dry cell battery by drawing a pencil line around a crack in an aluminum wing skin. A couple of months later the crack lost its importance because the entire disk fell out. Unapproved marking pencils can have a similar destructive effect on turbo-jet engines. The General Electric Small Engine Division reports that when it becomes necessary to mark any hot section part during inspection, maintenance, or storage, only the following marking materials are approved for use:

(1) Chalk, (2) Dykem Red (Yellow or Black), (3) Ink (Justrite Slick-Black; Marco S-1141; March Stencil Ink), (4) Soapstone.

GE further recommends that the use of grease pencils or any marking material that contains lead, copper, zinc, or similar material be prohibited. The use of these

marking materials will introduce intergranular corrosion attack and/or carbon impregnation (alloy creation) when exposed to engine operating temperatures, and may result in loss of structural strength. If an aircraft or engine part has been marked with an unapproved material, all traces of the material must be promptly removed. Be careful to avoid removing any surface protection.

**Reprinted from Aviation Mechanics Bulletin**



# REFLECTIONS

by Maj Jack Drummond  
23 TFW/SE, England AFB, La.

**A**fter having been a Wing Flight Safety Officer for the past eighteen months, I am about to depart PCS. It is perhaps only natural that I pause now and reflect on the tour of duty to analyze my feelings and perceptions before, during and after the experience.

First of all, I can truly say that it has been a mind expanding and highly interesting eighteen months. In all honesty, I must admit my emotions were mixed before I accepted the job. Flying airplanes had always been my bag and I was hesitant to move out of the operations field. Looking back, I now know that the job enabled me to obtain a broader view of the wide range of responsibilities and problems related to operating an organization than would have been the case in any other individual position within the

wing. In a very real sense, safety is everybody's business; conversely, everybody's business, in varying degrees, is safety's business.

Another reason for hesitancy in accepting the job was the two-fold impression of "Safety Weenies" that I had formed. The first worry that had to be worked out was the impression I had developed that people who worked in Safety were over the hill, out of touch and had been put out to pasture. The second problem was that Safety folks always looked at problems and their solutions from a negative viewpoint; a "we can't do that" attitude. I don't know why I had these feelings, they probably were the result of some "adverse halo effect" from the obscure past which stereotyped the entire group. At any rate, the prior feelings have proved to be groundless. The people in the Safety field that I worked with in this wing, other wings, and on higher

headquarters staffs were young, eager and knowledgeable. They were on the way up — not out.

The innovative and original approaches taken in problem solving by these people would do credit to any level of activity. In my own mind, the safety field now consists of some of the more highly qualified personnel in the Air Force. Still, I realize a certain adverse image still exists in some minds — as it did in mine.

The biggest problem that I experienced after moving into the safety shop was in trying to logically discover what my duties should consist of and how these duties could be accomplished, while keeping my new born safety responsibilities paramount on my mind. Reading safety regulations and manuals is not all that enlightening. They list numerous responsibilities but if these responsibilities were taken literally, a Flight Safety Officer would be the DO, LG and Civil Engineering Squadron Commander, all rolled into one. After a few weeks in the job, I finally came to the conclusion that my primary re-



sponsibilities should be in a service context. This service, I felt, should be directed to the aircrews and the aircraft maintenance areas. It should consist of doing all that was possible in removing the hazards and decreasing the irritants that can prevent these people from doing their normal outstanding jobs. My hope was that these people could be kept aware of potential problems and the methods of initiating corrective actions, without feeling "put upon" by some outsider.

It is debatable how well these desired outcomes were accomplished but it was fun while it lasted. Overall, I felt that I gradually came to be accepted, and this was highly gratifying. However, I must admit that on certain occasions some of the people in an organization would feel that I was infringing on their areas of responsibility. My approach under these circumstances was to attempt to convince these people that the suggested change could improve the effectiveness and efficiency of the operation in question and that the organization as a whole would benefit. The level of activity in this wing has been extremely high during the past eighteen months. The wing reached combat ready status, we had inspections by Air Force and TAC teams, we lost two aircraft, the runways and taxiways were constantly being repaired, many squares were filled, and flying safety meetings were duly held throughout. Luckily, we survived all of these trials. More important, I think we all learned something and we didn't lose any jocks in the process.

Now the question: What can I pass on to my replacement? From my experiences, I think the actions that a Flight Safety Officer should accomplish are:

1. Get to know as many people as possible in the Maintenance, Operations and Civil Engineering business. Go by their work locations, shoot the breeze, drink coffee, and let them

know you are not trying to get their jobs but that you are vitally interested in their jobs as they relate to the Mission. Cooperation and understanding from people at the working levels are mandatory if you are to accomplish your responsibilities. If these individuals know you and understand that you want to help assure a smooth running organization, their assistance will follow.

2. Develop a close working relationship with the DO and LG. Almost everything you will want to accomplish will impact in their area of responsibility. Without their confidence and cooperation, your effectiveness will be minimal, and eventually, in some way or other, the Mission will suffer for it.

3. Do your homework. The assistance and advice that you will be expected to provide requires that you have at least a working knowledge of many and diverse disciplines.

4. Work to convince the Wing Commander that you are the most knowledgeable man in his command. When an unresolved conflict arises between what you think should be done and how other staff agencies want to do it, the Commander will make the final decision, based, in large part, on your advice — provided it is good. Since the FSO is generally outranked in these situations, the Commander must have confidence in your knowledge and ability if he is to accept your advice.

5. Be Humble. A FSO must never forget that the organization's end objective is mission accomplishment. The safety officer's job is to help assure that the Mission is accomplished safely. If the Safety Officer gets carried away with his importance because he reports directly to the boss, he is in the process of losing his effectiveness. Remember, you are an ADVISOR to the Commander, not his surrogate. Cooperate, coordinate, and do your best in helping to assure a safe smooth-running operation.

6. Be positive, innovative, and logical in your thinking. Don't develop "gun-barrel vision" or be hidebound because of your background and interests. Accept, and solicit, other's advice and experience in considering possible solutions to problems. Above all, don't be negative to new ideas or approaches. Keep an open mind!

These are my perceptions after eighteen months, for what they are worth. This has been one of my most challenging and enjoyable tours of duty, and as I depart for an assignment outside of the safety field, I know that these experiences will influence my performance in all forthcoming responsibilities. I wish my replacement the best of luck and hope that he enjoys the job as much as I. For my associates in the 23TFW, I would fly your wing anyplace, anytime.



Major Drummond has been the A-7D Safety Officer for the 23 TFW at England AFB, Louisiana. His TAC experience includes AT-28, A-1, A-37, and A-7 aircraft. He is pressing on to bigger and better things at the Armed Forces Staff College at Norfolk, Virginia. He served at NKP during his SEA tour and was awarded the Silver Star with two Oak Leaf Clusters and the Distinguished Flying Cross with one Oak Leaf Cluster.  
*Good Luck Jack!*



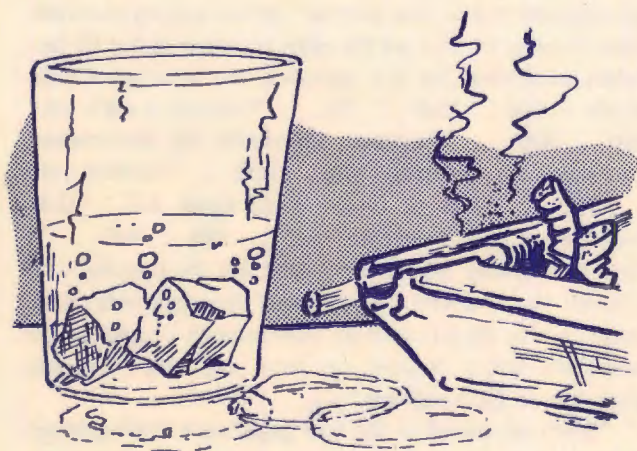
## between pit stops

and you still run out — you haven't changed a bit."

"Sixty thousand pounds, Giz. And I suppose you're still forgetting to turn your boost pumps on. I remember when you pink-slipped your four-ship checkride in 38's. Double-engine flameout, just like the book says."

"Geez, Totch, don't say that in front of Sully. He still thinks I'm the world's best pilot."

"Don't worry, Gizzard my boy, I lost faith in you long ago — if I 'member right it was about five minutes after I met you. But just in case you get the idea that I'm the only god-like person here and since you are on the subject of fuel, let me tell you one of my funnier, but dumber moves."



Sullivan stared thoughtfully at the rings Giz was etching on the formica table-top with the bottom of his glass.

"Back in my many-motor days we were flying between Hickam and Wake. Because of the weight of our load, we took off with only the minimum fuel required. Our fuel line was lookin' pretty good, but we didn't carry the usual spare fuel for the wife and kids. We had this dumb copilot that loved to hang over my shoulder and spill coffee down my back. I warned the boss that if he didn't get the bopper off my back, I'd deck him with my sextant. Well, this settled him down for a while but after about three hours of flight, he decided to stretch his legs while he was eating his lunch.

I could hear his heavy breathing right above my head then . . . splat! A great big gob of mustard hit my chart! Right on the course line! I calmly advised the engineer to tie the copilot into his seat before I did something rash."

"When I gave the boss a 90 degree right turn, I thought he would drop his hard-boiled egg."

"Ninety degrees? YGBSM!"

That's right, 90 degrees. After five minutes I gave him

a 90 left, five minutes later another 90 left, and then finally a 90 right. By then he must have thought I was ready for the rubber room so he came back to chain me to the load. When he looked at my chart, he was hoppin' mad. I had redrawn the course to circumnavigate that ugly yellow blob."

"Well, I can tell you the copilot didn't hang around my desk much after that — in fact, when the A C found our little maneuver put us above our fuel line, the last three hours of the mission were conducted in complete silence — except for radio calls and the sizzling sound you usually hear when someone's makin' a slow burn."

"It's amazing how easy it is to hack someone off," said Giz, "especially when they're as thin-skinned as some guys are."

Totch picked up the dice cup.

"You guys talk too much and drink too little. Happy-Hour is over in five minutes — how about one flop, nothing wild?"

"You're on," said the F-4 crew in unison.

"Pair of sixes — it'll take trips to beat."

Totch pushed the cup to the WSO who scooped up the dice one at a time with the cup and then slammed it down. He pushed the cup to Giz Flapworthy.

"Showboat," said Giz, lifting the leather cup.

"Pair of threes." Giz scooped up the dice and rolled them out. They lay in a puddle of beer — four fives and an ace.

"Thanks for the drink, Sully, you're ever so kind."

Sullivan stood up. "In your ear." After he left Giz said, "You know, Totch, there goes one of TAC's finest. I mean it. He's the best damn Gib I've seen. I remember one day we were out on the range . . ."

Sullivan returned with the drinks, all three settled back into their chairs. "Sully, I was just telling Totch here about that time down at Eglin when . . ."

*Editor's Second Note: It was about this point that my memory fades out — it could be that it was late and I was tired. It could be that the four pitchers of beer kinda' got to me. Or possibly, and I suspect more accurately, I passed out. If any of you out there happened to be at the Langley Casual Bar on the night of 26 January 1974, you might remember how the story went — better yet you may be one of the three guys in my story. In any case I sure would like to hear Flapworthy's story.*

*As a matter of fact, we at TAC ATTACK would like to hear any bar stories you would like to share with us — we hope to get enough inputs to run one each month. Any story (with or without a moral) you would like to see in print (with or without a byline) would be appreciated. We hope this article will be the first of many . . .*



From a collection of anonymous stories published in 1942 by the Army Air Forces, TAC ATTACK presents:

# Lessons That Live

No. 16 of 37

Courtesy of Lt Col H. M. Butler, 4500 ABW/SE



## WHEN PANIC REIGNED

To set the stage properly for this account of my narrowest escape from disaster, I should explain that our dive-bombing missions in a P-39D consisted of two passes at the target — the first a trial run for tab adjustments and orientation, the second for releasing the bomb.

The pattern around the target was in string formation at 4,000 feet. When the left wing was opposite the target, a peel-off was made so that the target was approached at an angle of approximately sixty degrees. From the dry run we executed a fairly sharp pull-up, enabling us to use our excess speed, approximately 150 miles per hour, in regaining altitude.

Well, on this particular day I was on my first or second dive-bombing mission. I made an unusually sharp pull-up and experienced a complete blackout. When I came to, I was going straight up. My eyes looked at the instrument panel but they told my brain absolutely nothing. For some seconds I was completely blotto.

I tried frantically to push the stick forward but I knew

I'd stall before I could regain normal flying attitude. The next panicky thought was to complete an Immelmann. By this time, the cobwebs were leaving my mind and I noticed my altitude was 3,000 feet and the airspeed, around 120 miles per hour. I was somewhat over-anxious and pulled back on the stick to get in position to execute my half-roll, but I pulled too hard, and immediately went into an inverted snap-roll, then a violent stall, and I finally ended up tail spinning.

I fought those controls like the doomed man I thought I was, trying to regain normal flying attitude. It seemed useless. Finally I just let go of everything. The result, to my delight, was that the plane recovered beautifully with the stick and rudder in neutral position. The altimeter needle at this time was resting on 1,000 feet — obviously much too close.

There are a couple of morals to this episode. First, I had failed to heed instructions about putting my chin down and yelling when pulling out of a dive. Second, I had been over-anxious when I found myself in an awkward position. Had I kept cool and worked the controls smoothly, I'd have had no trouble at all. ➤

# KNOWLEDGE VS *DESIRE*



Dr. V. E. Schultze, Jr.

One of the most difficult aspects of flight safety education is the conversion of skeptics into believers. Aircraft accidents will generally accomplish this, but only if the person being converted is involved in the accident himself or has a close friend involved in one. Needless to say, this is the undesirable way.

A pilot must know where and how he is likely to be

involved in an accident, not just in relation to emergencies and other obvious pitfalls, but in relation to the situations and environmental atmospheres that precipitate emergencies and potential accidents. These are the subtle and subconscious causes of accidents, and they are the most dangerous of all the causes in that they are so obvious and plain, but yet so nebulous.



We are all human, and because of this, we share common failings. There are three main peculiarities of the species *Pilotorum Humanis* that account for the majority of aircraft accidents. Do not deny these manifestations of human nature, because you have them like the rest of our breed. If you have not noticed them by now, you will eventually . . .

The first of these peculiarities is the fact that men tend to be prouder of their willingness to take a chance than of their caution, conservation, and carefulness. No doubt many of us can recall flying in marginal weather to make that date or stretching our fuel supply to avoid a refueling delay, even attempting hazardous flights in aircraft we are not fully qualified to be flying. Sure, we all made it. From the stories we hear, we would think the odds are predominantly in our favor, but are they? Unfortunately, testimony to the contrary reposes quietly in flight safety files under the heading of "Pilot Factor."

While remembering these talks of daring episodes, how many can remember the times you have heard of cancelled flights because of weather or of diverting before

The second undesirable peculiarity of human nature is the fact that men tend to use their powers of logic and reasoning to find justification for the things they want to do rather than to determine what is best to do. In other words, we tend to compromise our better judgment in favor of our desires by rationalizing.

Basically man is a creature of emotions, feelings, impulses, and unrecognized urges, all kept under precarious control by a flimsy bridle of intelligence, rationality, and logic, and by the painful whip of authority and social pressure. Most of us, when confronted with a problem involving a conflict between what we know we should do and what we would like to do, tend to seek a way to satisfy our desires while convincing ourselves that it is the proper thing to do.

"I'd sure like to get back to play in that golf tournament this weekend, but the weather looks pretty mean," we say. "What the heck, I need some weather time anyway, and if I stay low I probably won't get any icing." This is rationalization. "I'd like to get home. I know the weather is bad and I shouldn't go. Anyway, I need some weather time. How convenient. Warm up the golf sticks, I'm on my way!"

When man's basic nature, his fundamental urges and strong desires pull him toward one decision, and his education inclines him toward another, all too frequently he will go with his feelings.

Now the third undesirable characteristic of man is this: men will risk losses out of all proportion to possible gains if they feel that through their skill and luck they can probably avoid the loss. Why do people in automobiles attempt to pass on hills or blind curves? Why do pilots flying a poor landing approach go on and attempt to land when they know they should go around? They know better. Why do they do it?

Why? Simply because it is one of those undesirable human quirks. What is to be gained and what is to be lost? A few minutes' time in the case of the former, a life in the case of the latter. What gambler would play odds like that? Still, if someone asked if you were a gambler, how would you answer?

If you were to sit with a man in his living room and give him these situations, he would tell you he would do the safe thing. But put him in one of the above situations and see what he does. More than you would expect will gamble. It is human nature, and it comes back to the old conflict of knowledge versus desire.

Being a pilot is a hazardous profession, but it is only as hazardous as you want to make it. Control your desires, and be aware of the traps human nature has laid for you. In years to come, remembering what you have read here may save your life.

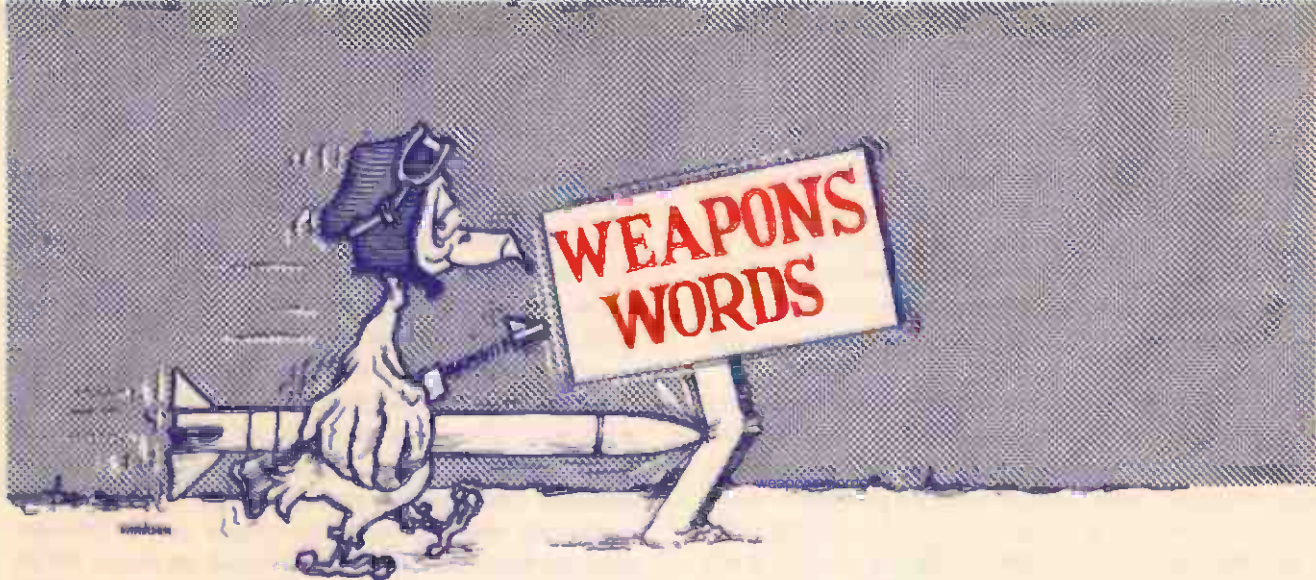


reaching the destination because of low fuel? Not many, I'll wager. Why? Because it is human nature to romanticize, to startle, to glamorize. Flying is a romantic business. It is so because it is hazardous.

Any profession that involves hazards over and above those encountered in the more common occupations is romantic. Who does not admire the bullfighter, the mountain climber, the auto race driver? There is an undeniable human tendency to romanticize the risk-taker more than the man who figures a way to avoid the risk.

To what does this all add up? Simply this: conservatism and caution must compete with a subconscious tendency to regard these qualities as a form of timidity unworthy of a pilot.





## GET OFF MY BACK

by CMSgt George R. Edenfield  
Accident Investigator/Egress  
Hq TAC/SE, Langley AFB, VA.

The Tactical Air Command experienced 156 explosives mishaps involving egress systems from 1969 through December 1973. Adequate, appropriately timed communications between the commanders and all subordinate levels probably could have prevented most of these accidents.

Most of these mishaps are directly attributable to supervisory attitude at some level because shortcuts are tolerated in the interest of "keeping up with the workload." The statement "just be careful" is often heard when a supervisor knows that he is pushing his specialist to that critical point.

The primary reason for taking shortcuts is to get the job done. Rationalizing is made easier because you know the consequences of failure to keep the commander "off the boss' back." Low APRs mean you can forget about promotion; therefore, the money for supporting your family or buying that new car is restricted. The worker, when pushed, takes the most expedient direction to job completion for the same reason he reported to work in the first place. He senses the responsibility to support himself and his obligations to the best

of his ability. Therefore, as the pressure increases, caution decreases. Additionally, he has a need to be looked upon favorably.

It all begins because there is too much priority work during peak periods, with too little help. Multiple dispatches, relayed job requests, and changing priorities in the middle of a job lay the groundwork for the first occurrence. Although these inequities appear necessary in the interest of preventing late takeoffs and aborts, they breed disaster.

Recently, within the Air Force, three ejection seats were accidentally fired which killed two mechanics and permanently disabled one other because unauthorized maintenance was

performed and checklist procedures were not followed. Additionally, one pilot was killed because he could not eject; his ejection control cables were not connected. In all three accidents the real cause was "taking shortcuts" and most likely with the supervisor's best interest in mind.

Who is flying on an ejection seat that isn't going to work? The same commander who was being kept off the "boss' back" by the same team of specialists who should have been performing accurate maintenance on that ejection seat instead of taking shortcuts. The specialists need more help and less hassle so they can give the crew members more reliability with less risk.

TAC			WEAPONS MISHAPS			ANG		
DEC 73	THRU DEC		EXPLOSIVE	DEC 73	THRU DEC		DEC 73	THRU DEC
	1973	1972			1973	1972		
10	170	131	TOTAL	4	53	27		
6	66	38	Personnel	3	36	15		
2	70	59	Materiel	0	13	12		
2	34	34	Other	1	4	0		
0	15	25	MISSILE					
1	6	4	NUCLEAR					



## TACTICAL AIR COMMAND



### Maintenance Man Safety Award

Sergeant John W. Harrelson, an Environmental Systems Repairman of the 4485 Test Squadron, USAF Tactical Air Warfare Center, Eglin Air Force Base, Florida, has been selected to receive the Tactical Air Command Maintenance Man Safety Award for December 1973. Sergeant Harrelson will receive a certificate and letter of appreciation from the Vice Commander, Tactical Air Command.



SGT HARRELSON

## TACTICAL AIR COMMAND



### Crew Chief Safety Award

Staff Sergeant Wayne J. Mihm, an RF-4C crew chief in the 363 Organizational Maintenance Squadron, 363 Tactical Reconnaissance Wing, Shaw AFB, South Carolina, has been selected to receive the Tactical Air Command Crew Chief Safety Award for December 1973. Sergeant Mihm will receive a certificate and letter of appreciation from the Vice Commander, Tactical Air Command.



SSGT MIHM

## TACTICAL AIR COMMAND



### Ground Safety Man of the Month

Technical Sergeant Peter C. Peterson, an Airborne Instructor Weapons Mechanic of the 415 Special Operations Training Squadron, 1 Special Operations Wing, Hurlburt Field, Florida, has been selected as the Ground Safety Man of the Month for December 1973. Sergeant Peterson will receive a certificate and letter of appreciation from the Vice Commander, Tactical Air Command.



TSGT PETERSON



# LETTERS

## TO THE EDITOR

### **WANTED:**

### **A NEW ASSISTANT EDITOR FOR TAC ATTACK**

Qualifications: Captain, pilot or WSO with recent experience in TAC fighters or recce. Should have completed SEA tour and possess some writing ability. No editorial experience required.

Reporting Date: Spring/Summer 1974

Interested individuals should contact Lt Col Patterson or Maj Tillman, TAC/SEP, Langley AFB VA (Autovon 432-2937) for additional information. Take it from someone who knows . . . it's a good job.

Asst ED

### **REUNION**

"The 8th Tactical Fighter Wing will hold its annual reunion 1-3 March 1974, Ramada Inn Rosslyn, Arlington, Virginia. For further information contact Lt Col "Doc" Broadway, OJCS/J-3 (EUMEAF Division), Pentagon, Washington, D.C. 20301, telephone OX5-7903/57909, or Lt Col Ron Markey, 1111 19th Street (AF/SAGF), Arlington, Virginia 22209, telephone OX-48571."

### **THE EDITOR, TAC ATTACK**

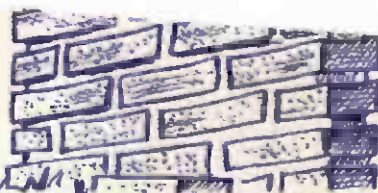
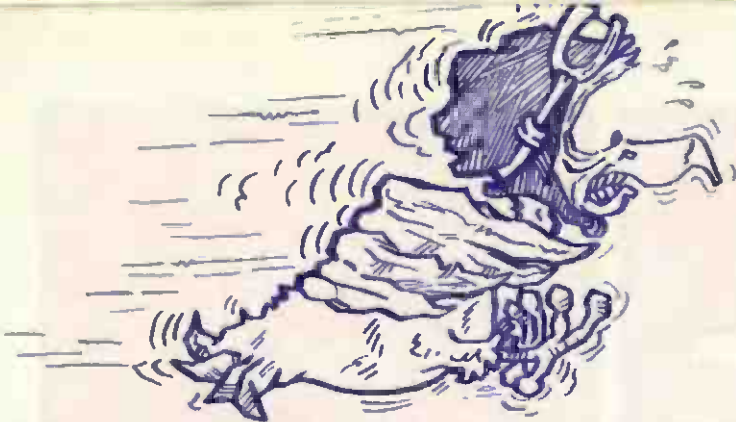
1. A review of our aircrew library showed that three of our copies are missing. I guess this is further proof that your magazine is well read and in constant demand around here.
2. If you have spare copies of your May, June, and August 1973 issues, could you forward us one of each?
3. Apparently some of our members would be interested in an individual subscription to your magazine. If there is any convenient way of doing this, please let me know and I'll announce it at one of our aircrew meetings (along with another appeal for the troops to stop running off with the squadron copies).

WILLIAM E. C. KENNEDY III  
Captain, USAF  
35 TFW, 561 TFS/SE  
George AFB, CA 92392

*Your missing copies are on the way. Unfortunately, we don't have individual subscriptions to the magazine. As you know, our distribution ratio is one copy for every ten people in TAC regular units. So — all we can do is supplement your plea — please don't hoard your copies, guys; pass them on!*

*Ed*





# TAC TALLY

TOTAL ACFT. ACCIDENTS	▶
MAJOR ACFT. ACCIDENTS	▶
AIRCREW FATALITIES	▶
TOTAL EJECTIONS	▶
SUCCESSFUL EJECTIONS	▶

TAC		
DEC	THRU DEC	
	1973	1972
2	40	53
1	27	34
2	26	55
2	26	32
0	15	20

ANG		
DEC	THRU DEC	
	1973	1972
0	16	23
0	11	18
0	1	3
0	8	13
0	7	13

AFRes		
DEC	THRU DEC	
	1973	1972
0	1	3
0	1	2
0	2	2
0	1	0
0	0	0

## TAC'S TOP "5"

FIGHTER/RECCE WINGS		
ACCIDENT-FREE MONTHS		
69	33 TFW	TAC
39	67 TRW	TAC
37	162 TFTG	ANG
36	4 TFW	TAC
28	122 TFW	ANG

AIRLIFT/REFUELING WINGS		
ACCIDENT-FREE MONTHS		
102	440 TAW	AFRES
101	136 ARW	ANG
65	316 TAW	TAC
54	126 ARW	ANG
53	463 TAW	TAC

SPECIAL UNITS		
ACCIDENT-FREE MONTHS		
112	2 ADGP	TAC
81	DET 1, D.C.	ANG
53	182 TASG	ANG
48	68 TASG	TAC
46	193 TEWG	ANG

## MAJOR ACCIDENT COMPARISON RATE 72-73

TAC	72	73	72	73	72	73	72	73	72	73	72	73	72	73
	0	5.0	.8	5.1	1.6	5.1	2.8	4.2	4.0	5.0	4.8	4.4	4.2	4.1
ANG	0	8.5	0	8.6	6.3	6.8	8.1	5.1	6.3	5.0	4.3	4.2	5.9	3.9
	0	14.9	0	6.7	0	4.1	0	0	0	0	1.5	1.1	3.0	.8
AFRes	0	14.9	0	6.7	0	4.1	0	0	0	0	1.5	1.1	3.0	.8
	0	14.9	0	6.7	0	4.1	0	0	0	0	1.5	1.1	3.0	.8

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

