
TAC ATTACK
tac attack
JANUARY 1974
HARRISON
CYA....
Pg 4

for efficient tactical air power

# TAC ATTACK

JANUARY 1974

VOL. 14, NO. 1

Tactical Air Command

COMMANDER
GENERAL ROBERT J. DIXON

VICE COMMANDER
LT GEN DALE S. SWEAT

Published by the Chief of Safety
COLONEL E. HILLDING

editor
Maj Joe Tillman

assistant editor
Capt Jim Young

art editor
Stan Hardison

layout production
SSgt John Tomkowski


## CURRENT INTEREST



## DEPARTMENTS



TACRP 127-1

# Angle of ATTACK

## THE PAPERWORK MILL

Supervisors in all positions have time-consuming problems with paperwork. Safety people are no exception – in fact, the preponderance of "CYA" correspondence in the area of safety may take first place in the paper-kingdom contest. We at TAC Safety try to keep the paperwork load down, but unfortunately the lowest-level safety man still bears the brunt of incoming message traffic. Couple this with a local accident or incident, and this poor soul may have to lock himself in a nice, quiet corner for days to answer queries and prepare reports.

1. Paperwork is a method of communication – only one of several available to the staff man.

2. Paperwork is used only to provide the recipient with information.

3. In no way can paperwork, alone, correct a dangerous situation.

All this adds up to one thing: Accident prevention requires that you get out of the office. At times you must hold the paperwork and physically examine the flightline, drive through your base traffic network, and walk through hazardous work areas. You must talk with pilots, maintenance, and support personnel. You must talk with accident victims (if possible) and near-accident victims (they're everywhere). Go out on the line with the Supervisor of Flying and see if he knows what accident-prevention clues to look for – teach him how to be an accident investigator before-the-fact. Are those taxi-lines in need of repainting? Isn't that a strange place to leave a fire extinguisher? Isn't that LOX man reservicing without proper protective clothing?

Back to paperwork. I don't see an end to it. In fact, it could get worse. It must be done, so plan to do it when your physical presence in work areas is least necessary. Don't do it during max aircraft launches and recoveries. Don't do it when operations are taking place in marginal weather conditions. Don't do it when you could prevent a tragedy by just being there.

We'll try to keep our paperwork to you at a minimum so you can keep on-site inspection at a maximum. Get out and see . . . and be seen.

E. HILLDING, Colonel, USAF
Chief of Safety

# CYA...games people play

*We are reprinting the following article with the kind permission of "Flight Comment", the Canadian Forces flight safety magazine. With the exception of the title and artwork, we chose to run the article "as is" – the following guide may help you in understanding a few of the terms used in "CYA."*

*CFP 100 – Canadian Forces Flying Orders "bible", which contains the rules and regulations for VFR, IFR, flight planning, etc. These orders can be – and usually are – augmented by Command and unit orders.*

*Ops Memos – System used by squadrons to detail temporary changes in orders or to "fill in" until amendments are published. Similar to our Flight Crew Information File.*

*Squadron Standards Officer – Standardization/Evaluation pilot.*

*– Ed*


**"Clearing one's Yard-arm" (CYA) is a game by no means reserved for sailors or those of a nautical bent. CYA is played everywhere — even on flying bases — and is especially popular with supervisors. Hockey, golf and baseball may be seasonal favorites but CYA is a year round pastime . . . and anyone can play.**

Most CYA players were originally participants in the more orthodox game of MA (Mission Accomplishment) and the similarity between the two games can lead to some confusion. Still, the best way for a learner or beginner to become proficient is to study the great games of the masters. Watch the experts at play and then decide for yourself. Is "Clearing one's Yard-arm" the game of the future or is there more real satisfaction in Mission Accomplishment?

The account which follows is of an imaginary game, but it does indicate the extremes to which CYA players can go.

**PITCHOUT'S PUNCHOUT**

Lt Percy Pitchout was a keen young pilot, well-liked by his squadron buddies and a real ball of fire and fun on Friday nights and at squadron parties. A gay young bachelor, he was enjoying his first tour after Wings graduation. After all, at 20 years of age, who could ask for anything more than a sleek, fast fighter aircraft in which to burn the sky.

One bright spring morning Percy roared off on a routine low level navigation training mission. Forty eight minutes after takeoff a telephone call from a rather confused farmer's wife advised the base MP shack that a pilot was nursing minor injuries in a farmhouse 185 miles northwest of the airfield. Pitchout had punched-out moments before his aircraft crashed into a rocky, pine-treed ridge. Base Rescue launched its helicopter and while Pitchout was being safely returned to base, an Accident Investigation Board was convened.

After burning the midnight oil for a couple of weeks, the board members packed up and went home, leaving the wreckage (which was in a very inaccessible spot) under the pine trees. The bound volumes of their investigation, findings and recommendations were duly signed, sealed and sent on their way to travel from desk to desk, through the musty chambers of various HQs until "Pitchout's Punchout" was finally laid to rest; another statistic on an accident rate graph, another coloured slide for a Commander's briefing.

Essentially, the Board "found" that the young lieutenant's aircraft had been serviceable and functioning properly on impact. Pitchout was able to fill in the details. En route at 500 ft, he had encountered some scattered stratus and had descended below the cloud. The scattered condition rapidly became overcast. Flying down a valley, Pitchout suddenly realized that he wasn't going to clear the ridge ahead. He attempted to pull up but decided to eject when he felt the aircraft contact the trees (the Board congratulated him on his decision). The facts were therefore quite clear and the Board stated as much. Pitchout admitted that he had "pressed on into deteriorating weather conditions which forced him to descend to maintain visual contact with the ground". However, some other observations were made by the

# CYA

investigating team:

Pitchout had not had breakfast on the eventful day,
Pitchout had signed out in the wrong column,
Pitchout had just returned from two weeks leave and this was his first flight, and

Pitchout — along with others — had not signed Sqn flying orders for the quarter.

Now Pitchout was relatively inexperienced and had been in the Squadron less than a year. But his Sqn commander, LCol Gung Ho, had a multi-year and a multi-type background. He was naturally perturbed at the loss of the aircraft and the close call for young Percy. He became even more concerned when ***his*** Commander arrived without warning and suggested, in the strongest terms, that Gung Ho shape up his operation or else . . .

Obviously LCol Gung Ho's operation was somewhat "loose". Operations control seemed non-existent. Pitchout has been gone for two swinging weeks with his hot honey, a new Corvette, and yet he arrived back at base and set off on a low level nav mission without so much as a quick taxi test. Signing out in the "time of takeoff" column and failing to sign the Sqn flying orders are not prerequisites for flying into the trees but they do indicate a somewhat lax attitude on behalf of all concerned. Fortunately, Pitchout was still alive, but a valuable aircraft had been destroyed. What could be done to prevent a similar incident in future? Half a mile of shattered airplane and an injured pilot adds up to lots of zeros below the line. The only plus factor in this type of occurrence is in its preventive value. If some lessons can be ***learned*** and then ***applied*** . . .

This was the point where LCol Gung Ho could have made the opening moves in a serious game of MA — but instead, a classic example of CYA developed.

**HOW LCOL GUNG HO PLAYED CYA**

LCol Gung Ho called a Sqn Flt Safety Meeting.

The FSO briefed on the dangers of continuing a mission in deteriorating weather conditions.

The FSO exhorted the pilots to have breakfast every morning.

Base, Sqn and Command Flying Orders, CFP 100 and Ops Memo were to be "signed as having read" ***every month*** vice every quarter. Furthermore, a new memo was placed on the Sqn noticeboard to be signed when the other pubs had been signed off.

The visibility limits for low level nav missions were raised from 3 to 5 miles.

All pilots returning from leave were to have a dual check out.

Pitchout was given a check ride with the Sqn Standards Officer and returned to the flight line stamped "serviceable".

A copy of the Flight Safety minutes were immediately sent to command HQ.

LCol Gung Ho was satisfied. He was fairly confident that the Commander would be satisfied — and he was right. Young Percy was just an inexperienced "tiger" now duly chastened. The operation had been tightened up and everyone could sit back and relax. Even those Flight Safety characters could hardly complain. "Pitchout's Punchout" would soon be forgotten and the squadron could carry on doing its job — just as before.

**HOW COULD LCOL GUNG HO HAVE PLAYED MA?**

It is doubtful if LCol Gung Ho could start a real game of MA by himself. He probably needs some coaching from a higher supervisory level. Although his CYA moves point

" I know the wing fell off but ask him if he's had breakfast"

" OK, I'm cover....I mean....You're safe to go "

in the right direction, their value in most instances is negative.

The Flt Safety Meeting was expected – although no-one could remember when the last one had taken place. According to the minutes, ***all*** pilots were briefed about pressing on in bad weather, (but two were on TD, one was on leave, one was at Staff School and another was at Language School). Since FS meetings were so few and far between, the response from the Sqn might be "Ho hum, here we go – the old flight safety routine". Instant switch-off.

If LCol Gung Ho is to play MA he must evaluate himself and his whole operation in terms of the objectives established by the service. His attitude towards the flying operation creates the atmosphere in which his subordinates work. If Gung Ho merely pays lip service to the goals of the organization then Pitchout's Punchout will be just one of many failures. Regular, programmed squadron meetings with Gung Ho as a ***participating, decisive*** chairman should be the rule rather than a quickie CYA move when things go wrong. At one of these regular meetings the Base Flight Surgeon could be on hand to give a forceful talk on the advantages or necessity of having some food intake before flying. The FSO, "exhorting" aircrew to gobble up their Shreddies, is hardly speaking with any authority.

What about signing all the pubs monthly instead of quarterly? Well, if Gung Ho's troops aren't signing every 3 months, it's doubtful if they'll be leaping up, pen in hand, to sign on the first of ***every*** month. (CFP 100 may be getting thinner but it's not getting any more exciting). "Sign as having read" has come to mean "sign as having signed". Obviously some system must be established for aircrew to be advised of any changes in orders or procedures but not to the point where the pilot has writer's cramp before he reaches his aircraft.

Gung Ho increased the limits for VFR to 1,000 and 5. In effect he is saying to his pilots "I don't trust you, you Souls on Board, you'll drop me in it given half a chance". The next time someone tickles the trees Gung Ho will say to the Commander, "See that, and I even added on some extra limits for safety!" Of course the original limits were quite acceptable and provided an adequate operational training situation. If Gung Ho continues with this line of play he will eventually fudge himself into a position surrounded by all his aircraft in a locked hangar.

The requirement for pilots returning from leave to have a dual check out is worthy of an MA player (after a few days off a little dual with an experienced pilot never hurt anyone). But the real value of such a ride will depend again on the ***attitude*** of the supervisory staff which, in turn, influences the behavior of the line pilots. So often this check ride is just a mutual buddy-buddy trip. The flight becomes a casual touch and go practice rather than a professional work-out to get rid of the cobwebs. (These trips ***also*** contain the seeds of disaster.)

Finally, there's little Percy, the prime mover in all this. He's now back in harness – fit for duty. But is he? The MO has given him a clean sheet and the Sqn Standards Officer has given him a check ride. No problems. What did Gung Ho expect? Did he think Pitchout would go and fly into the trees again – or forget to put his gear down? No, Pitchout may continue his flying career for 20 years and never have another incident – or he may not be so lucky. If he doesn't make it he will become a topic for bar talk. The old heads will gather round; "He was an accident looking for a place to happen", "I knew he'd never hack it", "Remember the time when he punched out". These are the disappointing comments which mean that somewhere, sometime, someone sloughed off his responsibility to a young Pitchout. It isn't good enough to ***hope*** the young sprog will make it and then hide behind earlier prophesies when he plows in. Why didn't someone speak up earlier? Why didn't the experienced pilots take Pitchout aside and give him the benefit of their years behind the pole? Why didn't Gung Ho recognize that Pitchout needed some personal attention, training and regular evaluation. Why . . . ?

**WHY LCOL GUNG HO PLAYS CYA**

This is the most difficult question to answer without having access to the clockwork in Gung Ho's head. The incredible paradox is that Gung Ho thinks he is furthering the aims of Flight Safety. In effect, he is doing just the opposite. Perhaps:

> Gung Ho turned to CYA because it was ***easier*** to play. Authority is lots of fun if you can get rid of the responsibility that goes with it. MA demands ***effort.*** In the case of Pitchout, it demands a careful appraisal of a pilot and an operation. This is a difficult task but essential if the Sqn is to develop with any prospects of growth and success. Rather than search for the root causes and try to prevent a recurrence, Gung Ho found it easier to have his aircrew sign a few pieces of paper.
>
> Previous experience had convinced Gung Ho that it was best to look out for himself. A few extra restrictions on the Sqn wouldn't hurt and would prove he was "tightening up".
>
> The goals of the service had become secondary to personal objectives. Let's see "I've got two more years to my 30 so if I can just keep my nose clean . . . "

The sad story of Pitchout's Punchout and the ensuing account of LCol Gung Ho's gamesmanship are of course completely fictitious. No one would go to such great lengths to avoid facing up to responsibility. And by the way – how's your paper signing hand?

# TAC TIPS

...interest items,

The best reason for thorough air combat tactics training is the enemy.

## F/RF-4 INADVERTENT EJECTIONS

**by CMS George R. Edenfield**

How would you like to be run over by your own F-4? A GIB from another command recently experienced an inadvertent ground ejection resulting from FOD in the cockpit. This is the fifth one in as many years and if the command select valve had been open or leaked, a dual ejection would have occurred.

You might have thought we incorporated the interdictor mechanism to prevent that very thing, but we didn't. The interdictor mechanism delays actuation of the banana links until the canopy leaves the aircraft, which prevents the crewmember from being ejected into the canopy. Foreign objects, when lodged between the canopy actuator rod end and the ejection linkage, usually jam against the gun mounted (primary) M-3A2 initiator linkage and outer portion of the cross shaft. This pushes the firing pin from the initiator before contacting the banana links. This in turn initiates the normal ejection system, sending gas pressure to the canopy pressure operated valve, sequence actuator, inertia reel, and the aft side of the mounted select valve. If the command select valve is open, and the front canopy is closed, the front seater will be ejected by the dual method initiated from the aft seat.

Additionally, if the front seater is ejected and the aft canopy is not fully open, the back seater will always be ejected. The M-3A2 (primary) initiator is mounted to the outer barrel of the ejection gun, which remains in the cockpit when the seat goes up the rail. Regardless of the cause, when the front seat travels approximately one inch, the sear will be pulled from the initiator by the linkage attached to the seat and the initiator will fire the aft seat.

In either case, both of the F-4's crewmembers would have been ejected. PLF occurs 50 to 450 feet in front of the aircraft, depending on the crewmember's body weight and the seat adjustment.

The following are essential actions which must be performed to avoid inadvertent ejection:

1. The back seater must check the front seat ejection linkage for FOD before canopy is opened.
2. Both crewmembers must account for all loose equipment before opening the canopies. If any item is not located, delay opening the rear canopy until a ground crewman has checked the rear cockpit linkage.
3. Both crewmembers must wait until both canopies are fully open before beginning to unstrap.
4. The command select valve must be in the closed position during all ground operations.
5. The front canopy should be opened before the aft canopy.

## FUEL CONSERVATION AND AIR TRAFFIC CONTROL

**By: Rex M. Stewart**
**FAA/TAC Liaison Officer**

The FAA has requested ATC facilities to redouble their efforts in assisting pilots to conserve fuel during the energy crisis. Controllers have been encouraged to discontinue the use of STARs, SIDs, and other "canned" procedures which result in increased flying time or low altitude tunneling, unless absolutely necessary for separation purposes. Increased emphasis will be placed on holding aircraft at higher altitudes, assigning requested or optimum en route altitudes, and providing more radar vectors to achieve direct route or on-course climbs. In short, controllers, like everyone else, have been called upon to help conserve aviation fuel whenever and wherever this can be accomplished without compromising safety.

# mishaps with morals, for the TAC aircrewman

In addition to these fuel saving techniques, the FAA has recently revised the "Gate Hold" procedures currently contained in FLIP II, page 68. Under new guidelines, all aircraft (not just turbojets) will be able to absorb departure delays prior to engine start whenever such delays exceed, or are anticipated to exceed, five (5) minutes. The old procedures required expected departure delays of fifteen minutes or more before giving the pilot a proposed departure time. ATC facilities will be contacting the various base ops/airport operators to develop revised procedures based on local requirements. The developed procedures and departure delay information will be made available to all pilots. Help ATC help you by contacting ground control/clearance delivery for engine start/clearances at locations where these procedures are implemented . . . before you crank up.

## STOWAGE OF PUBS

An F-111 recently had a right engine fire light illuminate in flight. There were no other indications of fire, but the aircrew went ahead and shut down the engine. The fire light stayed on until the WSO raised his seat prior to landing.

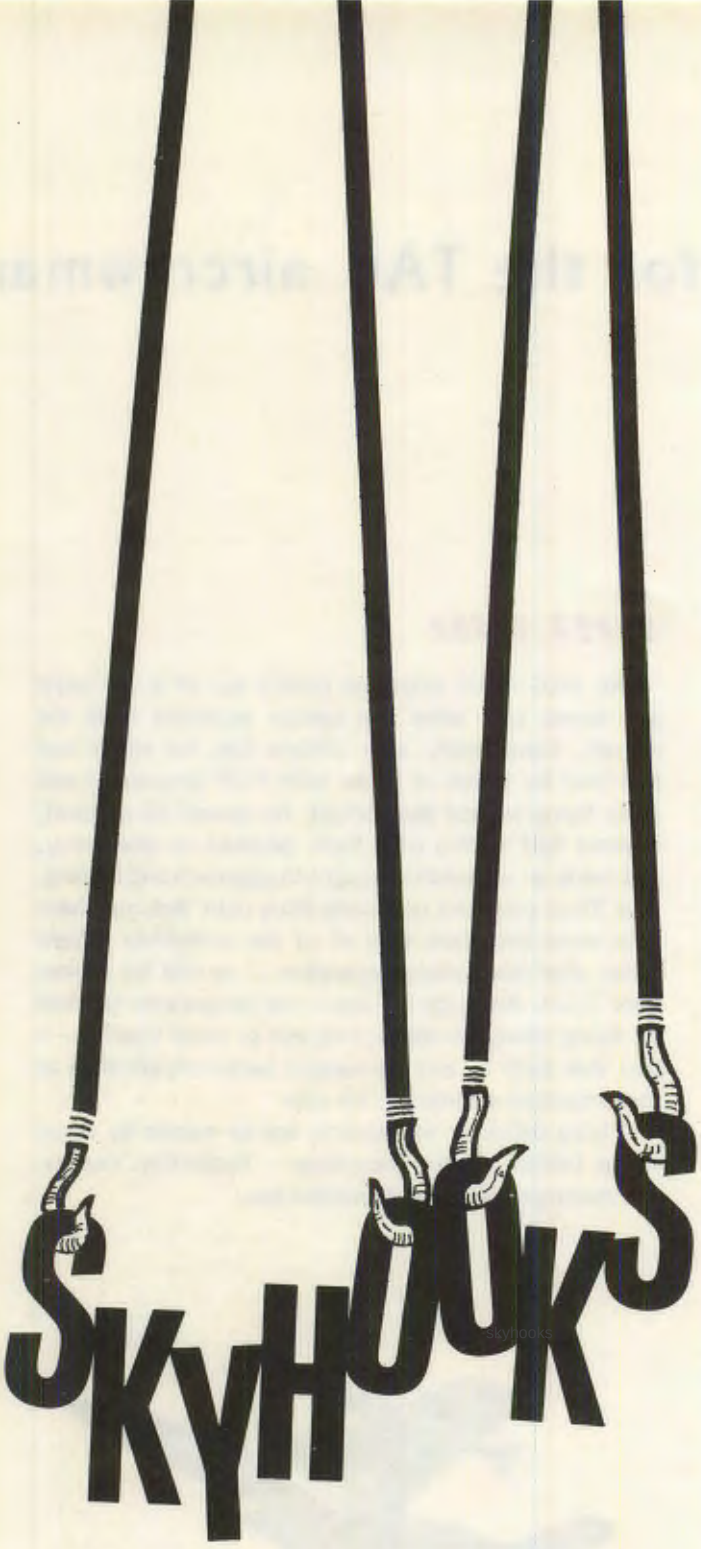
Post flight investigation revealed that the WSO had stored his en route publications bag under the seat. When the seat was lowered, the bag pressed on some wiring, which shorted out and caused the false fire warning light.

Where to stow your pubs is a problem in almost every fighter. Either you can't get to them when you need them, or they end up as cockpit FOD. At least we now know one place in the F-111 not to stow pubs — don't stick them under the seat.

## SUPER VISOR

An ANG F-105 pilot was pulling out of a low angle dive bomb pass when the canopy separated from the aircraft. Immediately after canopy loss, his vision was restricted by pieces of paper from FLIP documents and maps flying around the cockpit. He slowed his airspeed, lowered half trailing edge flaps, declared an emergency, and made an uneventful straight-in approach and landing. This Thud pilot did one more thing right that may have been more important than all of the emergency actions taken after his canopy separation — he had his helmet visor down. Although his vision was temporarily blocked by flying debris, he received no eye or facial injuries — a fact that both he and life support personnel attribute to the protection afforded by his visor.

Flying debris in the cockpit can be caused by many things besides canopy separation — birdstrikes, midairs, and decompression, just to name a few.




by
TSgt Rick Sherry, 12WSq

In the everyday life of any fighter pilot, there is always an element of excitement in "hacking" the mission. Locating the tanker, joining up, refueling, placing the ordnance on the target and getting back to home plate can at times become a trying experience, especially if home plate suddenly goes "below minimums" and the bird develops problems. Let's add another element of excitement. Imagine climbing into your Fighter Bomber or Recon Fighter, firing up, intercepting the unfriendly, or hitting a truck column with 20 Mike-Mike, or running a night IR recon mission and then returning to be recovered by an orbiting aircraft utilizing a trapeze which hoists you and your aircraft into the "mother" ship for the return home! Sound like Jules Verne or Buck Rogers? On the contrary — from time-to-time since 1905, the possibility of "skyhooking" aircraft from airships or other aircraft has been explored, sometimes with considerable success.

In 1905, Prof. John J. Montgomery of Santa Clara College launched a man-carrying glider from a balloon, with some success, and a year later Santos Dumont used one of his dirigible envelopes in an attempt to lift a full-size airplane into the air. The attempt was unsuccessful. World War I brought about an intense search for a useful skyhook and various aircraft such as the Sopwith Camel, DH-4, and the Sperry Messenger were successfully carried aloft beneath airships. The U.S. Navy pioneered day and night skyhooking (hook-on) operations with their airships, the Akron and the Macon. These airships operated for more than 3 years, from 1932 to 1935, without a serious accident with their aircraft but by the end of World War II hook-on flying had left the airship behind and had passed into the jet age.

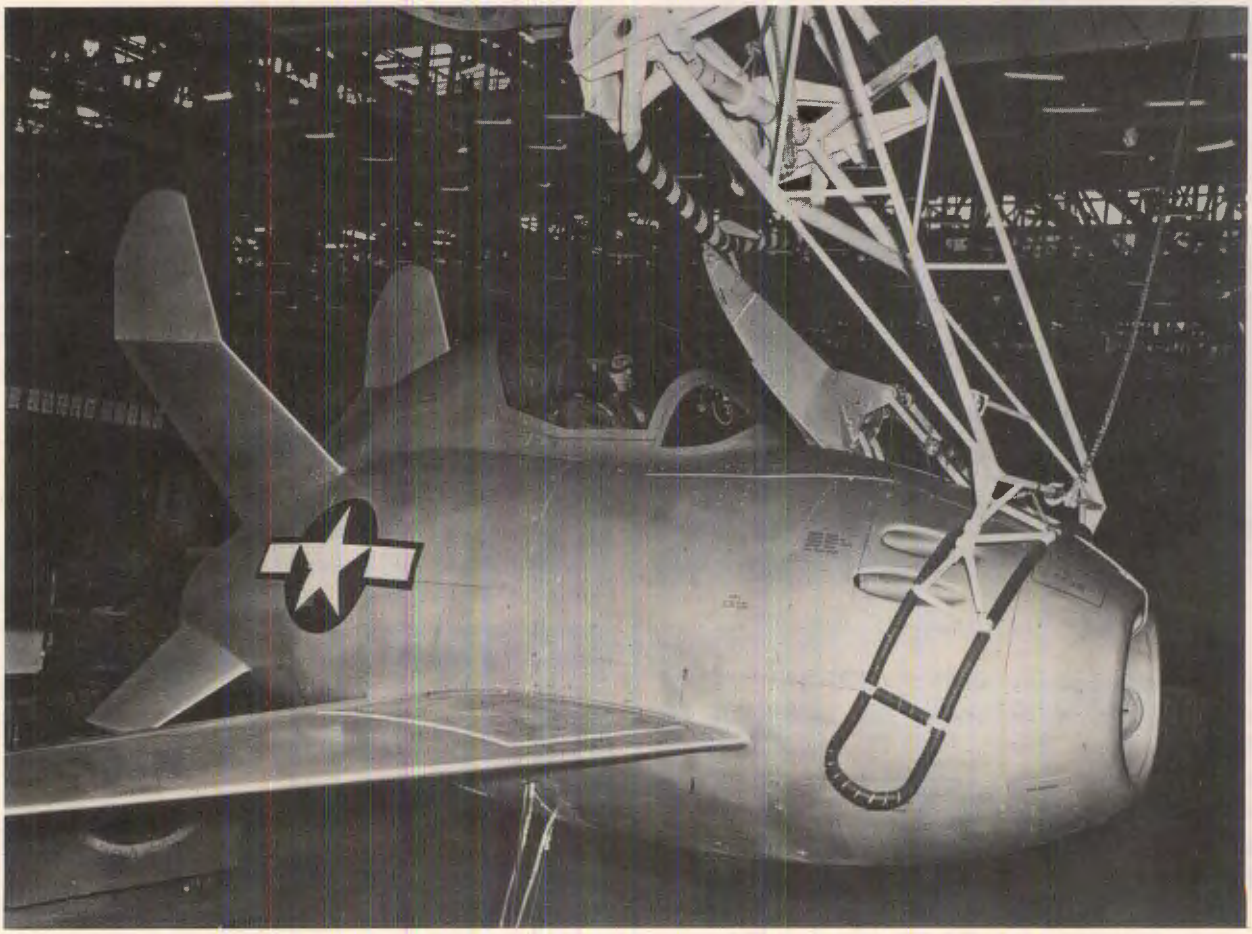
In 1944, as World War II began to wind down, Skyhooking was reviewed once again, this time by the Army Air Force because of their concern over fighter escort problems encountered during the war. The new B-36 intercontinental bomber was not too far in the future and it possessed an operating range far in excess of all existing bombers and future fighters. Range was the big problem with the World War II fighters. The bombers flew without fighter cover many times because the fighters did not possess sufficient range to keep up.

In January 1944, the Air Force began a study of a "parasite" fighter which was to be used with the B-36 and it was envisioned that this parasite would be carried in the belly of the B-36. The parasite, or escort, would be carried

deep into enemy territory with the B-36 and should the bomber come under attack, the parasite would be launched and fend off the attackers. Once the enemy aircraft has been successfully driven off, the parasite, or escort, would return, attach itself to a trapeze, fold its wings and be lifted into the B-36. However, the B-36 was still in the future and testing was begun with the new parasite and the B-29. In October of 1945, a development contract was let with McDonnell and the result was the XF-85 "Goblin." It was the first and only aircraft designed specifically for skyhook operations, possessing only a belly skid and no landing gear. The aircraft was extremely small, with a span of 21 feet 1½ inches, and a length of 14 feet 11 inches. It weighed 4,500 pounds. It was powered by a Westinghouse J-34 engine of 3,000 pounds thrust. It could make 650 miles per hour flat out and cruised at 580 miles per hour. Maximum cruising time was 1 hour and 20 minutes. Armament consisted of four .50 calibre machine guns.

The first XF-85 was delivered to Edwards Air Force Base test facility at Muroc, California, in the summer of 1948. On August 28th, it made its first free flight from a trapeze installed in the bomb bay of a B-29. To facilitate storage within the mother ship, the wings of the XF-85 folded in carrier fashion prior to the aircraft being stowed. Flight testing was carried on until April 1949. Testing proceeded with limited success during that time. On several occasions during the tests, the test pilot was unable to set the XF-85 onto its trapeze and the tiny aircraft was required to land, sans gear, on the desert floor. It is interesting to note that during these landings, the aircraft suffered little damage and was quickly returned to service. As the testing proceeded, it began to appear that the XF-85 demanded too much pilot skill to get it onto the trapeze and the aircraft left something to be desired in the area of stability. Several modifications to the tail planes failed to remedy the stability problems. There was also some opposition to the parasite fighter design in higher Air Force channels, and in 1949 when defense funds were cut, so was the XF-85 after completion of only two aircraft. The XF-85 with its associated trapeze was never used in the B-36.

A second and much more successful skyhook program developed from 1951 thru 1956. It was called FICON



The XF-85 Goblin. This is the only aircraft designed specifically for skyhook operations. On several occasions during tests, the pilot was unable to position the XF-85 onto the trapeze shown here, and the tiny aircraft was required to land on the desert on its belly skid.

# SKYHOOKS

This sequence of photos shows the YRF-84F "landing" and fully stowed in the mother ship, an RB-36D. The official Air Force photos, dated 25 August 1973, are quoted: "The new development, announced today . . . aims at providing the Air Force with the capability for long-range, high speed reconnaissance with a high probability of survival for personnel and equipment."

(FIghter CONveyer) and it teamed up the new B-36 and the F-84. FICON was initially begun as an effort to extend the range of the fighters. The requirements coincided with the successful miniaturization of nuclear weapons, which gave every fighter plane nuclear capability. With the perfection of inflight refueling, however, the FICON program underwent another conversion. Since inflight refueling appeared to be the more successful and simpler means of range extension for fighters, FICON was converted to a photo recon conveyer.

The first in-flight experiments were begun in January of 1952, using an RB-36 and an F-84E, with the tests continuing thru 1952. In the spring of 1953, Convair was ordered to modify 10 RB-36s to the FICON configuration. The new conversion caused the RB-36 to be redesignated the GRB-36. Rather than a trapeze system, the FICON used a large H-shaped cradle with a deep yoke. The F-84 had a probe attached to its nose and this probe engaged a latch in the crotch of the GRB-36's yoke. With the probe in the latch, the yoke was lowered over the aircraft to engage pins on the sides of the F-84's fuselage. This provided a three-point suspension for lifting the aircraft into the mother ship's bomb bay. Unlike the XF-85, whose wings folded up, the FICON fighters' wings stuck out of the sides of the GRB-36 bomb bay.

The first GRB-36s became operational during 1954 and 8 of the 10 original GRB-36s were assigned to the 99th Strategic Reconnaissance Wing at Fairchild AFB, Spokane, Washington. The remaining two were retained for experiemental purposes. Republic Aircraft Corporation modified twenty-five RF-84F Thunderflash photo reconnaissance aircraft to the RF-84K configuration, installing the necessary retractable probe hook used in conjunction with the GRB-36 yoke. These were operated by the 91st Strategic Reconnaissance Squadron at Malmstrom AFB, Montana, until 1956.

Concurrent with the phase out of the B-36, the FICON operations were terminated in the spring of 1956, and by June of that year all of the FICON GRB-36s were languishing in the desert sun at the AF boneyard at Davis-Monthan AFB, Arizona. Some consideration was given to converting the B-52 to the FICON configuration but it never came to pass, and there is some conjecture that the advent of the Lockheed U-2,with its phenomenal range and altitude, sounded the death knell to any further FICON projects. The last remaining XF-85, SN46-6523, is presently enshrined at the Air Force Museum at Wright-Patterson AFB, Ohio.

Skyhooking is not dead, however. Not too long ago, one of the Nation's leading aviation magazines carried an article concerning the C-5. It seems as though an enterprising individual has developed a plan whereby the C-5 could be used as a "mother" ship for RPVs.

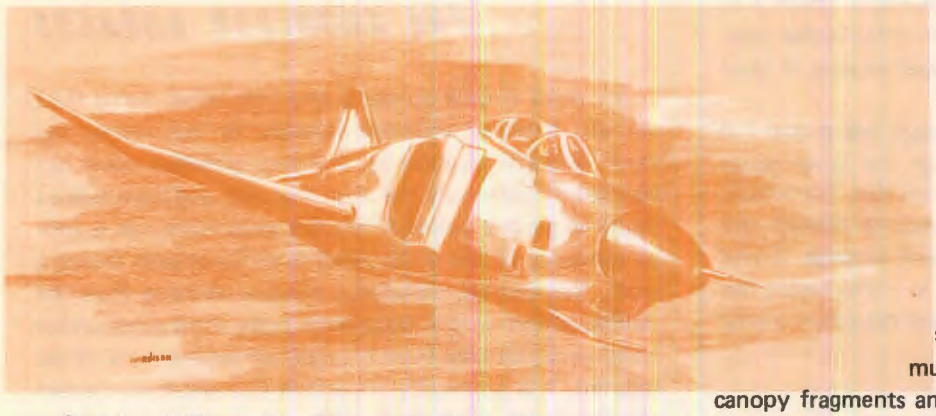
Could it be we've come full circle? →

TACTICAL AIR COMMAND

# AIRCREWMEN of DISTINCTION

Capt Bear

Maj Bocklage



Captain William M. Bear and Major Norman W. Bocklage, 45 Tactical Reconnaissance Squadron, 67 Tactical Reconnaissance Wing, Bergstrom Air Force Base, Texas, have been selected for the Tactical Air Command Aircrewmen of Distinction Award for November 1973.

Capt Bear and Maj Bocklage were returning to Bergstrom from an out-and-back mission in their RF-4C aircraft. They had entered a low-level flying route in West Texas for a routine reconnaissance training mission. After approximately four minutes of flight at 480 knots and 500 feet AGL, there was a loud explosion-like sound. Capt Bear, the aircraft commander, was momentarily stunned by the impact of a bird that shattered the front windscreen. The resultant windblast and noise negated effective intercockpit communication. Maj Bocklage, the Weapons System Operator, recognized the situation and, assuming that Capt Bear was incapacitated, immediately assumed control of the aircraft. He initiated the prebriefed maneuver — a wings-level, straight ahead, military thrust climb to a higher altitude. In the climb, he attempted to assess the extent of damage and determine his course of action. As he started to level the aircraft at 8,500 feet MSL, he felt the stick shake from side to side. This was Capt Bear's prebriefed signal that he was all right and indicated that he had reassumed control of the aircraft. The bird struck the right front canopy quarter panel and had impacted on Capt Bear's right shoulder, neck, and face. He received multiple cuts from bird parts and flying canopy fragments and had a severly bruised shoulder. His oxygen mask, microphone, and visor were all damaged. In addition, the bird had cracked the front cockpit personal parachute pack casing, thus rendering an inflight ejection extremely hazardous.

Capt Bear was unable to speak to Maj Bocklage due to an inoperative microphone. He was able to hear satisfactorily in spite of the tremendous noise in the cockpit and by using notes and prebriefed signals, the crew was able to communicate. Maj Bocklage declared an emergency and aided Capt Bear in determining the damage. After making a controllability check, the crew elected to make a radar-monitored straight-in approach at Bergstrom AFB. Maj Bocklage accomplished necessary coordination with air traffic control and a successful landing was accomplished without further incident. Before opening either canopy, the crew requested that egress personnel check for damage to the ejection mechanisms.

By their prompt action and superior crew coordination, the crew displayed superb airmanship in recovering their damaged aircraft. Their actions prevented the loss of a valuable aircraft and further injury to themselves. The professional skill and alertness of Capt Bear and Maj Bocklage certainly qualify them as Tactical Air Command Aircrewmen of Distinction.

# SPO COR

## F-4 LIFE SUPPORT NOTES

GARTERS – (F-4 Leg Restraint Type) – A sister service recently had an inadvertent ejection and fatality when a misrouted leg restraint line got caught in the rocket motor firing assembly/sear. Rocket motor firing probably resulted from seat raising or the WSO stepping on the line as he prepared to leave the cockpit. USAF F-4s have a protective boot over the rocket motor igniter area. The overall solution, however, is proper routing of your leg restraint lines.

On the same subject – informal word has it that F-4 drivers have been observed hooking up the lower garter just below the knee instead of at the boot top. The Velcro tape mod to your G suit was supposed to restrain the garter in the proper position and prevent slippage. If you don't put the garter where the Velcro is – you negate the mod and increase the possibility of lower extremity injury during an ejection.

**by Maj Burt Miller**

## AERO CLUB — LET'S HEAR IT FOR THE SHOULDER HARNESS

It seems natural to use a seat belt when flying light aircraft; however, shoulder harnesses do not receive the same favorable acceptance. Accident statistics point out that head injuries are the most frequent and most serious injury in general aviation. In most cases this is due to lack of restraint, allowing the head to strike objects during a crash deceleration. Generally, injuries resulting from the flailing action of the occupant's body show a peripheral trend (areas furthest from the seat belt receive most of the injuries). It is practically impossible to avoid these contact injuries during crash deceleration when occupants are not restrained by a properly installed and properly used shoulder harness and seat belt.

In the event of post crash fire or a ditching, the ability of occupants to rapidly evacuate the aircraft becomes most important. This time element becomes even more critical when occupants are handicapped by a disabling injury or a stunned condition, e.g., making an imprint on the glare shield with your forehead.

So, I ask each Aero Club Board of Governors – "Have you provided each club aircraft with a shoulder harness capability?" And to each Aero Club member, I ask – "Are you using all the safety features provided in the aircraft you fly?"

**by Maj Al Mosher**

## GET IT ON THE GROUND

Land As Soon As Possible – "Emergency conditions are urgent and require an immediate landing at the nearest adequate airfield."

Recent TAC accidents and incidents indicate there may be some cases of improper interpretation of the

# NER


above flight manual Section III guidance. With the rash of inflight fires and bleed air system problems we've experienced in the F/RF-4 this year, it would appear all aviators should take the above reference to "immediate" and "nearest adequate" more seriously. Additional time spent driving toward your home drome or that better RON base may cause additional damage or allow the situation to exceed the recoverable category. Get it on the ground! Safely!

**by Maj Burt Miller**

## MORE ON BLOWN TIRES

A recent meeting of all concerned agencies resulted in a USAF position that the major effort to reduce the number of blown tires on landing will consist of expedited effort to procure the MK III antiskid system to replace the present MK II system in all F/RF-4s. The MK III provides improved stopping performance plus touchdown protection, cross-over locked wheel protection, and the benefits of a newer state-of-the-art system with improved reliability and maintainability.

Due to the inherent delays in our procurement system, it will take up to two years before the jocks will actually fly machines with the MK III installed. In the interim, the hazards are still there. At the risk of beating the proverbial horse, we remind you once again that the pilot MUST make every effort possible to insure that he does not apply brake pedal deflection (1/8 inch is too much) prior to wheel spin up.

A recent incident/near accident pointed out another salient reminder for all F-4 drivers who experience a blown tire during the landing rollout. Shredding tires can occasionally rupture hydraulic lines. If you lose the utility fluid, you will also lose most of the good things you need to keep the aircraft going straight down the hard surface and stop it before you get to the end. If you lose your utility pressure after landing and after blowing a tire, keep in mind the fact that you may need the emergency brakes to control and stop the aircraft.

**by Maj Burt Miller**

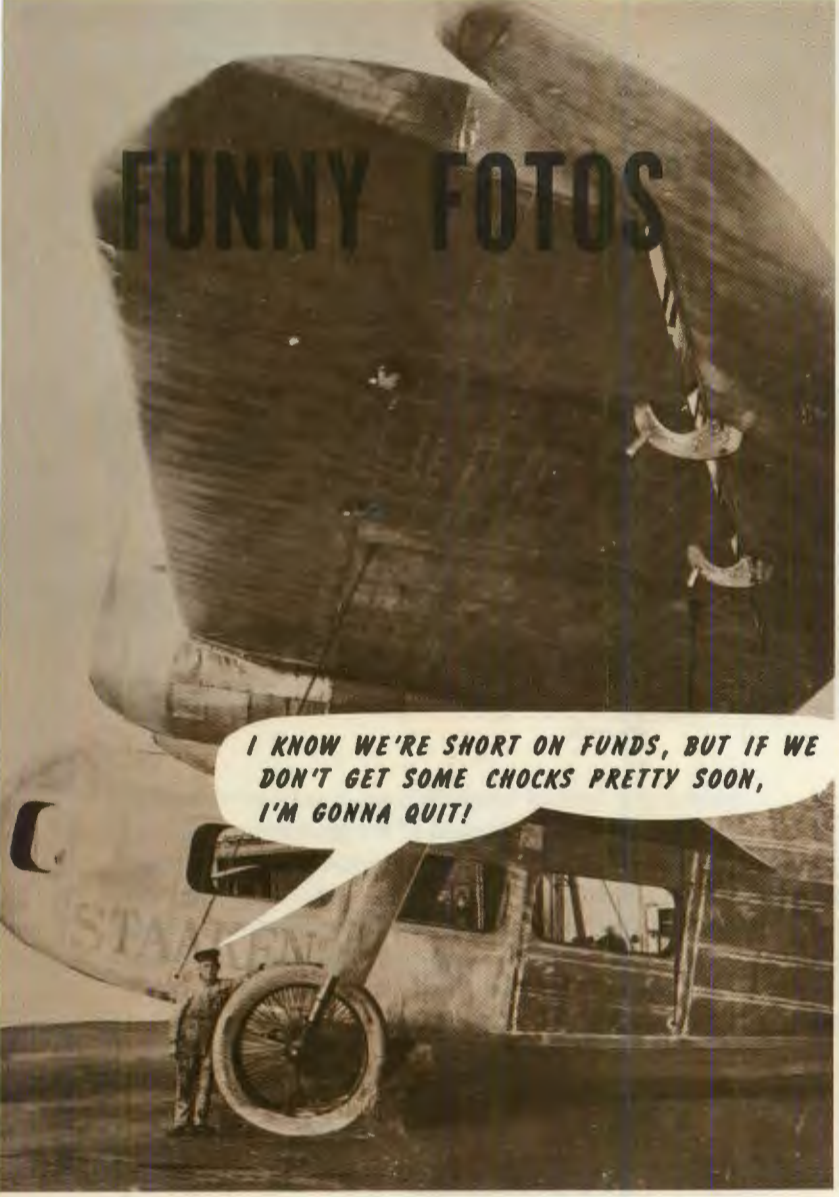
## 16lb. OVERBALANCE (TO 1F-4-978)

We've had several unofficial and a few official inquiries into the question of "WHY" and "HOW GOOD" is the 16 lb overbalance added to the aircraft longitudinal control system. Three tests were flown to evaluate this mod. All pointed out some advantages and a few disadvantages. All final summations, however, recommended incorporation of the mod as the inconveniences of the system were outweighed by the improvements. For a more detailed discussion of this mod, we recommend the article: "The Pros and Cons of Sixteen Pounds Overbalance" in the third quarter/1973 McDonnell Douglas Product Digest.

Like any change, immediately after it starts arriving in the field, we find people who dislike it and some who even declare it a flight safety hazard. Our only response at this early stage of actual use by the operator is: give it a chance. The tests say it's better and only requires getting used to. Let's wait a bit and see if it doesn't fall into the same category as 3 vs 5 lb bob weights.

**by Maj Burt Miller**

# FUNNY FOTOS









WILBUR, WHEN YOU SAID YOU COULD BUILD A LIGHT AIRFRAME I NEVER REALIZED...


THIS SHOULD FIX THOSE #%#$&#! WATER SKIERS!


LOADMASTER, I THINK YOU BETTER SHIFT THE LOAD FORWARD A BIT


BUT I DON'T WANT TO BE A BOMB!

# CHOCK TALK ...incidents and incidentals

chock talk ..incidents and incidentals

## TRANSIENT ALERT

A Marine T-33 was destroyed when improper oxygen servicing procedures were used.

An F-105 departed the end of a wet runway and was destroyed after the drag chute failed — improper drag chute installation was suspected.

A canopy was jettisoned after a technician was instructed to insure that the drag chute handle was in the "down" position — the emergency canopy handle had been pulled aft.

All of these recent incidents have one thing in common. Transient alert personnel were involved — TAC transient alert personnel.

Before we levy the responsibility only on our line workers, let's first take a look at prevention. Nobody makes a mistake on purpose. Supervisors must evaluate the initial training our Transient Alert people receive. More importantly perhaps, quality supervision at the lowest level is a must. This responsibility is not a luxury — it's a necessity.

One more note to supervisors of transient alert personnel — it is your responsibility to let your base ops people know if any transient services cannot be provided. This way the installation can advise the aircrews of the deficiency through NOTAM procedures. If you can't do it, let the aircrews know — if you can, do it right — the first time.

## NOMEX AND REFUELING

**Capt John Byers TAC/DOXBL**

You've probably noticed that Nomex, from time to time, will build up a pretty good static charge. Although there are several anti-static compounds available commercially (made for use in a washer or dryer), these don't always prevent static buildup and subsequent discharge. This static discharge is usually only a minor annoyance and might affect your relationship with wife/girlfriend, children, pets and possibly your navigator. Around fuel, however, it could blow you to hell-and-gone. In fact, a recent message from AFISC advised that some POL operators have refused to service aircraft when crewmembers were wearing Nomex flight suits. The straight word on this operation is as follows: "Flight crews wearing Nomex may participate in aircraft fueling operations without violating the requirements in AFM 127-101 and para 5-70, TO 00-25-172, 15 Jun 73, provided the following precautionary measures are accomplished: Prior to connecting a single point nozzle or before beginning over-the-wing fueling, crewmembers will assure that they are at the same potential as the airframe. This is achieved by skin contact with the aircraft or by inserting the ground cable jack on the nozzle with bare hands. Revision to TO 00-35-172 is underway with anticipated issue date Jan 74. Appropriate information will be incorporated."

## C-130 EXTERIOR INSPECTION

Recently a TAC 780 equipment specialist received a nasty gash on the forehead (four stitches) when a gust of wind caught a life raft door and blew it into his face. Any inspection requiring the unfastening or removal of large panels in gusty winds is extremely hazardous, so be especially careful during these windy winter months.

In addition to this hazard, we seem to get our share of one-and-a-half gainers off the Herky as the result of that freezy skid-stuff. Those pre-dawn preflights are miserable enough without making like Peggy Fleming on top of the wing. It's a toss-up as to which is slipperiest, deicing fluid or frost, so don't forget the warning in the dash one, page 2-23 (Change 5 for B and E model, Change 4 for A model): "Conducting this inspection (top of aircraft — Ed) during high winds or other severe weather conditions can be dangerous. Under these circumstances, the pilot may waive this inspection." We would like to add that for safety's sake, you should at least make a check of the dry bays if you can.

# *with a maintenance slant.*

## THE $10,000 DIME

An A-37B suffered compressor damage shortly after takeoff. At 200 to 400 feet AGL, a vibration occurred in the left engine and the throttle was reduced to idle. Another attempt by the IP to advance the throttle resulted in severe vibration and the engine was shutdown. An uneventful landing was accomplished.

Engine inspection revealed FOD damage; a small piece of silvery metal showed a faint, but unmistakable, "19" stamped on it. As you can see from the pictures, this small clue led to the discovery that the culprit was one thin dime. It has not yet been determined how it got there, but an expensive lesson is there to be learned. All flightline personnel should keep small objects such as change, keys, and cigarette lighters out of their pockets while working on aircraft. Aircrewmen should make sure flightsuit pockets are tightly zipped, especially if you carry small items in your breast or shoulder pockets. It cost about $10,000 to fix this engine. That's a hell of a price to pay for losing one dime.

# IFR - THE ONLY WAY TO GO

by Mr. J. W. Hafley
HQ TAC/DCF

The Air Force now requires the maximum use of IFR flight, regardless of weather conditions. The "good old days" when a pilot had a choice are nearly gone — and with air traffic what it is today, it may be just as well.

But as we experience progress and computerized application in many fields, things get a bit complicated. Aviation and air traffic control is no exception. The air traffic control system is expanding its capacity to accommodate users, with as little inconvenience and delay as possible.

In the last few years, the FAA has received new and sophisticated electronic, radar, and computer equipment in both en route and terminal facilities. Both the Centers and Approach Control agencies are automating their traffic data handling and displays. Each step enhances the capability and real-time information exchange between controllers. Ultimately, a departing flight will squawk an assigned discrete beacon code and it will be the key to his identification and automatic air traffic control service until the flight is terminated at destination.

As we progress toward that lofty goal, pilots are going to be faced with the mental gymnastics of comprehending and complying with the rules of Positive Control Airspace (PCA), and Terminal Control Areas (TCAs). In addition, there are several programs where expanded radar service is already provided to VFR aircraft on a voluntary basis; i.e., Stages I, II, and III. The three have been around a while and one or the other is available at most civil and military terminals. Just for a review, the following quick definitions are included:

Stage I service is radar advisory service for VFR aircraft. Vectoring may be provided when requested by the pilot or with pilot concurrence when suggested by Air Traffic Control.

Stage II service is radar advisory and sequencing for VFR aircraft. The purpose is to adjust the flow of

arriving VFR and IFR aircraft into the traffic pattern. Pilot participation is urged but is not mandatory.

Stage III service is radar sequencing and separation for VFR aircraft. The purpose is to provide separation between all participating VFR and IFR aircraft operating within a defined airspace. Separation between VFR and IFR aircraft may vary from normal IFR standards. Visual separation is often used between sequenced aircraft if weather conditions permit, and 500 foot vertical in lieu of 1,000 foot separation, and one and a half miles in lieu of the normal three miles may also be employed by control facilities. This airspace where Stage III service is provided is called Terminal Radar Service Area (TRSA). Unlike TCAs, the TRSAs are not established through rule-making action and do not appear on aeronautical charts. But more on this later.

It can be confusing, always requires careful planning, and is surely discouraging for inexperienced pilots. In fact, it may be so confusing that many pilots decide the trip isn't necessary; to go VFR is to risk violation for not complying with the right track, altitude, or possibly not calling the nearest ATC agency at the right time. So, rather than try to run the gauntlet, a good many civil pilots, those with IFR tickets, are filing and flying IFR along with Air Force jocks.

Operation in the en route PCA is pretty well known, but, because of the many new procedures and designations of terminal airspace, a quick look there might be beneficial. Let's run down the list of names and put some tags and definitions on each one to aid in recognition and make the flight operation through or into these high activity areas a bit easier.

The big daddy of them all is the TERMINAL CONTROL AREA, Group I. These are at the nine high-activity locations in the United States: Atlanta, Boston, Chicago, Dallas-Ft Worth, Los Angeles, Miami, New York, San Francisco-Oakland, and Washington National.

A Group I TCA can be a rather imposing fortress. "Thou shalt not enter without a clearance from Approach Control." The floors of the segmented area progress from the surface around the airport to higher and higher levels as the periphery expands. For general aviation, plan view charts are available at Flight Service Stations, or a new style VFR Terminal Area Chart, scale 1:250,000, can be purchased.

By official definition a Group I TCA consists of controlled airspace extending upward from the surface or higher to specified altitudes, within which all aircraft are subject to operating rules and pilot and equipment requirements specified in paragraph 91 or the Federal Air Regulations (FARs). Turning now to FAR 91.90 we find these operating rules: "An appropriate authorization from ATC must be received prior to flight in the area, and large turbine powered aircraft shall operate at or above the designated floors while within the lateral limits of the Terminal Control Area." In other words, it's a "NO NO" to fly big birds below the floor of these areas if you are landing or departing the primary airport.

As to pilot and equipment requirements, paragraph 91 says: "The pilot must hold at least a private pilot certificate, and the aircraft itself must have a VOR or TACAN receiver, two-way radio with adequate frequencies, and a transponder with at least MODE 3/A 64 code capability (except helicopter)."

That's the requirement now for operation to the main or primary Group I airports, whether you are VFR or IFR. FAA plans to require an improved radar beacon transponder after 1 July 1974. That means AIMS equipment with MODE 3/A 4096 codes and MODE C automatic altitude reporting.

Next down the list is the Group II TCAs. These will be at the next 12 high-activity locations: Cleveland, Denver, Detroit, Houston, Kansas City, Las Vegas, Minneapolis, New Orleans, Philadelphia, Pittsburgh, Seattle, and St. Louis. The Group II TCAs have not yet been activated or charted. But most of the locations are now shown graphically in the Airmen's Information Manual (AIM) and FLIP as TERMINAL RADAR SERVICE AREAS or

# IFR...

under the heading TERMINAL AREA GRAPHIC NOTICE.

The operating rules will be similar to Group I locations, but less stringent. As in Group I, authorization from ATC will be required. Turbine-powered aircraft will have to stay above the floor of the area, and NAVAIDS and radio will be required. But only IFR aircraft destined for the primary airport will be required to have a basic radar beacon with 64 codes. There is no mention of pilot certification requirements. As in the case of the Group I locations, plans are in the works to stiffen up the rules. What is proposed is that by 1 January 1975, the 4096 beacon codes with CODE C altitude reporting will be required.

The last of the three new class TCAs are the 42 Group III locations. These will be located at all other FAA Terminal Approach Control (TRACON) areas where the Automated Radar Terminal System (ARTS III) is installed. These locations will provide a Stage III type service within the designated airspace.

We mentioned the TRSA and TERMINAL AREA GRAPHIC NOTICE. The significance of each is capsulized here:

The TRSA is an area in which Stage III radar separation and sequencing is provided to VFR aircraft on a voluntary basis. This generally applies only for the primary airport in the terminal complex, and VFR arrivals are handled on a first come, first served basis along with IFR traffic. There are no special equipment requirements, however, as in the case of the TCAs.

The TERMINAL AREA GRAPHIC NOTICES are intended to assist VFR pilots in planning flights in the areas and in many instances recommend VFR routes to avoid heavy concentrations of IFR traffic activity. These graphically depicted areas include some of the Group I TCAs as well as a number of military locations, Myrtle Beach for one.

This has been a quick summary of terminal airspace definitions and rules of engagement. The main thing for Air Force flyers to remember is that the Air Force has opted for IFR en route operation wherever possible, and have instructed aircrews to participate in the stage service if operating VFR in a terminal area. So – the name of the game now and in the future is IFR. It's the only way to go.

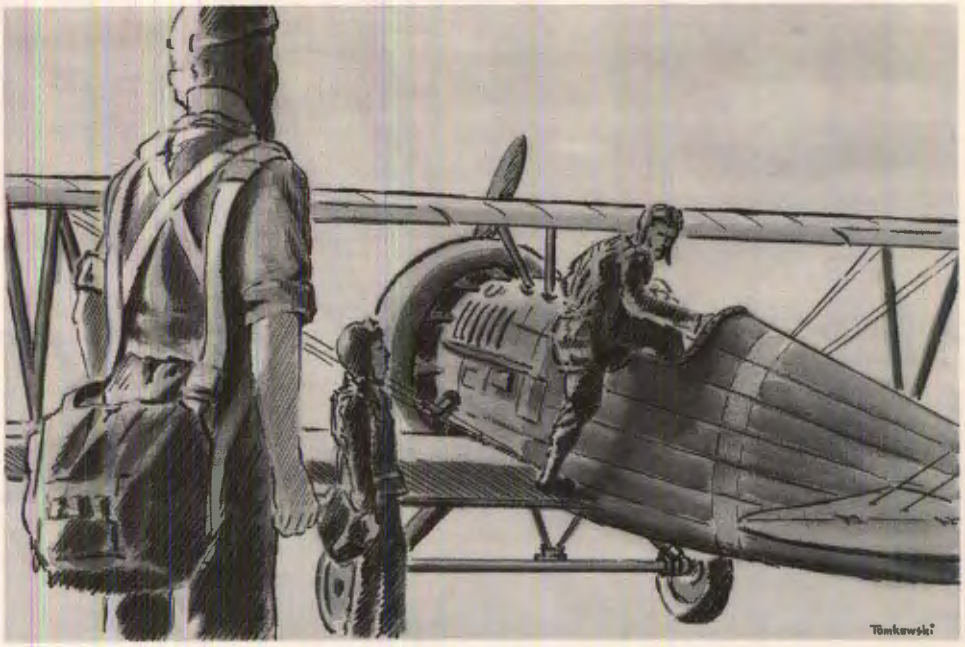
Photo Courtesy Sperry Rand Co.

Federal Aviation Administration air traffic controllers will use computer-aided ARTS III System as they supervise aircraft at Chicago's O'Hare International Airport, the world's busiest commercial terminal. O'Hare's ARTS III includes seven horizontal and four vertical displays which can show aircraft identity, altitude, and speed next to the plane's target blip. Controllers can use keyboards to request information. Overhead panels include frequency-selection switches and other transmitting and receiving equipment.

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

# Lessons That Live

No. 15 of 17
Courtesy of Lt Col H. M. Butler, 4500 ABW/SE




**"WHEN I SAW THAT THE STUDENTS NEEDED IMMEDIATE ADDITIONAL INSTRUCTION, I LIT RIGHT INTO THEM."**

# OUT OF GAS

Five thousand hours is a lot of flying time, and in that period I've had my share of close calls. This one, perhaps, was the closest of all. I was instructing in the Pursuit Section of the Air Forces Advanced Flying School at Kelly Field and I had a crack-up caused solely by my own carelessness.

It so happened that while I was flying in formation with two students, I suddenly realized that the main gas tank of my P-12 was nearly dry. We peeled off from a Lufbery Circle and made a landing on Kelly Field, but it was the sloppiest landing on the part of students that I had ever seen.

My original plan had been to taxi into the line upon landing, but when I saw that the students needed immediate additional instructions, I lit right into them. I told them exactly what I wanted and then we took off to execute the same maneuver again while the instruction was fresh in their minds.

Not until we had left the ground, with my plane in the lead and the two students in very close wing formation, did I think again about my gas. A quick look and my eyes bugged out — the gauge stood at zero. Even as I stared at it, the inevitable happened — the engine began to stutter and then stopped dead.

With planes on both sides of me, I was sure to be hit by one or both. I quickly decided that I would stand a better chance if I collided with one plane instead of two, so I purposely skidded to the left, hoping that the ship on my right would pass me. It worked. As I held my breath, the plane flew by my right wing without touching. Meanwhile, the student on my left cut his throttle and executed a very beautiful formation landing with me.

As we approached the ground, however, he was unable to cut his speed completely and we collided in such a manner as to cause my plane to turn over on its back. The other ship ground-looped and ended up uncomfortably close to me. Neither the student nor I received a scratch, and by some miracle neither plane was seriously damaged.

I must have looked pretty silly in the eyes of those students, and I can assure you I learned a lesson that day which I shall never forget.

# BUZZ-PHRASE GENERATOR

Buzz-phrase generator

For all you pencil-pushers and staple-stickers out there, we have an item here that should prove invaluable. This "buzz-phrase generator" was developed by the RCAF some time ago and is worth a reprint. Why use a single, simple word when three obfuscating ones will do? The fuzzy phrases listed below should offer an alternative to the writer who is hard pressed to find just the right phrase for almost any situation. A sort of mini-thesaurus, it consists of a three-column list of over 30 over-used but appropriately portentous words. When you need a good opaque phrase, just think of a three-digit number — any three numbers will do — and substitute the corresponding "buzz" words from the list. For example, 2-5-7 produces "systematized logistical projection" which has the ring of true authority but means absolutely nothing. The beauty of this system is that even though the phrase is pure "baffle-gab," it will take a really brave "fog-cutter" to question its meaning.

| | A | B | C |
|---|---|---|---|
| 0) | INTEGRATED | MANAGEMENT | OPTIONS |
| 1) | TOTAL | ORGANIZATIONAL | FLEXIBILITY |
| 2) | SYSTEMATIZED | MONITORED | CAPABILITY |
| 3) | PARALLEL | RECIPROCAL | MOBILITY |
| 4) | FUNCTIONAL | DIGITAL | PROGRAMMING |
| 5) | RESPONSIVE | LOGISTICAL | CONCEPT |
| 6) | OPTIONAL | TRANSITIONAL | TIME-PHASE |
| 7) | SYNCHRONIZED | INCREMENTAL | PROJECTION |
| 8) | COMPATIBLE | THIRD-GENERATION | HARDWARE |
| 9) | BALANCED | POLICY | CONTINGENCY |

**TACTICAL AIR COMMAND**

# Maintenance Man Safety Award

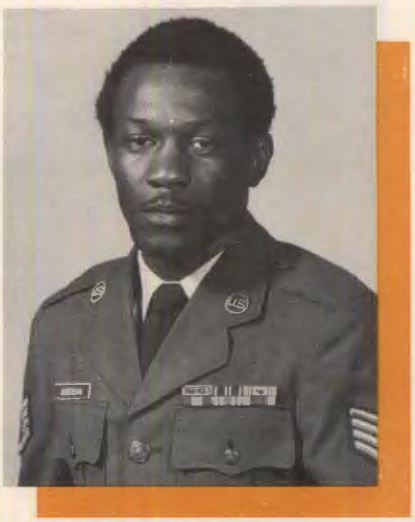
Sergeant Joseph B. Huff, an Integrated Avionics System Technician of the 27 Avionics Maintenance Squadron, 27 Tactical Fighter Wing, Cannon Air Force Base, New Mexico, has been selected to receive the Tactical Air Command Maintenance Man Safety Award for November 1973. Sergeant Huff will receive a certificate and letter of appreciation from the Vice Commander of Tactical Air Command.

SGT HUFF

**TACTICAL AIR COMMAND**

# Crew Chief Safety Award

Staff Sergeant John H. Anderson, T-33 Crew Chief of the 1 Tactical Fighter Wing, MacDill Air Force Base, Florida, has been selected to receive the Tactical Air Command Crew Chief Safety Award for November 1973. Sergeant Anderson will receive a certificate and letter of appreciation from the Vice Commander of Tactical Air Command.



SSGT ANDERSON

**TACTICAL AIR COMMAND**

# Ground Safety Man of the Month

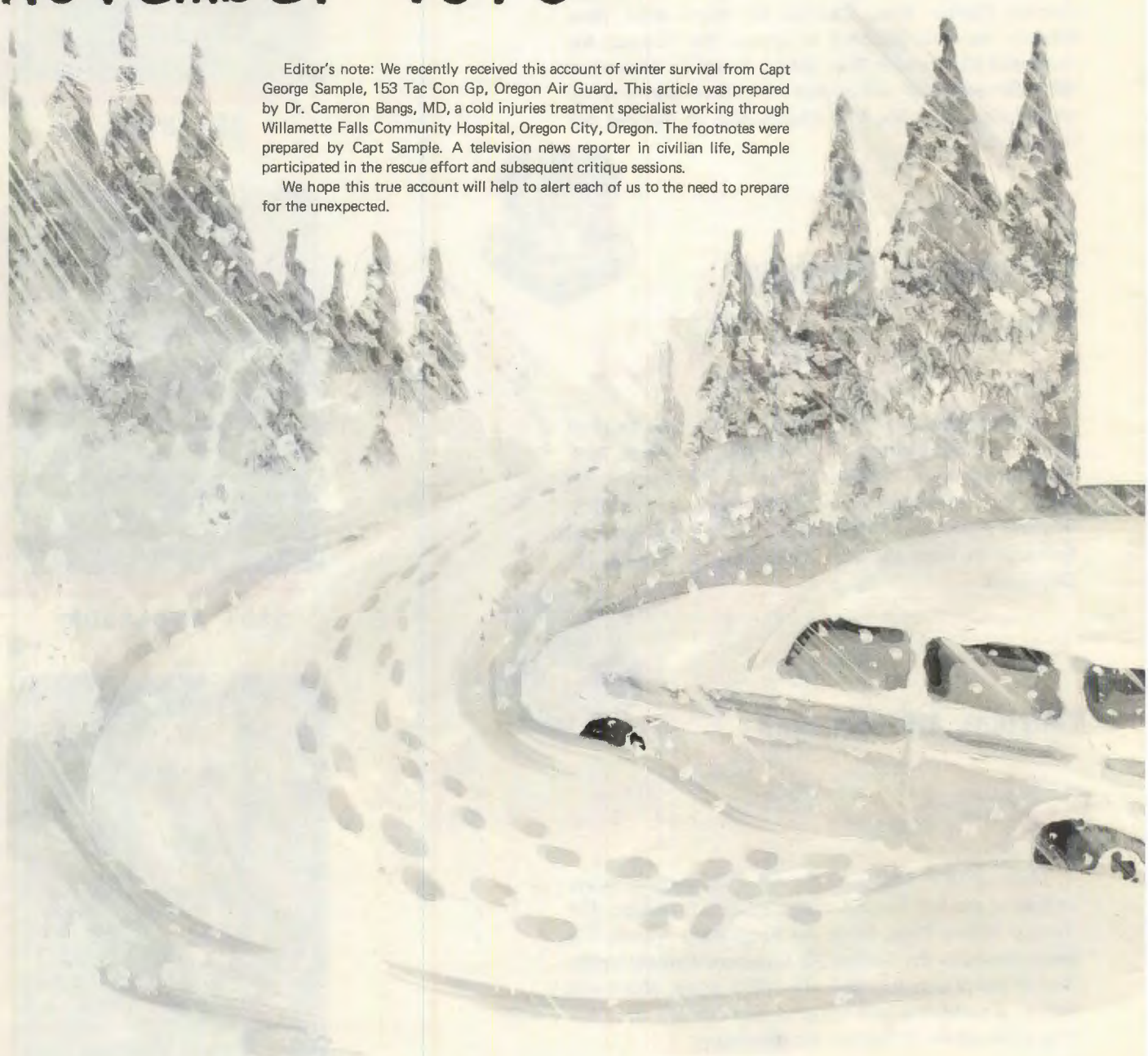
Major John P. Myers, additional duty Ground Safety Officer of the 442 Tactical Figher Training Squadron, 474 Tactical Figher Wing, Nellis Air Force Base, Nevada, has been selected as the Tactical Air Command Ground Safety Man of the Month for November 1973. Major Myers will receive a certificate and letter of appreciation from the Vice Commander of Tactical Air Command.

MAJ MYERS

# Survival and Rescue of Emily and Scott McIntire, November 1973

Editor's note: We recently received this account of winter survival from Capt George Sample, 153 Tac Con Gp, Oregon Air Guard. This article was prepared by Dr. Cameron Bangs, MD, a cold injuries treatment specialist working through Willamette Falls Community Hospital, Oregon City, Oregon. The footnotes were prepared by Capt Sample. A television news reporter in civilian life, Sample participated in the rescue effort and subsequent critique sessions.

We hope this true account will help to alert each of us to the need to prepare for the unexpected.



BACKGROUND INFORMATION

On Saturday, 3 November, Scott McIntire, 28, his wife Diane, 31, and their four and a half month old daughter Emily, left Portland on a one-day outing to Bagby Hot Springs. They were driving their 1966 Chevy wagon, which had three good radial tires and one older radial tire on the back. The weather was clear and cool, but they were aware that a storm had been predicted for the following day. They took a lunch which was eaten before leaving Bagby.[1]

They took the one and a half mile walk into the hot springs and on the way met and chatted with several other people. There were patches of snow on the ground; the weather was overcast but it did not start snowing until after they had bathed in the hot springs and started hiking back to the parking lot. By the time they reached the parking lot, it was snowing heavily.

Scott noted a large bus with a propane heater and a pickup with camper and propane stove and recalls thinking that if the weather became bad that people could find shelter in the self-contained heated bus.[2] There was a Volkswagen in the parking lot which belonged to two people they had met on the trail. The Volkswagen and one other car had left the area prior to the McIntires and their tracks were in the snow.

CLOTHING

They were dressed as follows:

Scott McIntire had hiking shoes and two pairs of socks, one thin and one heavier, both of cotton. He had on Levi pants and a wool shirt, a medium-weight wool shirt and a light wool coat. He had gloves which were single thickness leather and a hand-made knitted wool cap.

Diane McIntire had hiking shoes and two pairs of socks similar to her husband. She had on woolen pants of medium weight, a woolen sweater, a leather three-fourth length coat and a large, knee-length windbreaker.

Emily, the baby, had on pajamas and a new snowsuit with a hood which zippered and totally covered her.

* * * * * * *

1. Bagby Hot Springs is in the southwest corner of the Mount Hood National Forest, about 50 miles southeast of Portland.
2. The driver of this vehicle later (Wednesday) telephoned search officials and confirmed he had seen the family in the area.


SATURDAY AFTERNOON

As they left the area at 4:30 pm, there were two sets of tire tracks preceding them. The smaller, belonging to the VW, was having considerable difficulty as demonstrated by skidding tracks. It was snowing hard with big wet flakes, but not particularly cold or windy.

As they drove through the foot of snow, they had problems with skidding and at times it was necessary for his wife to drive so Scott could push. He noted that the older, more bald tire slipped more and for this reason he decided to change to his good radial tire. After changing the tire, he found the recently-repaired radial was flat. He then had to change back to his more bald spare. This incident, he felt, was disheartening and this was the first time he felt any discouragement. At this time he let some air pressure out of the tires for better traction.

After changing the tire, they were able to make it about half a mile further with his wife driving and he pushing, using one of their wool blankets under the tires for traction. It was completely dark when they skidded off the right side of the road into a ditch and were permanently stuck. Scott was soaking wet, particularly from the waist down; his wife remained dry as she had been in the car.

They ran their car with the heater on for half an hour and dried all their clothing except the one wet wool blanket.[3] They spent the night in the car, awakening occasionally to start the motor to turn the heater on. They used half of the available gas during the night so that by morning they had only one-eighth of a tank left.

The mother breast-fed the baby during the night.

SUNDAY MORNING

On Sunday morning at 8:00 am, they wrote a note stating that they had spent the night and they were leaving the car. At this point they thought they were approximately five miles from the Ripple Brook Ranger Station. The snow was knee-deep which caused difficult, but not impossible, walking. One of the contributing factors to their decision to leave the car was the fact that the VW had preceded them and that the two people they had met on the trail appeared reliable and would stop at the ranger station to report that there were many people stuck in the snow.[4] They were also aware of the fact that people in Portland knew where they were and they would be reported missing. For these reasons they felt that their chances were better off attempting to walk out.

As they left the car, the baby was placed in its snowsuit and into a backpack especially made for the baby. The baby was totally protected from the elements by the backpack and a large umbrella. The mother nursed the baby at 8 am prior to leaving the car. As they left, they noted that all tire tracks were covered.

Scott usually led and was able to go only 20 to 30 feet before resting. They occasionally changed leads with Diane doing the leading. At 10 am they stopped next to a tree to seek some shelter and the mother nursed the baby. Diane was not particularly exposed to the elements during the nursing except for a brief period while the baby was placed beneath her clothing. Both ate snow to satisfy their thirsts, but Scott ate considerably less than Diane.[5] At approximately 12 noon, they again stopped briefly so Diane could nurse the baby. There was a slight wind and it continued to snow quite vigorously.

SUNDAY AFTERNOON

By 2:00 pm Sunday afternoon, the snow was waist deep and Scott noted pain in his upper legs because of the exertion of walking. Diane was becoming more fatigued and sometime around 2:00 pm decided that she no longer wanted to carry her camera and cast it aside. She continued to carry a bag containing extra diapers, but eventually discarded this also.

* * * * * * *

3. Wool is an excellent insulator; it retains 40 percent of its insulating qualities even when wet.
4. The two young men in the Volkswagen were also trapped by the storm and were found by a timber company crew within one hour of the rescue of the McIntires. They stayed with their auto and were treated and released at the same hospital. They had no serious injuries.
5. It takes 38 calories to change a gram of ice or snow to a gram of water at 32 degrees. It then takes one calorie to heat that gram of water one degree. Therefore, for every gram of snow eaten, the person burned up 104.6 calories, which were not subsequently replaced.

# Survival and Rescue

Around two o'clock, they came to a small road junction and it appeared to them that turning right would be the best route. They proceeded down a long hill through the waist-deep snow. They then decided that this was not the route to take and reclimbed the hill to the junction and proceeded on the left-hand road. After a period of time, they decided that they were wrong again and they returned to the junction and proceeded down the road they had first gone down. At the bottom of a long hill about where the road again started uphill, they came to a large snow drift which was over their heads and totally impassable; Scott attempted to go around the drift but was unable to do so. This whole series of events of missed roads took them approximately two hours and by now it was getting dark. Scott noted that to the left of the road there was a large cleared area, and he specifically recalls that it was an attractive sylvan view and he was able to appreciate the beauty of the area.

During this two-hour trek between 2:00 and 4:00 pm, they both became very fatigued but Diane the more so. She frequently would walk with her hands dragging in the waist-deep snow. Scott mentioned to her that she should keep her hands out of the snow but somewhere during that period, she lost both gloves and was without gloves for the remainder of the experience.

To the right of the road, in a logged-over area, they found a large log which was partially covered with snow but had a bare area beneath it. They scooped the snow away so that they were down to bare ground beneath the log. They had one plastic sheet and the umbrella which they put on one side of the log and then they were able to lie beneath the log, but perpendicular to it. During this entire period of scooping snow and walking, they did notice rather marked shivering and felt that they might not survive.[6] The baby was nursed again after they got under the log. Diane continued to eat large amounts of snow.

They were able to lie with their bodies protected by the log and enclosed their legs with a large plastic bag. Between their knees and their waist, they placed the baby's wool blanket over them. At their head, they used a plastic sheet and the umbrella to keep the snow out. They got beneath the log just about dusk and the baby was nursed again at 5:00 pm.

* * * * * * *

6. **Always make camp before you become exhausted. The more energy you have available to establish your camp, the better.**

ADDENDUM TO SUNDAY AFTERNOON

There was very little wood available as most of it was covered with snow. Scott tried to start a fire using some bark and maps he carried, but his matches were wet and he was unable to get anything going.[7]

SUNDAY EVENING

After they were beneath the log and settled down for the evening, they noted that they were still shivering but were able to talk quite freely. They discussed many things at length. They both felt that there was reasonable chance that they would not make it. They stated that they "loved each other very much" and that they "had had a good life together." If they didn't make it, they had "had a better two and a half years than most people do in a lifetime." They discussed the fact that they couldn't understand why this had happened. This was their first unfortunate experience in life and generally life had been very favorable toward them. They did not feel that they were being punished in any way and had no guilt feelings for any of their previous behavior. Neither of them were extremely religious, although Diane had attended church as a child and still went occasionally. During Sunday evening she did pray occasionally and asked that "the Lord help them." They both concluded that they were there only as a result of a "crazy accident" which was a pure happenstance of them being in the wrong place at the wrong time. They felt that there were few things that they could have done differently which would have made any difference. They wished that the tires on their car had been in better condition and that they had had better first aid equipment. They both discussed the fact that they would probably lose their feet due to frostbite. They had been making plans for redesigning their kitchen at home and Scott planned how they would alter these plans to accommodate them after they lost both feet. Scott similarly made plans as to how he could continue work as an artist without feet. These same thoughts regarding loss of feet were continued during the entire experience.

During the night, they were able to sleep in stretches of 15 to 20 minutes. They were quite afraid to sleep for longer periods because of the feeling that if you sleep two or three hours, you may not be able to rewarm yourself on awakening.[8] While the mother was nursing, Scott would feed snow to his wife. Diane now complained of severe stomach cramps, particularly associated with eating snow but, in fact, the cramps lasted all night long. She compared these to labor pains. Scott similarly had stomach cramps but to a lesser degree. He was eating considerably less snow during the night.

MONDAY MORNING

On Monday morning, the weather had not changed; it remained cold, not too windy, but continuing to snow hard. They discussed the couple in the VW and hoped that they had notified the ranger station that there were snowbound people. They also discussed their friends in Portland who knew they had gone to Bagby Hot Springs, hoping they would send help.

Scott had never pursued ESP in the past but did not think it strange to attempt ESP to contact the rangers at the Ripple Brook Ranger Station in an attempt to tell them where they were.

During the morning, their activities consisted primarily of sleeping, nursing the baby, and standing to urinate periodically.

The baby was soaked with urine as they had no change of diapers for her.

They lay on their backs beneath the log with the baby on top of them, beneath their outer garments. The baby's urine contributed to the moisture of both Scott and Diane. They shared the baby about equally, passing her back and forth from time to time.

They noted at this time that their feet were quite "club-like" but not at all painful. They became less and less aware of their feet as numbness progressed.

* * * * * * *

7. **A road flare from their car, if available, would have been an excellent fire starter, another good reason for carrying flares.**
8. **When you sleep, the shivering reflex stops and more heat energy is lost from the body.**

Scott took his shoes and one pair of socks off and rubbed his feet and then replaced the shoes and socks.[9] Diane did not do this.

Diane kept her hands in her pockets as much as she could in an attempt to keep them warm.

MONDAY EVENING

Diane had talked of dying more Monday afternoon than previously and they both became more convinced that they would not survive. Scott seemed to accept the fact that they would not survive. He had the feeling that he was expected to survive longer than Diane and would probably do so. He did not feel, however, that he would survive if she did not.

As the evening wore on, Diane became less oriented and more delirious. She held her hands in a "claw-like" appearance and would sleep fitfully and then wake up and claw at either the baby or Scott. Scott would speak to her but she would not respond normally. On some occasions, Scott became concerned that she might injure the baby by clawing at her but at no time did he develop any anger toward her. On one occasion, he felt that he did have to protect the baby from her.

Scott went to sleep with Emily on his stomach and when he awakened, he noted that Diane was not moving. He grabbed her wrist and realized that she had died. He tried to feel her pulse, which wasn't present, and he felt below her nose and noted that there was no air moving. He states that he accepted her death as inevitable and felt no sudden grief, remorse, or guilt. He did not feel an increase in anxiety or panic at her death but felt "What can I do?" He did not have any immediate thoughts as to the future if he and Emily should survive.

He felt that he and Emily would benefit greatly by using Diane's windbreaker, but he had so much difficulty in removing it he finally abandoned the idea.

TUESDAY MORNING

His sleep at this point was influenced primarily by Emily's sleeping and waking pattern. She would sleep for an hour or an hour and a half and then wake up crying. He would put snow in his mouth to melt it and then attempt to nurse it into Emily's mouth, either using his curled up tongue or his lips. Initially, she took water quite vigorously and returned to sleep but as the day wore on, she became less interested in the water and took very little of it.

Each time he would fill his mouth with snow, he would swallow some himself and then developed severe substernal and epigastric pain followed within minutes by vomiting. This vomiting and discomfort continued throughout the rest of his survival experience.[10]

His activities during this period consisted primarily of sleeping, melting snow to feed Emily, and standing to urinate. He was too weak to stand without support and as time went by he had greater and greater difficulty standing up. His hand motions became incoordinated and it took a tremendously long time to perform any menial task, such as putting snow in his mouth.

During this time, Tuesday morning, he was aware of commercial airliners flying overhead and also of some small planes flying by. He did not at any time think that the small planes were searching for him as they seemed to be flying directly from one point to another. It was also too overcast to be of much value.

He kept Emily on his own stomach during the day except when he would have to stand to urinate. At this time he would put her onto Diane. He felt that he and Emily contributed to each other's survival. He had definite feelings that her body heat benefited him as much as his benefited her. He felt that he had an obligation to see that she survived and that her "precious life" should be saved. He did not dwell on thoughts of death, did not seem to think about it at all; nor did he think about the future, particularly with Diane now dead and he and Emily alone. He was sure that things would work out in the future as they always had in the past.

During the time after Diane died, he did not like the fact that her eyes were open and he attempted three or four times to close them but they kept reopening.

* * * * * * *

9. If Scott's feet were frostbitten at this point, rubbing would have increased the amount of tissue damage.
10. It was later believed Scott developed a stress ulcer during this experience.

WEDNESDAY MORNING

The weather had improved. It remained overcast but had stopped snowing. As Scott looked out, he noted that he had a very attractive view of the valley which he felt was quite scenic. It did not seem strange to him that even under these circumstances he could appreciate nature. Because of the improvement of weather, he felt slightly optimistic and felt they could perhaps survive another night. His biggest problem during this Wednesday was the continual vomiting and substernal and epigastric pain. Wednesday morning passed in the same way as previous days, with intermittent sleeping.

RESCUE

At approximately two o'clock Wednesday afternoon, he heard a helicopter overhead. He knew immediately that he had been rescued and he felt great relief. He put Emily on Diane and immediately left the snow cave and ran out and waved his hat at the helicopter. The helicopter made several passes and he felt sure they had seen him. He then sat down in the snow and felt very relieved and relaxed. The helicopter was able to land fairly close; three men including a deputy sheriff and two newsmen came to him and asked his name and how he was. He stated immediately that he and his daughter were fine but that his wife had been dead since Monday night. Scott reached into the snow cave by the log and grabbed Emily by the snowsuit and handed her to one of the rescuers. The other two rescuers then assisted him to the helicopter. He took one sip of hot coffee in the helicopter but the abdominal pain was such that he wanted no more of it.

They were flown to Willamette Falls Community Hospital and arrived at 3:40. He was taken to the Emergency Room and had rapid thaw of all four extremities.[11] Initial body temperature was 94 rectally, and he was noted to have violaceous[12] coloring of his toes and the bottom half of his feet. Following rapid thaw, the coloration had not appreciably changed and lack of capillary filling was noted. The dorsal pedal pulses were palpable bilaterally.[13] Over the next two or three days, his feet developed changes consistent with frostbite and prognosis is that he may possibly lose some toe tissue.

ANALYSIS

There are several factors playing a role as to why Diane died and the other two survived. The fact that she was breast feeding meant that she was losing calories via the breast milk. Of more significance is the fact that the fluid had to be replaced by melting snow. The large amount of calories to convert snow to water played a definite role. Their clothing was equivalent and both seemingly had the same degree of wetness. Diane lost her mittens early and therefore lost more body heat via her hands.

Wind chill did not seem to play a great role in this situation but wetness did. Both were soaked through from at least the waist down. They both had wool on their upper bodies which surely influenced survival. Their feet were inadequately clothed for prolonged wetness and cold, as neither of them had wool socks.

The fact that the baby survived is somewhat miraculous but attests to the excellent care she received. She was never really exposed to the elements. She was always protected by her parents' clothing and was adequately fed for the first two days of the experience, and then at least received water which had been warmed in her father's mouth. Had the baby been old enough to thaw snow herself, her survival might not have occurred.

On 7 November 1973, an Oregon Army National Guard UH-1H "Huey" helicopter piloted by Maj William Gottlieb rescued Scott McIntire and his daughter. McIntire, now recovering from the effects of his experience and from frostbite, is very eager to have others learn from his misfortune.

* * * * * * *

11. Rapid thaw, though painful to the patient, may save the limb. When a cell is frozen, it requires little oxygen; as soon as the cell is warmed, it requires oxygen for its survival. Slow thaw allows cells near the outer skin to warm first while interior capillaries, which supply blood, are still frozen. There is greater chance of cell death with slow thaw and ambulance crews serving this hospital are being instructed to keep the patient's frostbitten limbs cool until the emergency room crew can apply rapid thaw. Also, it should be assumed that all extremities have been frostbitten and all should be treated.
12. Bluish discoloration.
13. The pulse could be felt on the top of both feet.

# LETTERS TO THE EDITOR

Dear Editor

Editorial improvement of TAC ATTACK could be gained by remembering that many fanatical and highly enthusiastic readers are of a non-flight crew orientation.

Our ranks are spread among sand crabs (Civil Service types), crunchies (Army Reservists), and the parachutist half of the two things that are known to drop out of the sky.

In the interest of successful comprehension, all we ask is that you frequently spell out and define the meaning of acronyms and abbreviations used in articles, features and lessons.

Art work and graphics are exceptionally well done. Often, however, I feel that I am looking at (not reading) a foreign language publication. The excessive use of jargon leaves me no alternative but to scan the pages and be humored by Fleagle.

In anticipation

EDWARD P. MYLOTTO
Construction Inspector
Base Civil Engineer, Bldg 10
928th TAG, AFRES
Chicago-O'Hare Int'l Airport

*Sorry to hear you're having trouble with our acronyms. Our last reader survey (June 1973 issue) indicated only 3 out of 141 readers responding found TAC ATTACK "hard to read." Eighty-seven found the magazine "easy to read" and fifty-one felt it was "about right"*

*We realize that some of our readers may have trouble with many of the lesser-known aviation abbreviations so we'll try to do better in future issues. — Ed*

• • •

Obviously you folks in TAC Headquarters have lost sight of the fact that we in the Airlift Force are still maintaining a contingent of personnel and aircraft in Southeast Asia in support of Operation Constant Guard I thru V. I am quite sure our counterparts in the Fighter Force appreciate your efforts in the November TAC ATTACK article, "Welcome Home," but I am afraid it left our good C-130 folks "the forgotten few."

We have been, and still are very much involved in airlift operations in SEA, and I feel duty bound to inform you of our continuing role in that part of the world. As a proud member of the 317 Tactical Airlift Wing, and one who participated, I feel a certain responsibility to see that our Airlift folks are in some way recognized for their efforts. What I am trying to say is, all of the TAC Constant Guard units are not home yet . . .

Sincerely,

TSGT GERALD J. HOLLAND
39 Tactical Airlift Sq
Pope AFB NC

I noted with interest and pride your accolades in the November issue for the TAC units which participated in the Constant Guard deployments. Such commitment and response was an excellent demonstration of what can be done with our tactical forces.

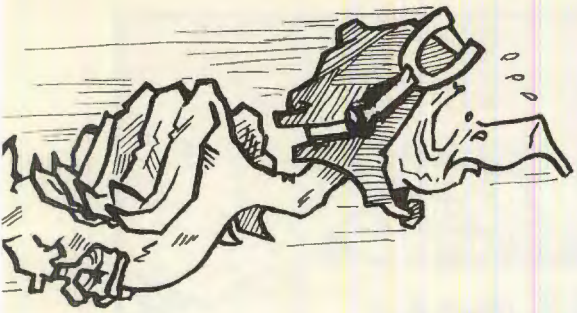
I would like to add one unit which was omitted from your list – the 31 Tactical Fighter Wing at Homestead AFB, Florida. The wing deployed the 308 Tactical Fighter Squadron in May 1972 and again in December 1972. This squadron "Returned With Honor" only two months prior to Operation Coronet Bolo, after completing nine months and over 3300 combat sorties supporting the war efforts. The 307 Tactical Fighter Squadron, also from Homestead, deployed in July 1972 and returned in October. Together the aircrews of the 308 and 307 Tactical Fighter Squadrons flew over 4300 combat sorties and 9300 hours during this momentous year, and are proud to have been a part of such an operation.

HENRY D. CANTERBURY, Lt Col, USAF
Commander, 308 TFS

*The "Welcome Home" article was aimed primarily at those units participating in Coronet Bolo. We're aware that many other units participated in various phases of Constant Guard, and some still are. Thanks for bringing your units to our attention. We'll make sure they're included in our wrapup of the SEA effort by TAC, which will appear after our involvement has ended. In the meantime, to all those still "over there," we wish you a safe, speedy return home. Editor*



U.S. GOVERNMENT PRINTING OFFICE: 1974-739. 263/5



# TAC TALLY

| | TAC | | | ANG | | | AFRes | | |
|---|---|---|---|---|---|---|---|---|---|
| | NOV | THRU NOV | | NOV | THRU NOV | | NOV | THRU NOV | |
| | | 1973 | 1972 | | 1973 | 1972 | | 1973 | 1972 |
| TOTAL ACFT. ACCIDENTS ► | 2 | 38 | 43 | 0 | 16 | 20 | 0 | 1 | 3 |
| MAJOR ACFT. ACCIDENTS ► | 2 | 26 | 31 | 0 | 11 | 15 | 0 | 1 | 2 |
| AIRCREW FATALITIES ► | 1 | 24 | 39 | 0 | 1 | 3 | 0 | 2 | 2 |
| TOTAL EJECTIONS ► | 2 | 24 | 31 | 0 | 8 | 9 | 0 | 1 | 0 |
| SUCCESSFUL EJECTIONS ► | 1 | 15 | 20 | 0 | 7 | 9 | 0 | 0 | 0 |

## TAC'S TOP "5"

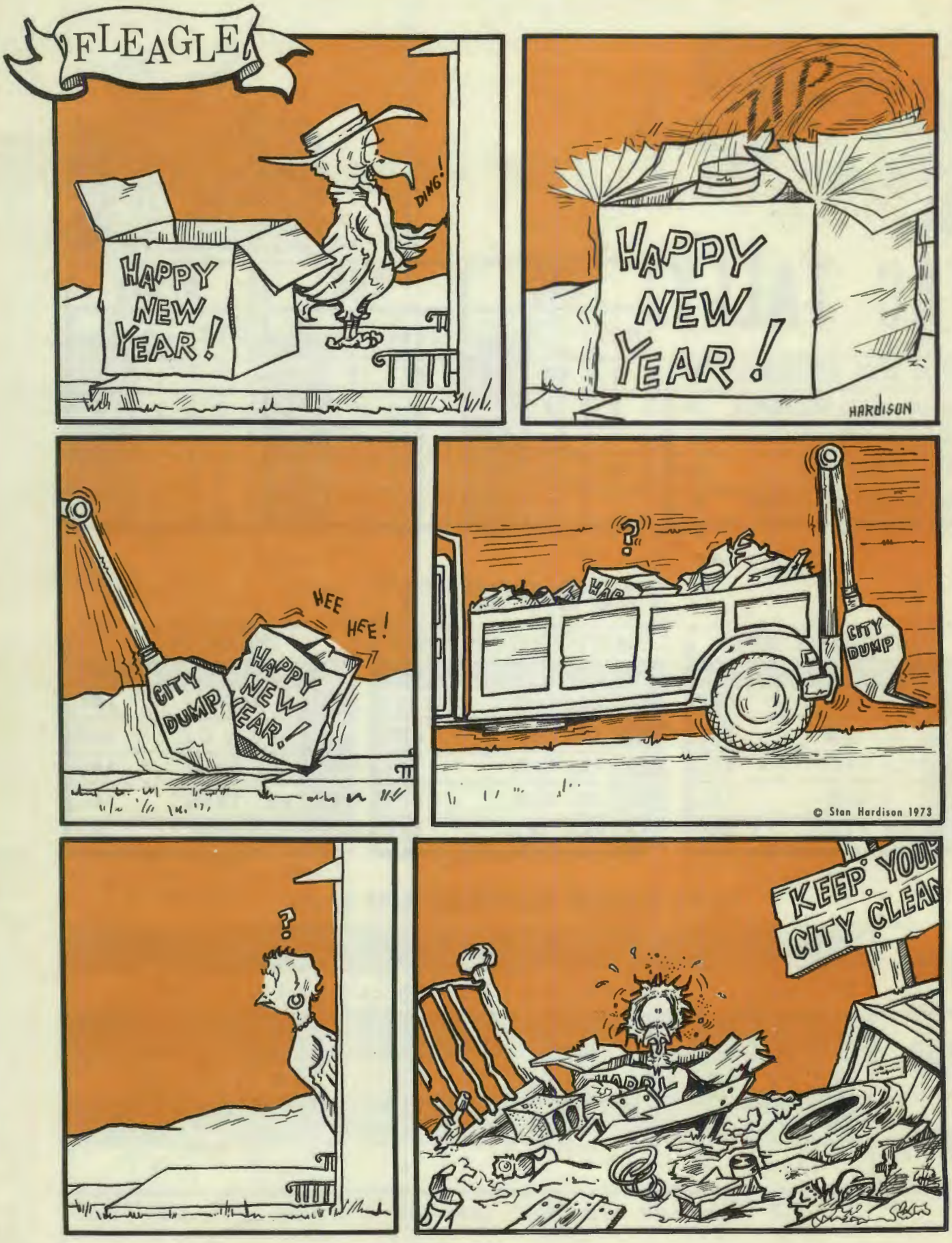
| FIGHTER/RECCE WINGS | | |
|---|---|---|
| ACCIDENT-FREE MONTHS | | |
| 68 | 33 TFW | TAC |
| 38 | 67 TRW | TAC |
| 36 | 162 TFTG | ANG |
| 35 | 4 TFW | TAC |
| 27 | 122 TFW | ANG |

| AIRLIFT/REFUELING WINGS | | |
|---|---|---|
| ACCIDENT-FREE MONTHS | | |
| 101 | 440 TAW | AFRES |
| 100 | 136 ARW | ANG |
| 64 | 316 TAW | TAC |
| 53 | 126 ARW | ANG |
| 52 | 463 TAW | TAC |

| SPECIAL UNITS | | |
|---|---|---|
| ACCIDENT-FREE MONTHS | | |
| 111 | 2 ADGP | TAC |
| 80 | DET 1, D.C. | ANG |
| 52 | 182 TASG | ANG |
| 47 | 68 TASG | TAC |
| 45 | 193 TEWG | ANG |

## MAJOR ACCIDENT COMPARISON RATE 72–73

| | | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TAC | 72 | 0 | .8 | 1.6 | 2.8 | 4.0 | 4.8 | 4.2 | 4.6 | 4.6 | 4.2 | 4.0 | |
| | 73 | 5.0 | 5.1 | 5.1 | 4.2 | 4.3 | 5.0 | 4.8 | 4.4 | 4.2 | 4.1 | 4.2 | |
| ANG | 72 | 0 | 0 | 6.3 | 8.1 | 6.3 | 5.1 | 6.2 | 6.4 | 6.2 | 5.9 | 5.9 | |
| | 73 | 8.5 | 8.6 | 6.8 | 5.0 | 4.7 | 5.1 | 4.3 | 4.2 | 4.6 | 4.2 | 3.8 | |
| AFRes | 72 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1.9 | 1.7 | 3.0 | 2.7 | |
| | 73 | 14.9 | 6.7 | 4.1 | 3.2 | 1.8 | 1.5 | 1.4 | 1.1 | 1.0 | .9 | .9 | |


FLEAGLE
HAPPY NEW YEAR!
DING!
ZIP
HAPPY NEW YEAR!
HARDISON
HEE HEE!
CITY DUMP
HAPPY NEW YEAR!
?
CITY DUMP
© Stan Hardison 1973
?
KEEP YOUR CITY CLEAN