

TAC ATTACK

JANUARY 1972



THE PROFESSIONALS...Pg 16

the professionals pg 16

HARDISON

for efficient tactical air power

TAC ATTACK

JANUARY 1972

VOL 12, NO. 1

Tactical Air Command

COMMANDER
GENERAL WILLIAM W. MOMYER

VICE COMMANDER
LT GEN JAY T. ROBBINS

Published by the Chief of Safety
COLONEL GERALD J. BEISNER



editor
Maj Tim Brady

assistant editor
Capt Jim Young

art editor
Stan Hardison

layout and production
SSgt Lindsey Cobb

managing editor
Mariella W. Andrews

CURRENT INTEREST

SOOPER SNOOPER	Pg 4
BLUE FOUR'S OFFICE	Pg 10
DID YOU HEAR THE ONE ABOUT . . .	Pg 14
THE PROFESSIONALS	Pg 16
RIDE 'EM COWBOY	Pg 20
DAYDREAM TO DISASTER	Pg 22

DEPARTMENTS

Angle of Attack	Pg 3
Aircrewman of Distinction	Pg 7
TAC Tips	Pg 8
Chock Talk	Pg 12
Unit Achievement Awards	Pg 25
SPO's Corner	Pg 26
TAC Men of the Month	Pg 29
Letters	Pg 30
TAC Tally	Pg 31

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.

Contributions of articles, photos, and items of interest from personnel in the field are encouraged, as are comments and criticism. We reserve the right to edit all manuscripts for clarity and readability. Direct communication is authorized with: The Editor, TAC ATTACK, HQ TAC (SEPP), Langley AFB, Va. 23365.

Distribution FX, Controlled by SEPP - TAC Publications Bulletin No. 22, dated 3 June 1970 Autovon 432-2937

THE ROUTINE

You'll never find these cause factors in an accident report.

OPERATOR FACTOR ... the aircrew completed the mission routinely without incident.

MAINTENANCE FACTOR ... all inspections were completed and the aircraft met the scheduled takeoff time.

SUPERVISORY FACTOR ... the briefings were prepared and presented in expert fashion and provided the crew with the most current information.

MATERIEL FACTOR ... all TCTOs were completed and the aircraft performed the mission without significant malfunction.

OTHER PERSONNEL ... the thousands of people necessary to the success of the mission performed their tasks correctly.

Why won't you find these factors in an accident report?

Because there was no accident.

NO messages were sent.

NO investigation boards were convened to determine why the mission went as planned.

NO panic stricken phone calls were made to the commander to tell him the mission was successful.

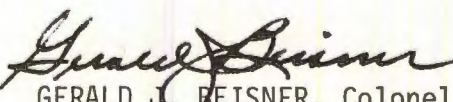
It was just one of those routine missions... y'know... the kind you never read about. The kind you probably won't even remember by this time next year. The kind in which everyone did his job correctly. The kind that happens hundreds of times a day in TAC.

There's a word for it... granted it's a tired word, and it has been used at length but it's a good word... **PROFESSIONAL.**

TAC units (Reserve included) fly over a million hours a year. A million hours!! And most of it is done accident free.

The accidents make most of the noise and generate the most paperwork but the routine deserves the most credit. The routine is professionals in action.

Let's hear it for the routine! ➔


GERALD J. BEISNER, Colonel, USAF
Chief of Safety



Angle of ATTACK ➔

SOOPER SNOOPER

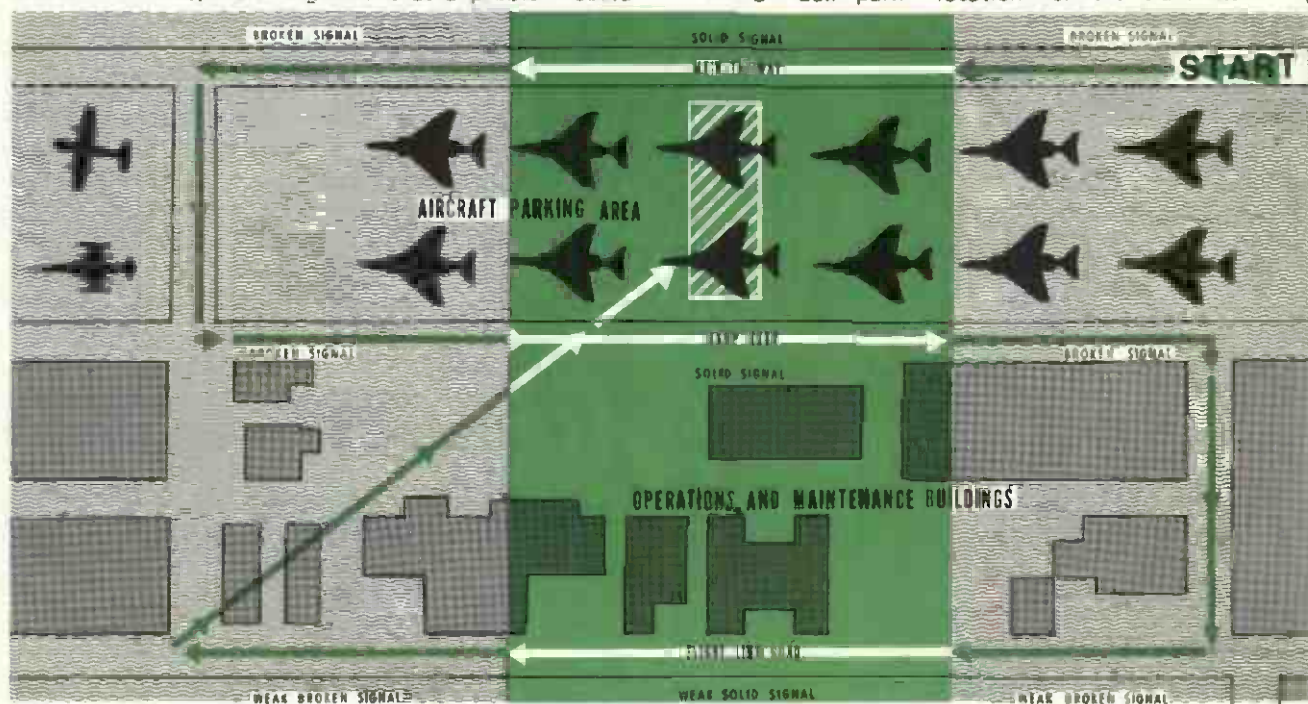
by Major Lou Kanison
Nellis AFB, Nevada

Back in May 1969 TAC ATTACK described construction of a simple unit to aid in location of inadvertently activated locator beacons. This unit was appropriately described the "Beeper Snooper." Here at Nellis we welcomed the snooper idea with open arms. Since with the hundreds of beacons on the base, the transient civil aircraft at McCarran Field from California (California state law will soon require beacons in most light planes) to say nothing of the transient military aircraft at Nellis, we recognized that a problem could

develop. Actually a few dozen phone calls from the flight facility officer convinced us that the problem was already here!

So to make a long story short, we built 14 snoopers. All nine squadron life support sections got one plus a few extra — tower, safety, base ops, etc. And although the number of emergency transmissions declined there was still the occasional transmitter that took days to find. To solve this problem we did several things:

First, recognizing the limited range of the snooper, we devised a build and fade search pattern to use with our jeep mounted UHF radio. The pattern was established to find a "ball park" location for the transmission by



JEEP BUILD AND FADE SEARCH PATTERN

monitoring the aural signal from the beeper.

JEEP BUILD AND FADE SEARCH PATTERN:

The pattern is designed to include all areas where an errant transmitter normally would be located.

The entire pattern is **always** completed. We don't guess early as this usually wastes time.

After the three runs are made (as depicted in the diagram) we know by monitoring the change in beeper signal about where the transmitter is located.

If the build and fade pattern of reception is not consistent but moves around — then the beacon is moving also (in an aircraft or on a truck). We had this happen once.

Next we bring the snoopers into the act to pinpoint the location.

After using this pattern a few times we recognized the need for a more sensitive snoopers so we asked Mr. Pete Johnson, a civilian in the Logistics Shop to construct a sooper snoopers — really an amplified snoopers with homing capabilities. He came up with the following . . .

The old Field Strength Meter (Beeper Snooper) has very limited range (approximately 20 to 40 feet) and in most cases it takes hours and at times days to locate an Emergency Beacon that has been turned on accidentally.

The new UHF Direction Finder referred to as the

Soooper Snooper has a range in excess of 2000 feet and indicates in which direction (within 2 or 3 degrees) the Emergency Radio Beacon is located.

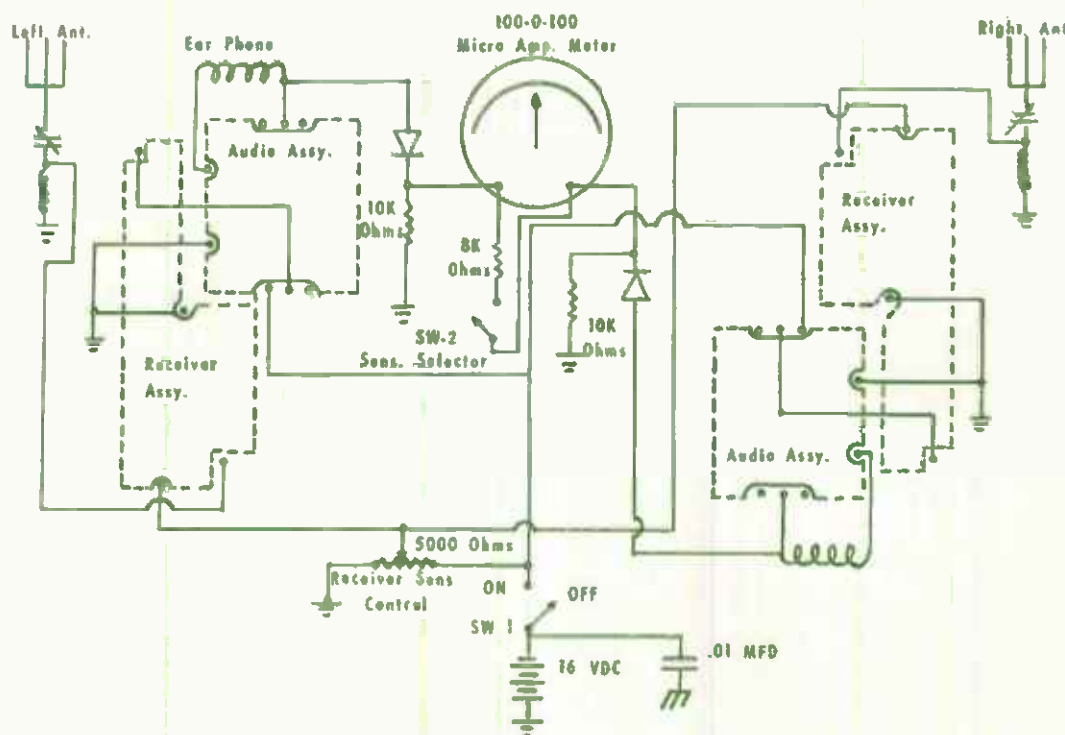
The direction finder works on the principle of two received signals opposing each other across a common lead or indicator. When both received signals are of equal strength the meter indicates zero (0) and the needle indicates the direction from which the received signal is being transmitted.

The Soooper Snooper antennas are fixed at 90 degrees apart. If the indicator is at zero (0) when a signal is being received, each antenna is at a 45 degree angle to the radiated signal. This angle induces a signal of equal strength in each antenna and if the amplifiers are balanced, the indicator reads zero (0). Any slight change in the angle of the antennas to the direction of the radiated signal causes voltage signals of unequal strength to be induced in the antennas resulting in indicator deflection to the right or left.

Two antennas were designed and built for this UHF direction finder. The long antennas are tuned to the resonant frequency (243.0 Mega Hertz) and are used for long range direction finding. The short antennas are used in strong signal areas to prevent saturation of the receivers.

Wiring Diagram UHF Direction Finder

243 meg. hertz



SOOPER SNOOPER

PARTS LIST

QTY	NOUN	PART NO. or STOCK NO.	UNIT COST
2 ea.	Module Receiver	5821-930-5256LS	\$43.44 ea.
2 ea.	Module Modulator	5821-930-5727LS	32.71 ea.
2 ea.	Earphone	5965-615-0104	4.34 ea.
2 ea.	Semiconductor Device	5961-070-7511	3.19 ea.
2 ea.	Connector UG 88 G/U	5935-823-0487	0.41 ea.
2 ea.	Connector Rec.	5935-201-3711	1.12 ea.
2 ea.	Trimmer Capacitor	750242-1	0.49 ea.
1 ea.	Battery Holder	5821-930-0990	14.73 ea.
1 ea.	Battery	6135-930-0810LS	22.70 ea.
2 ea.	SPST Switch	MS 25098-22	0.99 ea.
1 ea.	Potentiometer — 5K	Local Purchase	2.68 ea.
1 ea.	Meter Movement	6625-557-0981	16.45 ea.
2 ea.	5K Resistors — ½ Watt	Local Purchase	0.45 ea.
2 ea.	RF Coils	Hand Made	—
TOTAL			230.84

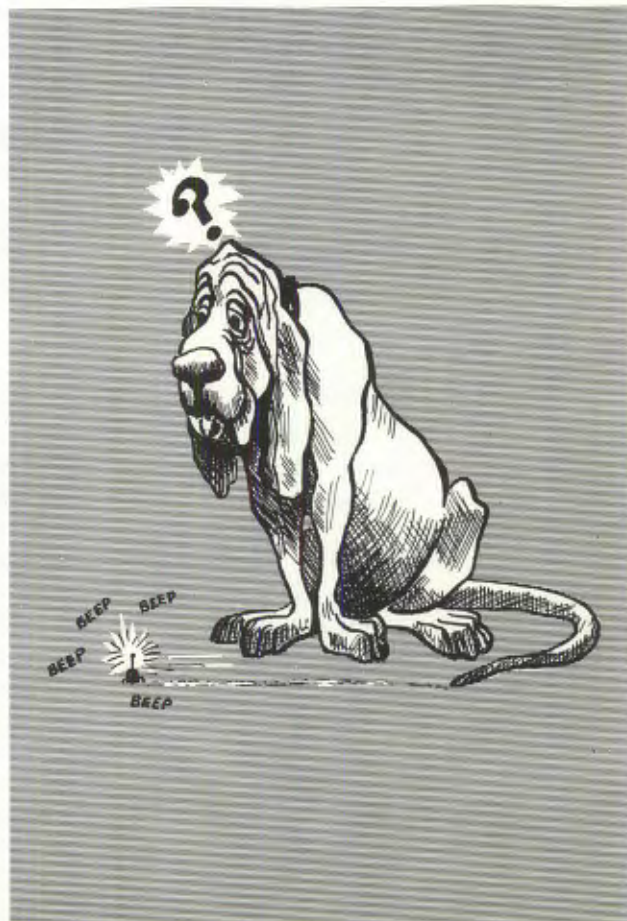


Once we have tagged the general area with the jeep build and fade search pattern, the sooper snooper, with its homing and DF features, is brought into the picture. The DF feature is unreliable at close range but the sensitivity feature works great. Just keep turning it down as you walk toward the transmitter. If the signal fades, you are walking in the wrong direction. With the sensitivity turned all the way down it will pick the correct parachute or seat kit every time.

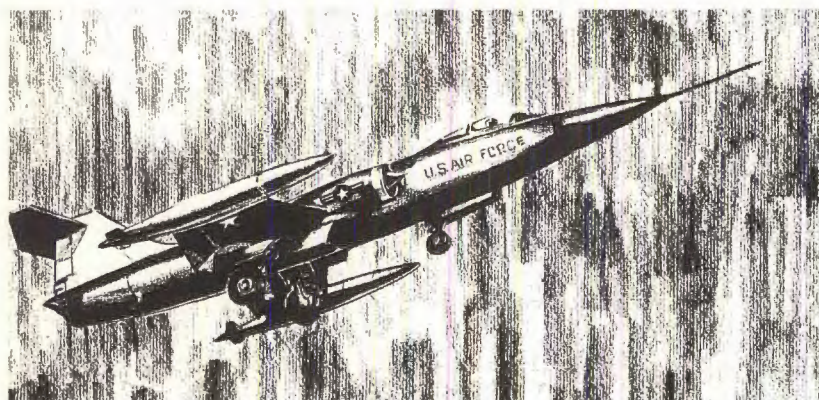
We occasionally run into an irate life support man who "guarantees" that it is not one of "his" beacons. In every case he has been wrong. When you think you have the beacon located — leave the snooper **ON** while you have the life support man turn the beacon **OFF**. That way you know for sure that you have the right beacon.

The final step in our program is, perhaps, the most important. Once we find the offending beeper we make it a point to correct the source of the problem with an EUMR or otherwise.

Needless to say our program has reduced the errant beacon problem to almost nil. The final test came recently when we located a civilian beacon in the bedroom of a sleepy, well-constructed, redhead on the 27th floor of the International Hotel. No emergency here! ➤



TACTICAL AIR COMMAND AIRCREWMAN of DISTINCTION



MAJ PENAGARICANO

Major Gabriel I. Penagaricano of the 156th Tactical Fighter Group, Muniz Air National Guard Base, San Juan, Puerto Rico, has been selected as a Tactical Air Command Aircrewman of Distinction.

Major Penagaricano departed Muniz Air National Guard Base in an F-104C to perform a functional check flight after a modified J79-7A engine had been installed in the aircraft. The flight had progressed normally until the aircraft was accelerating for the MACH 2 run. As the aircraft passed through MACH 1.8 the aircraft pitched down violently and started to tuck under. The pilot was unable to regain aircraft control for approximately 20 seconds because the nose down oscillations were beating his helmet against the canopy. When control was regained he noted that stick commands were not moving the tail slab, but slab oscillations were noted in the rear view mirror. He reduced throttle to idle power but deceleration was delayed due to the aircraft being in T-2 reset with RPM lock-up. When air speed decreased below 1.75 MACH, he extended the speed brakes and the nose down pitch oscillations reduced in magnitude as speed was reduced. At this time the APC switch and pitch damper were turned off, but had no effect on the tuck under oscillations. As air speed decreased, the violence of the

oscillations abated and at 15,000 feet, the APC switch and the pitch damper were turned back on and a check of the APC system in various configurations was conducted. The Command Post had been alerted to the aircraft malfunction and an F-104D that was airborne was diverted to examine the oscillations of the stabilizer. The chase aircraft confirmed that the slab was oscillating through approximately a two-inch cycle. The pilot lowered the gear and flaps, accomplished a flight control check, and found that satisfactory control could be maintained at landing airspeeds. On the first approach, gear, takeoff flaps, and 190 KIAS were used. However, pitch oscillations became too great necessitating a go-around. On the second approach, at 170 KIAS, gear and landing flaps extended, the oscillations were reduced considerably and aircraft control could be maintained throughout the approach and landing. Subsequent investigation revealed a frayed and shorted quick-disconnect cannon plug was the cause of the flight control difficulties.

The demonstration of outstanding airmanship during a hazardous flight control system malfunction readily qualifies Major Penagaricano as a Tactical Air Command Aircrewman of Distinction.

TAC TIPS

... interest items,

prop slop

The 0-2 was on a tactical VFR mission when the pilots heard a sharp pop and the elevator controls went slack. Both pilots confirmed that there was no elevator response. They jettisoned the door in preparation for a bailout when they discovered that they could control the pitch with the trim control wheel. An emergency was declared and a straight in approach was flown with one pilot handling the yoke and trim wheel while the other pilot handled the throttle and radios. To complicate things further the rear engine had to be feathered because it was running rough and would not respond properly to throttle movement. The landing was harder than normal because of limited control response but the only damage incurred during the landing was a blown nose tire and damaged strut.

The cause? A propeller counterweight had come loose, gouging one blade of the rear propeller and had sliced the elevator cables in the left boom. (Neat . . . huh?)

Our hats are off on this one. Sounds like cool heads and sharp thinking brought this crew and aircraft home! Good job!

don't forget to fly the airplane

What do these accidents have in common? An F-105 pilot calls unsafe gear after lift-off, then ejects shortly before impact; a single engine F-4 approach ends in disaster when the aircraft stalls on final; an F-100 with zero oil pressure lands hot and runs off the end of the runway — boom. Or these hairy stories; a young F-100 jock trying to keep his powerless wingman in sight suddenly gets a closeup look at some pine cones and brings his machine home looking like a Christmas tree or the Thud driver slowing it up so his wing man can check

his gear (it was okay) when he sees 160 on the clock.

All of these accidents and near accidents happened because the pilot was distracted — or to put it another way, somebody forgot to fly the airplane. Even in a clear-cut emergency requiring bailout, flying the aircraft can be important. There have been several unsuccessful low altitude ejections because trim pitched the nose down when the pilot reached for the handle.

Well — What can you do to avoid the distraction trap?

These three suggestions might help.

1. If you can afford the time — take it — it's your emergency.

2. Think — "Fly the Airplane" as you reach or call for the checklist.

3. Every time you take that written bold face quiz write "Fly the Airplane" under your name — the IG won't grade you down because he knows it's the most important beginning for ANY emergency corrective action.

by Maj Lou Kenison

squawk emergency

When you're in the hurts and you're attempting to squawk emergency, how do you do it? Mode 3 Code 7700, or IFF wafer switch to emergency? **Both of the above is the correct answer.** Reason: Some military radars will not detect a change in Mode Three settings but will detect an "emergency" squawk activated by the wafer switch on the basic IFF. On the other hand, FAA radars detect a change in Mode Three settings and are geared to recognize and act upon the 7700 emergency squawk. Additionally, the FAA radars will detect and act upon the 7600 radio failure squawk. So to insure that both the civil and military radar systems receive your distress signal, squawk **BOTH Mode 3 Code 7700** and basic IFF "emergency."

mishaps with morals, for the TAC aircrewman

"classic quote"

"The board felt that the pilot's action in failing to order evacuation of the aircraft and in being the first to deplane was not in keeping with accepted practice for aircraft commanders."

clipboards

An F-4 accident resulted when the navigator's clipboard latch release failed and the clipboard fell and lodged in front of the stick causing loss of pitch control.

The accident board recommended that the clipboards (MXU-163/P) be modified with velcro tape to back up the latch mechanism. As a result, TCTO 1451-3-526 was implemented to achieve the mod.

If your clipboard hasn't been modified, your life support people can fix you right up.

paper tiger

Recently an irate pilot submitted an OHR because of a lack of toilet paper in the john at a transient base operations.

The investigators found that a sufficient quantity of paper was available. All the jock had to do was tell somebody about it. 'Course maybe the nature of the emergency prevented the inquiry. One would think that a proper pre-(flight?) was not performed.

We spend a good deal of time chasing problems, both large and small, but seldom do we become involved in one of such microscopic magnitude. We are all dedicated toward conservation of resources but there are times when

the ruination of a map by a nimble hand could be excused.

Sure beats wasting time and energy processing an OHR. Wonder where the pilot found the blank OHR form?

a QU who?

As the pilot of a QU-22B dropped the gear, yanked off some power, and started to turn base, the engine quit. He set up a glide and was able to make a forced landing on the runway . . . no damage.

It appears that rapid throttle movement may have caused the engine to quit, however, the cause is listed as undetermined.

What's that you say?

What's a QU-22B?

Here's a shot of one.



WELCOME TO OF BLUE



(Editors Note) Blue Four is of course the anchor man of TAC. He is the one who plays 'crack-the-whip' in echelon turns — pulls the Friday night mobile — gets the late night takeoffs. He's the first one off the schedule when there's a maintenance cancellation, the first one on when a nuisance mission comes up. He's the young pilot, lots of ability but not much experience. He can't compare his bird with "86" or the P-51. He can't talk about Tagu,

THE OFFICE

or Mig 15s. He probably wears his sideburns longer than the "old man" likes. But he's a professional pilot and can talk and fly HIS machine with the best of them. Let's go with Blue Four as he steps into his office for a "test drive" of the RF-4.

He approaches his bird, does the walkaround, ambles up the ladder, enters the cockpit, and straps in. Let's see — a leg garter above and below each knee to secure his legs during ejection. Hook up the survival kit, plug in the G-suit, fasten the lap belt, hook up the shoulder harness, put on the helmet, and fasten the oxygen and radio leads. Sound like it could be a Chinese fire drill if he has to ground egress in a hurry? You'd better believe it. His five-step emergency procedure for ground egress will get him out in fine fashion. However, he *IS* tied to the seat and cockpit by as many as ten connections. Hope he never has to scramble — he'd eat up five minutes just strapping in.

Everything is normal taxiing out (assuming the nose gear steering works). Takeoff is normal, but then he starts to raise the gear. He must remember that a slight tug aft on his normal gear handle will activate the emergency gear lowering system. (Not too desirable when the gear is traveling toward the up position.) Of course, it's inevitable that shortly after takeoff he will have to squawk ident or change his IFF/SIF setting. This will allow him to practice his left-hand-on-the-stick technique while working the IFF on the right console with his right hand. No sweat, but a little inconvenient.

Four flies his mission and really enjoys his supersonic, all weather, day/night, recce bird. He decides to tune his radar scope. He has two choices, either tune with his left hand or his right. Simple, huh? Let's see. He's sitting in the cockpit, left hand on the throttles and right hand on the stick. If he chooses to tune the radar with his left hand, he merely releases the throttles and reaches up to the various knobs. Wait a minute! The knobs are on the right side of the scope so while he's handling the knobs he can't see the scope. On the other hand (no pun intended) he can tune with his right hand. This is more complex. He releases the throttles with his left hand and moves his left hand to the stick, lets go of the stick with his right hand

and reaches across to the left front area of the cockpit to tune his scope. Pretty neat setup, isn't it? Blue Four hacks it through, and after he finishes, he starts to recover from his unusual attitude. Unfortunately his primary ADI has failed so he switches to standby. All this entails is once again flying left-handed and reaching back on the right hand console to switch from primary to standby. Think that might induce vertigo? Blue Four *KNOWS* it does. He copes with it though... somehow. He recovers and continues on.

It's now time to shoot a penetration. Where to put the letdown book is another question. He can put it on a clipboard. Let's see... if the clipboard is on the left leg it either bumps the throttles, bumps the stick, or bumps the landing gear handle. Or — on the right leg it bumps the stick, or is covered by his right arm. So, he clutches it in his left hand or balances it on his leg, or uses some other improvisation that he has worked out for himself.

Now, Blue Four loves his airplane and thinks there are many outstanding features to it. Chances are he'd fight you if you tried to take him out of it. Granted, improvements are made through TCTOs, but it's difficult to understand why some more "human engineering" isn't done in the beginning. He'd really like to have a "heart-to-heart" talk with the "theys" (whoever THEY are!) that design cockpits for pilots. He wouldn't buy the stock answers — off the shelf items — etc. All he wants is logic. It doesn't take any advancement in the state of the art to give him a better organized office. It *DOES* take a users approach though. Even in his own office, his cockpit, Blue Four seems to be an add-on item.

Fortunately improvements are on the way. Heads up displays, improved switchology, and better designs are all part of human engineering, which is becoming an integral part of cockpit design. Increased cockpit efficiency can only result in better mission performance and enhance mission safety. ➤

WHAT HAVE YOU
DONE FOR
BLUE FOUR TODAY?

CHOCK

TALK

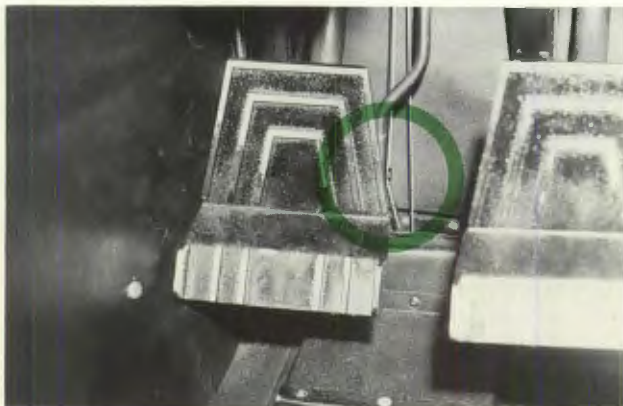
...incidents and incidentals

Cable Fable

While demonstrating stalls in an O-2, the IP used full left rudder to recover. After recovery (of sorts) the rudder would not return to neutral. He pushed on the right rudder with a lot of oomph and was able to keep the bird straight and level. Then he discovered he was unable to trim the elevator with either manual or electrical trim. He declared an emergency and put it on the ground with no further problems.

Investigators found the elevator trim cable entwined around a pin on the left rudder pedal (see photo). The snagged cable restricted rudder movement and the hefty use of right rudder put enough tension on the elevator trim cable to wipe out the elevator trim.

This unit has installed a guard over the pin on the rudder pedal to make sure it doesn't happen again (see photo).



with a maintenance slant.

Short Story

The O-2 crew chief removed the front engine cowlings and placed it two feet in front of the aircraft. During engine runup the cowlings were drawn into the propeller. (End of cowlings, end of prop, end of story!)

A Lemon?

The engine wouldn't restart after an intentional shutdown on an FCF.

Troubleshooting on the OV-10 after landing identified several minor problems which were quickly fixed. The engine successfully started four times, and the aircraft was immediately scheduled for another FCF. You guessed it — it failed to start on four attempts during the FCF.

A review of the records indicated this engine was removed from another aircraft for a similar problem. Perhaps we've come across an engine with a fear of flying . . . or maybe it's just a lemon!

RF-4 Binding Controls

During the before taxi check the RF-4 pilot could not move the stick to the right. Now we all know that given a choice most pilots prefer to turn to the left. This jock, being denied even a choice, elected to abort.

Maintenance found a 1/4 inch hex head bolt binding the rear aileron torque tube under the control stick boot.

Gremlins at work? Yes! . . . but these gremlins are wearing blue suits.

F-100-Look Out Below!

The F-100 was pulling off the target after firing one 2.75 inch rocket. The pilot felt two or three "thumps." The range officer advised him that he had just cleaned his wings! Impacting below (on the range fortunately!) were two 335 gallon external fuel tanks, one type III A pylon, one LAU 59/A rocket launcher and three 2.75 inch rockets.

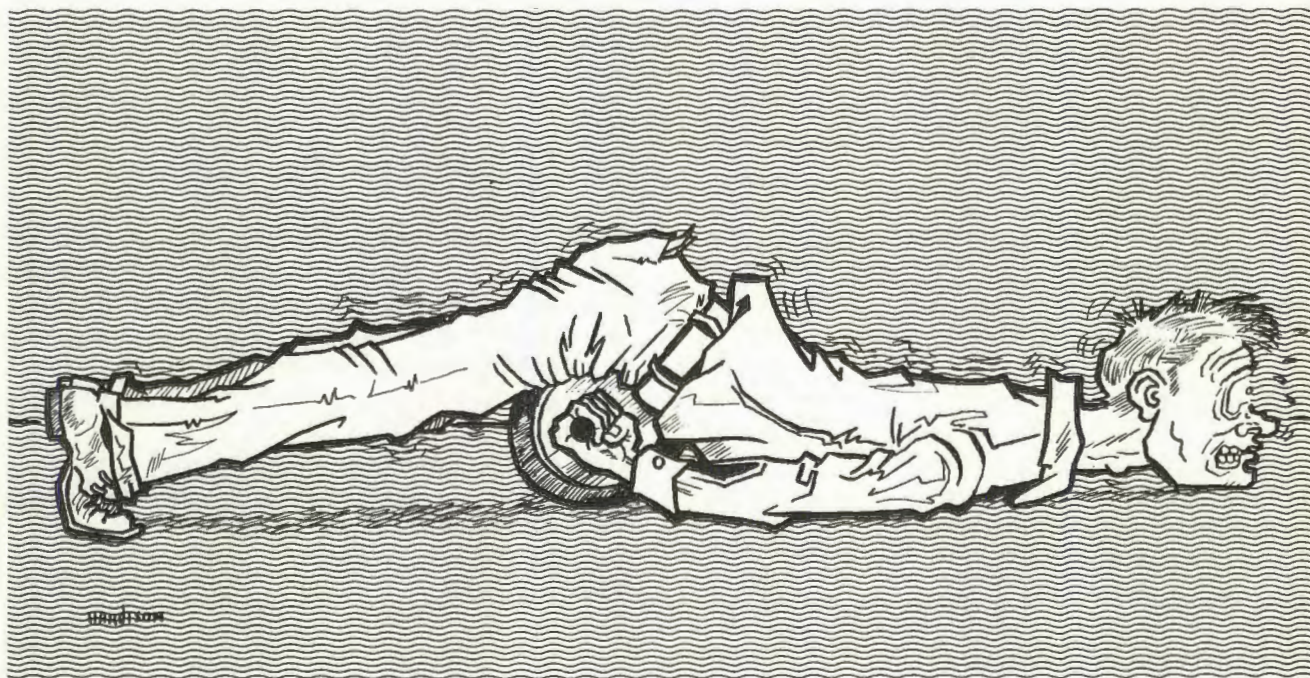
Post flight inspection revealed a small screw lying across the jettison relay, shorting the system and allowing the jettison circuit to work as advertised.

It's great to know that the circuit works OK, but what a way to find out!

Tool Inventory Complete?

The accident investigation of a T-33 crash revealed that a screwdriver had become wedged in the nose and had caused a failure of the emergency hydraulic system. At the same time the normal hydraulic system failed. The end result was a failure to get the nose gear and right main down. As is readily apparent, the T-33 doesn't land too well with only one main gear down. The troop responsible for leaving the screwdriver in the nose cannot be determined, so only HE knows who he is. Rather an expensive way to become a believer in proper tool inventory procedures, isn't it?

DID YOU HEAR THE ONE ABOUT...



The stalwart troop who arrived at his neighbor's house to find him grunting through a series of exercises with the ingenious invention, the exercise wheel?

Seems like he watched his neighbor go through the paces with the wheel then decided to try it for himself. He proned himself on the floor, reached out and grabbed each handle of the wheel, and started pulling it toward his chest.

Perhaps because of his exuberant desire to demonstrate his agility, his lightning reflexes, and his ability to master

the wheel at the first try, the next series of events unfolded.

He swiftly pulled the wheel in a quasi-push-up manner toward his chest. Unfortunately he had misjudged the precise location of his chest and the wheel continued on beyond his center of gravity and struck his groin (OOF). As the exerciser zipped past his C.G. with both hands still firmly attached, his body rotated around the wheel and his chin bounced off the floor a couple of times inflicting another grievous wound.

Result . . . a fractured jaw, a severe pain in the interim, and a shattered ego.

OR HOW ABOUT THIS ONE...

You know how it is after a hard day's work. It's great to take your shoes off and relax with your feet on the coffee table with the cool wind whistling through your toes.

Such was the situation when a couple of neighborhood dogs began fighting on the street outside the house. Being totally annoyed by the whole thing, the wife asked her spouse if he would go outside and break up the fracas.

He immediately leaped up from his comfortable position and plunged forthwith to the hot asphalt street to drive off the howling combatants.

After dancing around barefooted on the hot street and breaking up the fight by smiting the dogs several times, he went back into the house... victorious, but with sore feet.

Later that evening blisters began forming on the bottoms of his feet.

Result... an aborted dogfight and second and third degree burns on two dogs (feet kind).



OR THIS ONE ABOUT... the troop whose motorcycle was on the fritz. He asked a friend of his, who owned a car, to tow him from the base into town (a distance of eleven miles). The friend agreed and they rounded up a four-foot length of chain and attached one end of it to the motorcycle and the other end to the back bumper of the car... Off they went.

They made it out of the parking lot and to the first intersection, approximately a hundred feet down the road

from the parking lot. As the brakes were applied in the car, the motorcycle driver applied the rear brake and the back tire started to skid. Then he applied the front brake and the cycle started to skid sideways; then the whole thing flipped over and landed on top of the ejected rider.

Result... a fractured leg and an eleven mile trip terminated ten and nine-tenths miles from the destination.

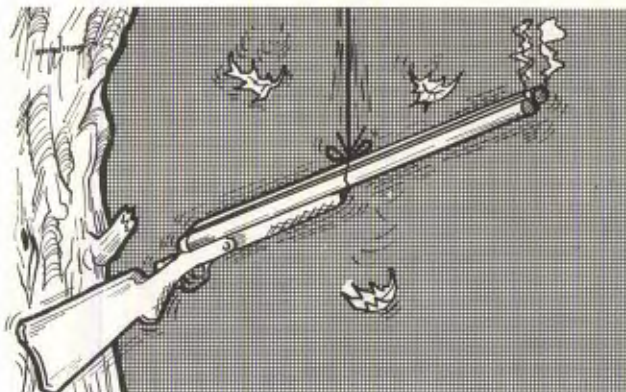
HERE'S ANOTHER ONE...

The first streaks of dawn were beginning to show as the deer hunter, armed with a 12 gauge shotgun loaded with a rifle slug, surveyed the situation.

He decided that his best chance of getting off a good shot would be to climb a tree; in that way he would be able to get a better view of the whole area. He didn't want to climb the tree while attempting to wrestle the shotgun so he tied a piece of twine to the loaded gun and suspended it from a tree branch. His intention was to climb the tree, get into position, then pull the gun to him with the twine.

As he started his climb the free swinging gun fired and the slug struck his leg just above the heel.

He crawled for awhile and then lit some fires but no help came until his wife grew worried some ten hours later and sent someone to look for him. Fortunately he lived.



If you see something funny in each of these accidents don't feel too badly... you're normal.

The human plight is always a source for humor, as is incompetence, stupidity, and the sudden departure of common sense.

Common sense, or the lack of it, is the thread that binds all of these accidents together. In each situation a smattering of the elusive common sense could have prevented the accident.

On second thought, it's not all that funny... ➤

THE PROFESSION

The pilot had completed the high altitude portion of a functional check flight in an F-105 and had descended to FL 230 in order to accomplish the rudder stop and the trailing edge flaps blow-up checks. When the flaps did not blow-up (retract) by the required airspeed, he reduced power and initiated a level off.

Suddenly there was a loud crack and the aircraft snapped abruptly and violently to the left. The pilot applied full right aileron, right rudder, and aft stick in an effort to regain control. However, when the aircraft had accelerated through 275 knots during the check, the rudder stop had automatically engaged, limiting rudder travel to only 8 degrees, and it was not enough to counteract the roll.

The aircraft entered a second snap to the left, rolling at about the same rate as the first. As the aircraft came upright through the second roll, the pilot applied considerable forward stick and extended the speed brakes. The Thud continued to roll, but at a slower rate, having lost a few knots of airspeed.



Realizing that he must further reduce airspeed in order to obtain full rudder travel, the pilot used the limited rudder available plus aileron and pitch control to "play" the rate of roll to his advantage.

Two rolls later enough airspeed was lost so that the rudder stops disengaged and full rudder travel was obtained. The use of the extra rudder enabled the pilot to stop the uncontrolled roll rate and bring the aircraft under control.

He completed a controllability check and determined that he could land the airplane. A well planned and executed straight-in approach and landing was accomplished despite a fifteen knot crosswind.

Investigation after landing revealed that the left outboard trailing edge flap support and screwjack had failed causing the aircraft to experience an immediate full split flap condition.

The pilot's calm appraisal of an extremely hazardous situation combined with his exceptional pilot ability demonstrate clearly a professional in action.



Less than two months after graduation from Undergraduate Pilot Training the pilot was accomplishing his first transition solo flight as part of his Phase I training in an F-104.

While at the top of a Lazy 8 he noticed that the nose of the aircraft continued to rise despite forward stick pressure. He immediately reduced airspeed and succeeded in lowering the nose but found that only one and one-half inches of forward stick travel were available and that both normal and auxiliary trim actuating systems were inoperative.

With the assistance of an IP in a chase aircraft, the pilot evaluated the situation and determined that the airplane was controllable in the landing configuration. Despite the restricted stick movement and only seven hours of F-104 time, he executed a flawless approach and landing. Subsequent investigation found that a stabilizer push rod had become disconnected in flight resulting in restricted stick movement.

ONALS

The quality of judgment displayed by the pilot demonstrates yet another professional in action.



The A-37 was returning to home station after a student cross country flight. When the landing gear was lowered during an ADF approach, the two mains came down and locked but the nose gear would not extend.

The IP took control of the aircraft, declared an emergency, and continued his approach while requesting the RSU officer to check the position of the gear on a flyby. The RSU officer confirmed that the nose gear was only partially extended.

The IP then left the traffic pattern and tried all emergency gear lowering procedures, including applying both positive and negative G to the airplane . . . to no avail.

Fuel became a factor and the surface winds were approaching the maximum recommended for a crosswind landing.

The IP decided to make one last attempt to get the nose gear down by bouncing the aircraft on a touch-and-go landing. Meanwhile, he called for foam on a shorter alternate runway which eliminated the need to close the primary runway and afforded a better wind advantage for landing.

The touch-and-go failed to bring the nose gear to the safe position. The IP elected to land with the speed brake extended, using it as support for the nose of the airplane. A strip of foam just slightly wider than the speed brake was applied to the shorter runway.

The IP flew a precision pattern, touched down and carefully lowered the nose into the foam. In spite of the gusty crosswind, the IP maintained perfect directional control and brought the aircraft to a stop with the nose still in the foam strip. The aircraft sustained only slight damage to the speed brake.

Outstanding airmanship, perfect ground crew reaction, coordination . . . all attributes of the professional.

During a GCI (ground controlled intercept) mission in a T-33 the pilots had just completed their first offensive attack and were in the process of making a spacing turn. The pilot in the back seat was flying the aircraft. During the turn he advanced the throttle from 82 percent to military power. The aircraft started to vibrate and the engine produced a loud rumbling noise.

The throttle was retarded to idle, then advanced again. Throttle advancement past 70 percent caused aircraft vibration and abnormal engine noise. Selecting the gangstart switch eliminated the indications only for several seconds and subsequent throttle advancement beyond 70 percent produced an overheat light accompanied by more severe vibration.

The pilots declared an emergency and requested radar vectors for a precautionary landing. At this time the slave gyro began to give erroneous indications so approach control was notified that a no-gyro approach would be required.

Maintaining optimum glide speed the pilots acquired the field visually at four miles. Final landing configuration was delayed because of the limited power available. Descent was initiated at approximately three miles and the gear was lowered and half flaps selected.

At this point the front seat pilot took control of the aircraft because of his better vantage point. He established a 20 knot high airspeed and a slightly steeper than normal glide path. As the aircraft approached the field boundary he selected full flaps. At this time the engine vibration increased drastically and the engine seized. The front seat pilot maintained precise aircraft control, shut down the engine and touched down for a perfect landing. Investigation after landing discovered materiel failure of the turbine resulting in oil loss and subsequent engine seizure.

Both pilots working together assessed the situation and took the correct action resulting in another demonstration of true professionalism.



THE PROFESSIONALS



While towing an aircraft from the wash rack to the flight line parking area, the crew chief noticed an object lying in the path of the aircraft. Realizing the potential hazard, he stopped the towing operation to retrieve the object.

Upon examination he recognized the object to be a retaining pin from the afterburner flame holder of an F-4.

He immediately notified the maintenance expeditor of a possible unsatisfactory condition on one of the aircraft. Flying was temporarily suspended while an inspection was made on all assigned aircraft for the missing retaining pin.

Assisting in the inspection the crew chief found the aircraft which was missing this vital pin. Discovery and correction of this discrepancy prevented the possibility of an afterburner flame holder coming apart during the next flight with possibly disastrous results.

Again . . . the actions of a professional.



The C-130 crew filed an IFR clearance from a South American base to a destination in Panama. Aircraft response was normal during the takeoff roll and at lift off slightly more than normal pressure on the control column was necessary to achieve elevator response, but not to the degree to cause concern. After lift off and during climb, progressively greater physical force was required for elevator movement until finally no nose-up or nose-down elevator movement was possible. A level flight attitude was established using trim at 3500 feet MSL and the crew declared an emergency. The aircraft commander sent the flight engineer back to the cargo compartment to make a visual inspection of the boost package components. There were no leaks or apparent malfunctions. The crew then performed a series of controllability checks to determine the best configuration for landing. During the checks the control column not only required excessive pressure to effect elevator movement but pushed back against any force applied. The pilot set up a long final approach and used power and elevator trim to control the rate of descent. Touchdown was normal. Later investigation by a team dispatched from home base discovered a malfunctioning elevator cable tension regulator.

Calm actions, thorough appraisal of the situation, outstanding crew performance . . . call them professionals.



During the turn to range downwind following the third strafe pass the pilots in the F-4 heard and felt a series of

explosions, followed immediately by dense smoke in the cockpit, numerous lights flashing on the telelight panel, and erroneous command inputs to the flight control system. The aircraft commander ordered the rear seat pilot to eject because of intense heat and heavy smoke in the rear cockpit. The ejection was successful.

The pilot then made one short radio transmission declaring an emergency and turned off both generators. A wingman joined up and observed smoke and occasional flames in the rear cockpit. The airspeed indicator in the stricken F-4 went to zero and the pilot used hand signals to indicate to his wingman his desire to land on the wing.

During RTB the aircraft continued to receive strange inputs to the flight control system. Although the situation was discomforting, the airplane was controllable. He lowered the tail hook, indicating that an approach-end engagement was necessary, then lowered the gear and flaps using the emergency systems. A successful approach-end arrestment was made using the BAK-12. Subsequent investigation revealed a malfunction of the connectors in the AC power control box, resulting in a fire in the rear cockpit.

The calm actions of the pilot plus the superb coordination of the wingman and ground personnel demonstrate once again . . . professionals in action.

The mission in the A-7 included air refueling followed by ACM (Aerial Combat Maneuvers). The refueling went as planned and the ACM portion of the mission was begun. After the first ACM engagement, as the aircraft was climbing through FL 260 the master caution and low oil lights illuminated, and the pilot noted the oil pressure at zero. The pilot immediately retarded the throttle to 75 percent RPM and initiated a straight in descent and approach while declaring an emergency. Three miles out on final he lowered gear and flaps and slowly advanced the throttle to 80 percent RPM where it remained until touchdown. After touchdown, when the throttle was retarded to idle, the engine flamed out. Total time from warning light to engine seizure was five minutes. By promptly identifying the malfunction and taking positive and immediate action the pilot saved a valuable airplane.

Split second timing, positive and decisive action . . . traits of the professionals.

These are vivid illustrations of professionals in action. There are others . . . lots of them:

The ops clerk typing out the flight orders.

The supply man researching a needed part.

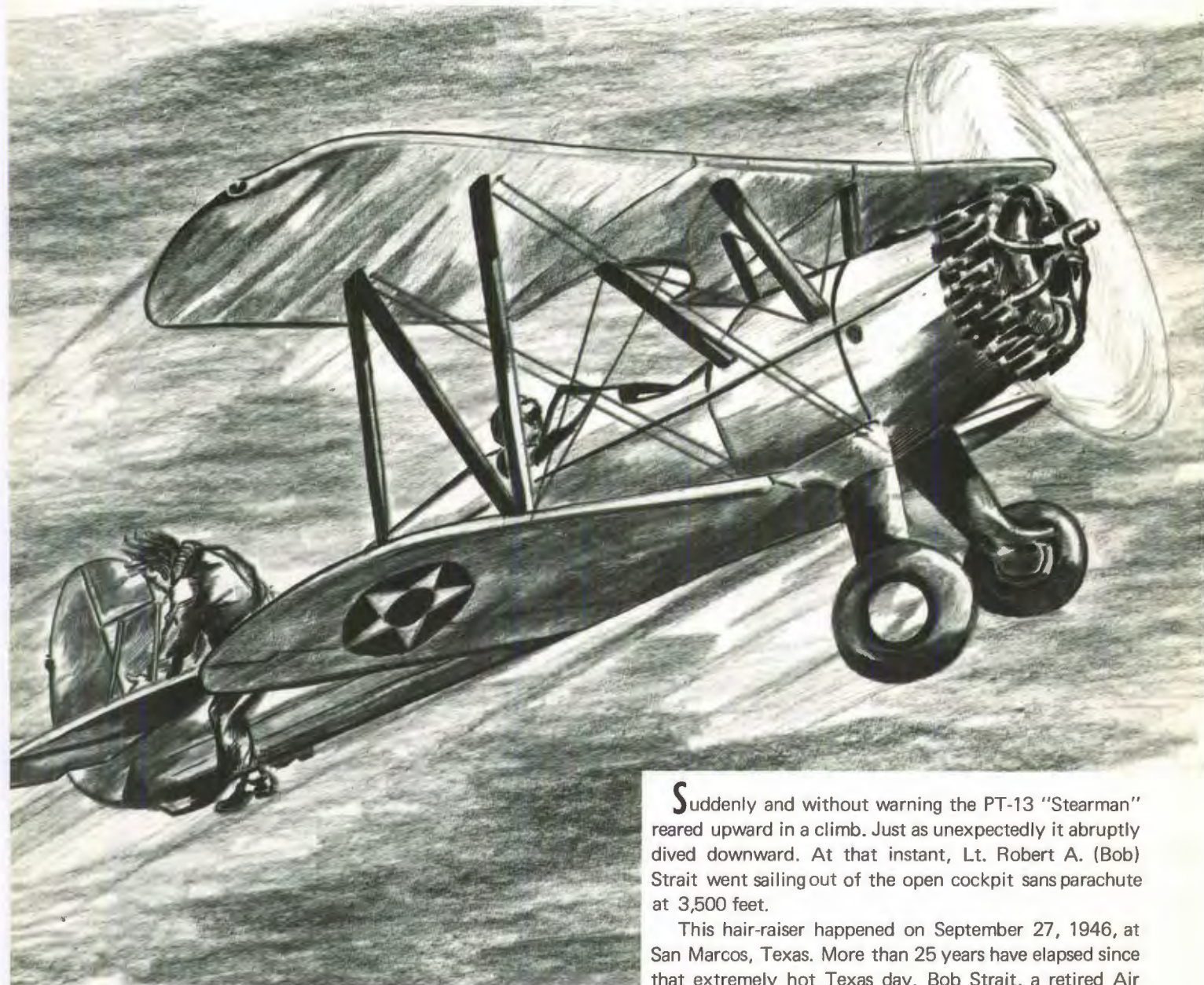
The radio man bench checking an R/T unit.

The engine man replacing a turbine.

The . . . What's your job?



RIDE'EM



Suddenly and without warning the PT-13 "Stearman" reared upward in a climb. Just as unexpectedly it abruptly dived downward. At that instant, Lt. Robert A. (Bob) Strait went sailing out of the open cockpit sans parachute at 3,500 feet.

This hair-raiser happened on September 27, 1946, at San Marcos, Texas. More than 25 years have elapsed since that extremely hot Texas day. Bob Strait, a retired Air Force major, still tells this story about himself as a joke. For the complete yarn turn the clock back to an afternoon in the summer of 1946 when you could fry an egg on a hardstand.

After being grounded several days by heavy rains at San Marcos Army Air Base, a break in the weather soon had scores of student pilots milling about the local area practicing IFR. All aircraft that were equipped for instrument flight had been latched on to except for a

by George A. Reynolds

COWBOY!

beat-up PT-13 that had no radio. This holdover from pre-war days did, however, have the necessary clocks for basic instrument flight.

Instructor pilot Lt. Joe Blow felt that he too could do with some hood time so he persuaded Strait, who was off duty, to go along for the ride. Bob was to check Blow's simulated instrument procedures and keep him clear of other aircraft while he was under the hood. After a quick preflight, the two young pilots roared off in the old PT bucket-of-bolts.

Blow practiced his airwork for over an hour, then removed the hood to relax. He waggled the stick (the only intercom) for Strait to take over for a while. Since nearby San Antonio had experienced some flooding from the recent heavy rains, Bob decided to fly over the area for a look while Blow goofed-off from his instrument work.

As they cruised around sight-seeing, the hot summer sun continued to beat down on the open cockpits. The heat was intense. Their seat belts and chute harnesses pressed uncomfortably.

To get relief, Strait unfastened his seat belt and squirmed out of his chute. Turning to the rear, he pointed to what he had done. Blow nodded and followed suit except to keep his seat belt fastened. The airmen continued to look over the flooding for a bit longer then turned back toward home base.

Joe waggled the stick once again and Bob released the controls to him. He looked back to see if the hood had been replaced but the grinning Blow was flying visually. Strait shrugged and looked down to his left taking in the view.

More than an hour had elapsed since Strait unbuckled his seat belt. Blow obviously did not remember this because he rolled into a sharp bank in the direction in which Bob was looking, then back in the opposite direction. When the plane resumed level flight Bob started to look back to see what Blow had in mind. But as he turned, Joe playfully hauled the stick back in his lap, then abruptly jammed it forward. At that moment, Strait simulated a cork popping out of a bottle of champagne.

He frantically grabbed for the top wing as he sailed out of the cockpit but missed it by inches. He flew over

Blow's head who looked up wild-eyed and unbelieving.

As the PT dived down and ahead of him, Strait closed his eyes expecting all of his past to flash back across his mind. But he could only think: What will my wife and baby do after I am gone? Then he hit! Not the ground but the tail section of the aircraft. He bashed into the rudder [vertical stabilizer] with his back and ripped open a four-inch hole in the fabric.

Never one to second-guess fate, Bob grabbed the rudder guy wires. Momentarily, he was able to twist around so that he sat on the horizontal stabilizer and managed to get a death-grip on the rudder with both hands, his legs dangling in the slip-stream on either side of the fuselage . . . cowboy style. It had cooled down some, but the heat wasn't off by any means.

The sudden added weight on the PT's tail made it climb sharply. Before Blow could counteract with the controls, the plane stalled out, then started with a slow spin. When Joe recovered from the spin, the altimeter showed their height to be less than 500 feet. Fear momentarily gripped Blow. He yelled, "Get the hell off . . . you'll kill us both!" Strait shook his head: "Negative!" and held on even tighter, shouting back, "Land this cotton-picking thing in that field down there!" Bob knew he had no other chance and a slim one at that.

Blow looked in the direction in which Strait was nodding his head. With minimum altitude remaining, Joe made a flat turn for the pasture and an attempted landing. By this time he had regained his composure but to keep the Stearman from stalling out again, he kept applying short bursts of power to compensate for the plane's tail-heavy attitude.

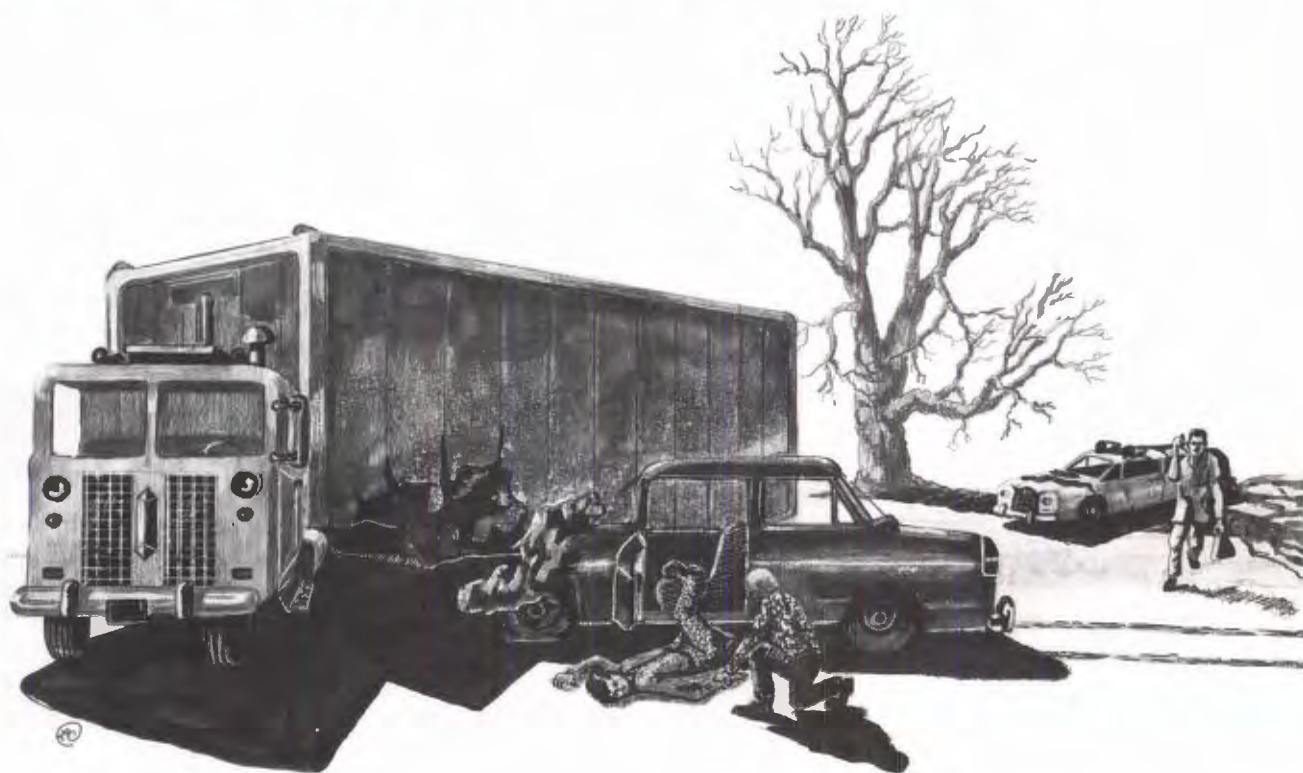
As the seesawing continued, fear stabbed at Strait. He thought: "Why the rascal is trying to shake me loose this close to the ground so he can make a good landing and save his neck." Bob stubbornly determined to stick with the plane regardless and clutched the rudder even tighter.

Moments later, Blow completed a successful tail-heavy landing and the '13 rolled roughly to a stop with both pilots safe — one still in the cockpit, the other riding the fuselage. Though still hot, the firm Texas soil seemed cool compared to the pilots' feverish brows.



Our appreciation goes to the Air Force Historian and the author for permission to reprint this unlikely but true slice of history. We don't get too many reports, these days, of pilots falling out of airplanes . . . now we know why. Ed.

daydream to **DISASTER**



By MSgt James H. Hearon, Jr.
Hq SOF, Eglin AFB, Florida

A feeling of apprehension, blended with excitement ran through my entire body as I walked down the stairway from Alaska Airlines Gold Nugget Jet Flight 89. Momentarily, I forgot about my family who were with me, and quick realization of this fact prompted me to begin a round-up at the McChord terminal for all seven of my brood. My wife had managed to get four of them and I conquered the other three. (How can they get so far in split seconds?)

My car, which was shipped from Anchorage two weeks prior, was waiting for us and took on the appearance of an old friend. When our luggage was finally loaded on the

roof rack (2 trunks, 10 suitcases and various personal bags) we began a wonderful 6190 mile trip to Eglin AFB, Florida, via Yellowstone Park, Mt. Rushmore, New York's Adirondacks, Cape Cod and finally to our destination.

These four weeks of travel were adventurous enough to fill a book with exciting events, but this is not what my story concerns. It concerns some of the accidents, and near accidents we saw on the highways and the 50,000 plus Americans who will start but never complete a journey this year via the media of Private Motor Vehicle.

In my 30 years of driving and my experience in the field of accident prevention and investigation, I have drawn several conclusions about one of the leading causes of fatalities on our highways. Today's driver must give his complete attention to the surroundings ahead, behind and on either side of him. **CONCENTRATION** is the key to



living. Inattention is the path to a drastic and horrifying death.

How many times have you driven along a road and suddenly wondered what has happened to the last few miles that you had travelled? You may have been thinking about some financial problem — some family argument — the way business has been going lately — a certain girl who you are crazy about, etc. The list is endless and the human mind is always at work.

Travelling along a different road or highway is far less hazardous than the daily route you travel every day to and from work. When travelling along a new road we are automatically more alert because we observe the new surroundings with interest, admiring the beauty and other qualities.

Your daily drive to work is a time when you are most

apt to be PREOCCUPIED and RELAXED; thinking of the problems to be encountered and the best means of attack. PREOCCUPIED to the point that you fail to notice the reading on your speedometer, which now reads 45 MPH and you are in a 35 MPH zone. PREOCCUPIED while a slow moving tractor-trailer is pulling into the approaching intersection. Suddenly PREOCCUPATION is gone — there is a large object directly in your path — the brakes are slammed on but the car continues to charge ahead faster than you ever thought possible — then it's all over. The usual crowd suddenly appears from nowhere. The flashing light of a police car and its wailing siren arrives, but you are impervious to it all. You were not driving — you were daydreaming. A daydream that turned into eternal sleep. PREOCCUPATION has claimed another life.

RELAXATION is equally as dangerous, especially

Daydream to Disaster ...

when mixed with PREOCCUPATION. Driving home from work after a hard day puts us in a sort of gratifying mood. Thankful that we are away from our job and heading home where we will be welcomed with open arms and an awaiting martini. The music on the car radio is enchanting and so are the thoughts of the evening ahead. We are so RELAXED that we didn't notice how close we came to a boy riding a bicycle as we zipped by him. We didn't notice a car about to pull out of a parking place, who had to slam on his brakes in order to avoid a collision with us. We are at peace with the world but driving like we are out to clobber everyone in sight. The strange thing is that we are totally unaware of this condition. If told these facts we would deny them vehemently and probably say it was a "pack of lies."

These two driving conditions occur for a combined total of 10 times each week and close to 500 times each year. I wonder how many gamblers in Las Vegas would give 1000 to 1 odds that this type of driver will be involved in at least one serious accident before the year is up. And they would, no doubt, win.

No — this story is not about someone else, it's about all of us. If a driver today is not fully concentrating on his driving, he is flirting with national statistics. The solution to staying alive on the highways is not beyond our reach. We can all live longer with our loved ones and with our conscience by following some simple rules of the road. All the safety equipment in the world will not stop accidents. Only we drivers can do that.

When leaving for work in the morning don't think about the shop, the office, or the job. Plenty of time for that later. Right now enjoy the sights around you, be aware of the other cars, your speed, and make sure your seat belt is buckled. If the weather is cold make sure your window vent is open — fresh air in the morning will do wonders for keeping a driver on his toes. Also leave a little earlier than usual. This eliminates some of the heavy traffic. This all seems simple, but how many of us use procedures of this type?

Going home from work is even more dangerous. Anxiety is now more predominant than it was nine hours ago. The eagerness of the approaching evening is already running through our minds. A serious accident is now in the making. Unless something snaps us out of it, our reflex action will be reduced to a point of uselessness.

This habit of daydreaming while driving must be

stopped. It all boils down to one thing — LACK OF CONCENTRATION. Would this same driver be found on a battlefield facing an aggressive enemy while daydreaming? Would he daydream while flying an F-4 into the midst of a pack of MIG s? Would he daydream while disarming a live bomb? The answer to all of these questions would certainly be "No!," but the point is, there is no difference — none at all.

The highway is a place of mass slaughter and the private motor vehicle is the bomb waiting to explode. Saddest of all is the fact that a daydreamer frequently takes innocent men, women, and children along with him — either to the hospital or the mortuary.

Battlefield USA is claiming more victims than all of our wars. Our losses are growing in concern throughout the country, but solutions from various organizations are not lowering our fatality rate.

The next time you get behind the wheel, try the new system of "driver concentration" — it works. Daydreaming while driving is a fatal sickness. ➞



Tactical Air Command

Unit Achievement Award

Our congratulations
to the following units for
completing 12 months
of accident free flying :

67 Tactical Reconnaissance Wing, Bergstrom Air Force Base, Texas
14 September 1970 through 13 September 1971

131 Tactical Fighter Wing, Lambert MAP, Missouri
20 September 1970 through 19 September 1971

149 Tactical Fighter Group, Kelly Air Force Base, Texas
20 September 1970 through 19 September 1971

308 Tactical Fighter Squadron, Homestead Air Force Base, Florida
17 September 1970 through 16 September 1971

416 Tactical Fighter Squadron, England Air Force Base, Louisiana
15 September 1970 through 14 September 1971

4455 Combat Crew Training Squadron, Davis-Monthan Air Force Base,
Arizona
16 September 1970 through 15 September 1971

913 Tactical Airlift Group, Willow Grove NAS, Pennsylvania
1 October 1970 through 30 September 1971

335 Tactical Fighter Squadron, Seymour Johnson Air Force Base,
North Carolina
2 October 1970 through 1 October 1971

★ 139 Air Refueling Group, Rosecrans MAP, Missouri
★ 3 October 1970 through 2 October 1971

★ 117 Tactical Reconnaissance Group, Birmingham MAP, Alabama
★ 20 October 1970 through 19 October 1971

69 Tactical Fighter Training Squadron, Luke Air Force Base, Arizona
23 October 1970 through 22 October 1971



SPO'S CORNER



A-7 The Power Plant

Most of us thought that we were through with compressor stalls when we started putting turbofans in the A-7D. Although the TF-41 engine is reliable and will take abuse from FOD, and the pilot, it is not without chugs, burps, pops, and bangs. If you are one of the fortunate pilots who flew the SuperSabre then you know what it was like to have your feet raised from the rudder pedals after a good compressor stall. The A-7D

doesn't raise your feet off the rudders but it does get your attention in a hurry. The uncomfortable thought of stop-cocking the engine to clear a compressor stall then making an air re-light certainly goes against the grain of previous training. But . . . it works, and to date no one has had to step overboard because of compressor stalls.

At the present time we have three areas of concern with the TF-41 engine. They are: compressor blade failure, clapper support, and plain ole IGV and fuel

control adjustments. The high pressure compressor blade failure presents the most serious problem for obvious reasons. However, this engine has the capacity to throw blades, chew them up, and keep on producing adequate thrust at reduced power settings so that you can still land the aircraft. As important as anything when losing a blade is to reduce the power to minimize vibration, limiting the chances of total engine failure.

The compressor blade has a thin trailing edge which sets up a harmonic mode and causes fatigue and eventual failure. Presently the plan is to shave the trailing edge of the blade to move it out of the harmonic mode that is causing failure. With any luck, and some footwork by logistics, we should have all engines up to speed with the new change in about 15 months. Meanwhile, if blade failures do occur, experience indicates that sufficient power will be available to land . . . posthaste.

Next serious problem is the clapper . . . which may be a new term to some of you. The clapper is a stiffener support between blades of the first stage low pressure rotor (pictured on page 1-14 of the Dash One). The clapper is failing due to fatigue, which eventually causes a small portion of it to break off. To date these portions have all gone out the air flow by-pass duct and have caused no further damage or compressor stalls. However, in the event that an adverse air flow exists upon failure, the potential for compressor stall and foreign object damage remains. The present plan calls for rework of the clapper area; action to be completed by the end of 1972.

Lastly, and not so disconcerting, is IGV and fuel control adjustment. Just like any vehicle that needs a tune-up and some TLC, so do the adjustments in the TF-41. If the carburetor on your car is not in tune the engine can backfire. If the IGV and fuel control are not in factory tolerance and the pilot over controls the throttle movements, then compressor stalls may occur. Compressor stalls of this type normally can be cleared without difficulty using TO procedures. Presently we have two TCTOs to adjust IGV and fuel control, -551 and -550, respectively.

There you have it, three areas of concern with the A-7D power plant. Action is already being taken to correct and improve the engine so that the pilot doesn't have to be distracted by chugs, pops, burps, and bangs. Meanwhile you, as the pilot, can't really be sure of what you're experiencing when you get a compressor stall. Hence the recommendation to land the aircraft as soon as possible applies. Confusion say, "It is better to do Monday morning quarter-backing with two feet on the ground." Happy motoring.

MAJ BOB LAWLER

TAC ATTACK

Safety FOD

As the A-37 pulled into the "Quick Check" area, the left engine rolled back to 35 percent while spitting sparks out the tailpipe. The cause was the bird's canopy jettison handle safety pin; it had found its way from a position down along the side of the ejection seat into the engine. The pilot had no idea how the pin got out of the cockpit, but the little "Super Tweet" FOD required 80 manhours and 22,000 of Uncle Sam's dollars to repair.

Now, as a lowly Safety SPO, I couldn't estimate the number of lives or dollars that have been saved by the use of safety pins over the years, but I do know that TAC alone has damaged 10 engines so far this year with this "Safety FOD." Inlet screen safety pins, armament safety pins, gear safety pins; all contributed to our sending eight engines back to the depot for overhaul while only two could be repaired in the local shops.

The moral of the story is simple: If we're to get that next pay raise, we can't blow the budget on items like the \$345,170 it cost to repair these 10 engines. Keep alert and fully aware of the turbojet's vacuum cleaner thirst for air, pure or contaminated. Only our individual recognition of the ever present FOD potential will keep us from tripping over our safety crutches and breaking the other leg.

MAJ "LEFTY" FRIZZELL

Let People Know

What You're Doing

The benefits of the aircraft checklist are well known and are demonstrated constantly. People in the know say using the checklist guarantees crew performance to near the 100 percent level. That's pretty powerful sales talk — but records do support the fact that TAC crews are using checklists and are performing at an outstanding level.

Unfortunately, the records also broadcast the fact that aircrews get into trouble while supposedly using this magic script. Let's look at a few examples.

Take the C-130 crew that made a short field takeoff then turned sharply to view the runway. The loadmaster had unfastened his safety belt to perform his after-takeoff check and was thrown to the floor during the turning maneuver.

Another case involved a C-130 crew during practice air drops. At release time the drop load hung up in the aircraft so the drop malfunction checklist was initiated. The pilot began a climb a couple of minutes later and the load slipped out of the aircraft.

Two examples were reported where passengers were

injured when the aircraft flew into turbulence with no warning given to the passengers by the flight crew. In both cases the turbulent conditions were forecasted.

In all of the examples the checklist did not satisfy the requirements. The missing link was crew coordination. In the first example, the pilots intended to make a maximum performance takeoff followed promptly by a turn; however, the loadmaster did not get the word. Had the LM been briefed, he could have delayed the checklist items and avoided the injury.

In the off-range drop incident the pilot started to climb before the load was properly secured. Merely calling for a checklist is one thing — completing the items is another.

In the last example, passengers on our aircraft know what's happening only if the crew tells them. Passenger briefing checklist includes weather and flight conditions enroute. But, obviously, the conditions change, consequently the information must be upgraded in flight to provide for passenger comfort and safety.

As already stated, the checklist is a magic script, but sometimes it requires some additional conversation to keep everyone in step. After all, the checklist only lists items and responses; the spirit and intent must be carried out by the crew. You gotta have the right words coupled with the right actions. They, the people in the know, call it crew coordination.

LT COL DICK PEDERSEN

F-4

From where this SPO sits — reading the morning mail — with the F-4 incident traffic from all over the world, the same "old" problems seem to keep popping up. Here are some of the most common ones.

Canopy losses are still with us. About the only thing you can do is make sure **YOU** do everything right. If it works too slow — even a second too slow — write it up! Anytime a canopy comes off, particularly right after takeoff, it's just human nature to cast a suspicious eye at the operator. That may not always be fair — but it's true.

Cockpit FOD pops up occasionally (literally). Recently another command lost a bird when a clipboard fell off during takeoff and jammed the stick. In another case the cause of jammed flight controls was a NICKEL binding in the stick well. The lack of storage space in any fighter cockpit is a problem — so if you don't need it — **DON'T TAKE IT ALONG!** (Take a look at Safety FOD on the preceding page.)

Engine problems show up day after day. Aside from the technical details, such as which blades failed, or which

hoses break, the reports sometime indicate that the phlyers aren't always aware of exactly what they still have available. We all know about utility failure and what it entails — but what about losing an engine **AND** utility? Make sure you know what you have left in the way of flight controls. Let's see — with one wing dead do I turn into it or away from it...? A little hangar flying and discussions such as... what would you do if... are still valuable ways of broadening your experience without actually being in the situation.

Tire failures and locked wheels still occur. Proper braking techniques are still emphasized at all levels, but in addition, only you can tell if the brakes are dragging while taxiing out. You are the one who does the preflight on the tires before getting into the cockpit. You are the one who goes for a hairy ride if a tire blows. A light foot on the brakes and a keen eye on the preflight are paid-up insurance premiums.

Flight control malfunctions are a bugaboo — remember the paddle switch, it's your fastest way to get yourself a basic airplane should you receive uncommanded inputs. (That's a SPO way of saying that the airplane isn't doing what you want it to.) Once you get back to the basic airplane, then you have time to figure out what you want to do about your problem.

One final thought — the most useless way to destroy a target is to hit it with your airplane. It just isn't worth it. Whether it's another airplane, a dart, or a target on the range — don't run into it — it's just not very good sense!

CAPT JIM YOUNG

THE SPOs

Lt Col Cottingham	— Advisor All ANG Aircraft.
Lt Col Coon	— O-1, O-2, OV-10, QU-22, Analysis.
Lt Col Pedersen	— C-7, C-47, C-54, C-118, C-119, C-121, C-123, C-130, C-131, C-135, T-29, U-3, U-6, U-10, JN-4, PT-13.
Major Wright	— F-111, F-15, B-57, Life Sciences.
Major Frizzell	— F-105, F-104, A-37, T-39, T-33, EB-66, Helicopters, Aero Clubs, Ranges.
Major Lawler	— A-7, F-5, F-100.
Capt Young	— F-4, RF-101, Barriers.

TACTICAL AIR COMMAND



Maintenance Man Safety Award

Technical Sergeant Owen M. Fox, 524 Tactical Fighter Squadron, Cannon Air Force Base, New Mexico, has been selected to receive the TAC Maintenance Man Safety Award. Sergeant Fox will receive a letter of appreciation from the Commander of Tactical Air Command and a Certificate.



TSgt Fox

TACTICAL AIR COMMAND



Crew Chief Safety Award

Staff Sergeant Edward W. Fant, 334 Tactical Fighter Squadron, Seymour Johnson Air Force Base, North Carolina, has been selected to receive the TAC Crew Chief Safety Award. Sergeant Fant will receive a letter of appreciation from the Commander of Tactical Air Command and a Certificate.



SSgt Fant

TACTICAL AIR COMMAND



Ground Safety Man of the Month

Master Sergeant Fairley M. White, 311 Munitions Maintenance Squadron, Hurlburt Field, Florida, has been selected to receive the TAC Ground Safety Man of the Month Award. Sergeant White will receive a letter of appreciation from the Commander of Tactical Air Command and a Certificate.



MSgt White



LETTERS to the Editor

Plea from a Bootlegger

Your publication TAC ATTACK has been most informative and helpful over the years to members of my staff; however, copies obtained have been "bootlegged" from various units, since we are not on distribution for same.

To insure timely receipt of all issues, kindly request consideration for one copy of each issue be sent to this headquarters.

JOHN B. FLAGG, Colonel, USAF
Director, Operations and Training
Fort Lee, VA.

You're on for one copy . . . from an old bootlegger. Ed.

Proud Heritage

Page 31 of the November 1971 issue of TAC ATTACK showed the aircraft accident rate in 1970 as N/A for our organization. It is our feeling a zero (0) should be shown to accurately portray the record of the 4485th Test Squadron and its predecessor the 4533rd Tactical Training Squadron (TEST).

On 12 April 1971 the command and control of personnel, aircraft and equipment of the 4533rd TTS (TEST) was transferred from the 33rd Tactical Fighter Wing to the Tactical Air Warfare Center (TAWC) and redesignated the 4485th Test Squadron. The officers and personnel of the 4533 TTS (TEST) were retained for the 4485 TS. Their outstanding efforts in establishing the safety record of the 4533 TTS, their presence in the 4485 TS, and the organization's distinguished history should be recognized by the continuation of the zero accident rate record and the accident-free safe

flying hours.

Please correct the accident rate table on future issues.

JAMES W. DEARBORN, Lt Col, USAF
Commander, 4485th Test Sq, Eglin AFB, FL.

Done!! Ed.

A Letter to the Safety Boss

I appreciate the opportunity to reconfirm in writing my extremely favorable impression of the Senior Officers Safety Course conducted by the Institute of Aerospace Safety and Management, University of Southern California.

The most striking impression gained from SOSOC is the professional reality that is evident in every segment of the course. It is NOT an academic approach to "safety poster wallpapering." Rather, the Institute provides a series of practical management techniques which each Commander can apply to the day-to-day confrontations experienced in the administration of a safe and efficient operation.

The faculty KNOW their business. The majority are aviators; each of them are expert and articulate in their field, and their USAF field survey and UEI participation gives them the communication link to put practical, and often innovative accident prevention ideas in terms both useful and understandable to senior USAF officers.

The SOSOC was a rich professional experience. I recommend it to my peers as a premier opportunity to enhance their own safety programs. I thank you and your staff for my opportunity.

WILFORD E. DEMING, III, Colonel, USAF
Director of Operations
31 Tactical Fighter Wing, Homestead AFB, FL.

TAC TALLY

AIRCRAFT ACCIDENT RATES

* Estimated

MAJOR ACCIDENT RATE COMPARISON

	TAC		ANG		AFRes	
	1971	1970	1971	1970	1971	1970
JAN	1.6	4.8	16.7	5.9	0	0
FEB	1.6	3.9	11.6	2.6	0	0
MAR	3.1	4.6	7.0	1.7	0	0
APR	2.7	4.9	4.9	2.4	0	0
MAY	2.5	6.2	5.7	3.6	0	0
JUN	2.6	5.5	6.9	3.6	0	0
JUL	2.9	5.1	7.1	6.1	0	0
AUG	2.7	5.0	7.8	6.9	2.7	0
SEP	3.2	4.7	7.4	6.6	2.4	0
OCT	3.2	4.5	6.7	6.8	2.1	0
NOV	3.4	4.6	6.9	6.7	2.0	0
DEC		4.6		6.6		0

UNITS

	Thru Nov			Thru Nov	
	1971	1970		1971	1970
9 AF	3.8	2.0	12 AF	2.3	7.3
1 TFW	5.8	5.7	23 TFW	0	4.2
4 TFW	0	0	27 TFW	4.9	7.6
31 TFW	14.1	4.5	49 TFW	0	10.4
33 TFW	0	0	347 TFW	0	N/A
354 TFW	4.4	0	355 TFW	0	N/A
4403 TFW	13.6	0	474 TFW	0	0
			35 TFW	2.7	10.1
363 TRW	3.3	6.0	67 TRW	0	3.5
316 TAW	0	0	313 TAW	0	0
317 TAW	0	0	314 TAW	3.7	0
			516 TAW	0	0
68 TASG	0	0	58 TFTW	9.1	15.3
			4453 CCTW	0	6.9
			71 TASG	0	0
TAC SPECIAL UNITS					
1 SOW	6.8	5.4	4409 SUPSQ	0	0
2 ADG	0	0	4410 SOTG	4.3	0
57 FWW	5.6	0	4500 ABWG	0	0
			4485 TS	0	0

TAC SUMMARY

	NOV 1971	THRU NOVEMBER	
		1971	1970
TOTAL ACCIDENTS	3	30	39
MAJOR	3	24	34
MINOR	0	6	5
AIRCREW FATALITIES	10	24	30
AIRCRAFT DESTROYED	3	20	31
TOTAL EJECTIONS	5	23	27
SUCCESSFUL EJECTIONS	5	22	21
PERCENT SUCCESSFUL	100	96	78

Fleagle

GEAR DOWN

HARDISON

KLUNK

OOPS!
UNSAFE GEAR!

AIRSPED BELOW
250 KNOTS

CIRCUIT BREAKER
PULL AND RESET.
LANDING GEAR RE...

HE FORGOT
TO KEEP FLYING.

NOT A
CHECKLIST ITEM.

SKRRRUNCH!