

# TAC ATTACK

TAC Attack February 1966



February 1966



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TAC THUNDERCHIEFS

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# Angle of Attack

*Experience keeps a dear school,  
But fools will learn at no other.*

— Benjamin Franklin

**COMPLACENCY ?**

**OR**

**lack**

**of**

**KNOWLEDGE**

Shortly after becoming airborne an experienced fighter pilot was practicing low altitude intercepts with other members of his flight on the way to the gunnery range. After the first intercept he pulled up and went into a hard turn to set up a reattack. The aircraft stalled, entered a spin, and crashed. The pilot had attempted a maneuver that was beyond the flight envelope of his heavily-loaded aircraft when he pulled it into a stall without enough altitude to recover.

After a cross country flight the pilot of a multi-engine aircraft was unable to lower the landing gear and found he had lost all his hydraulic fluid. When repeated and various attempts to lower the gear failed, and his fuel supply was almost exhausted, he landed with the gear up incurring major damage to the airplane. The cause of the hydraulic failure was a leak from a jam nut that was not safety wired when it was installed by an experienced NCO. It was inspected by a seven-level supervisor who signed off the red cross. The lack of safety wire even went unnoticed on a 50-hour inspection prior to the accident.

TAC suffered 43 accidents involving pilot or maintenance error in 1965. There were many more incidents and near accidents where the sequence of events didn't snowball into a major accident after someone's error or oversight set the stage for an emergency and possible loss of an airplane and crew.

The discouraging thing about these accidents is that in the majority of cases the individual involved is highly qualified with several years of experience. The circumstances vary in each case, but there is a monotonous sameness about most of them: someone overlooked, ignored, or just forgot a procedure or technique that he should have known as well as his own name.

What should we do . . . sigh and wring our hands when this happens to an experienced pilot or mechanic? Or shall we call a spade a spade and say that the old head exceeded his limits or the aircraft limits or didn't follow the procedures and techniques that are the foundation of experience. If we are honest and do not let the old head's years of experience cloud our judgment we will say the latter . . . that he didn't appreciate the importance or effect of all he knew. And we will take positive action to insure that the old heads and the new ones alike are fully aware of the importance of following prescribed procedures and proven techniques. If we do not, the old head and others will continue to attempt tight climbing turns close to the ground with heavily loaded airplanes, inspectors will gloss over critical areas in their inspections, and accident boards will continue to find: "The primary cause of this accident was pilot . . . or maintenance man . . . complacency."

When experienced people become complacent we must conclude that their complacency was spawned in an atmosphere favorable to its growth.



Colonel Gust Askounis, TAC Chief of Safety, discusses aerial demonstration techniques and air refueling with Lt Colonel Ralph J. Maglione, commander and lead pilot of USAF Thunderbirds.





# HOLD *that* TIGER

"Man, I always press in until the windscreen is full of dart before I fire! You gotta forget that safety jazz if you want to get top score!"

OR ... "Yeah, I stand that bear on its tail and get it up in the blue ... if you're in combat you gotta do it that way!"

OR ... "We'll add 10 to that wind. That'll get us over the fix with 1200 pounds on paper, no sweat!"

By - Lt Col Paul L. Smith  
Hq TAC Office of Safety

## AIR FORCE CRASH KILLS TWO

**T**he application of this bar talk and resultant publicity have been reality on several occasions recently. We continue to receive re-

ports, or postmortems, on people who have stretched their equipment or themselves to the absolute maximum. Then something fails...and down comes baby, cradle, and all.

There is no question about the need for tigers in an organization. In a shooting war they are vital. However, a dead tiger or one without claws is useless. We must emphasize and re-emphasize the

importance of leaving some margin for error in a non-combat training environment. When the shells are popping or the other guy is getting lined up on your tail, then go all out. Your life is at stake. I do not mean to imply that when you get into combat it is alright to push your luck. It's then even more important to save the bird. If you press home an attack to the point that you become p



of the permanent scenery you have created more problems than if you crashed on a training mission. Among other things you've given the enemy something to crow about, and you have one less weapon to hit him with. Obviously, when the kitchen sink is coming at you it's natural to extend yourself and your machinery right up to maximum effectiveness. But during preparation for a real fight fouling on a rocket run or strafing pass or that steep angle on an assault takeoff can also mean your life. If a slat sticks or a damper gives you trouble the proper break off distance could be the difference during recovery. And if an engine quits that airspeed you threw away could mean the difference.

Why then do our people continue to press themselves and their machines beyond the proven safe limits for training missions? A lot of it is gung ho and competitive spirit! The old bit about getting the best in the outfit hasn't disappeared. But sometimes the reason is resistance to authority. There are always those who think the rules are for other guys... this we can do without. When the boss sets down a rule he has good reasons for doing so. He is preparing for a mission in which he must have every man and every piece of equipment in working order. If he doesn't get the job done, the burden falls on others and the over-all effort suffers. Remember the old saw about "For want of a nail the shoe was lost..."

So if the boss says "don't," it is because he believes a particular act is dangerous. He has probably seen someone buy the farm from just such a mistake in the past.

Even if you then go out and violate his directives and get away with it once or several times,

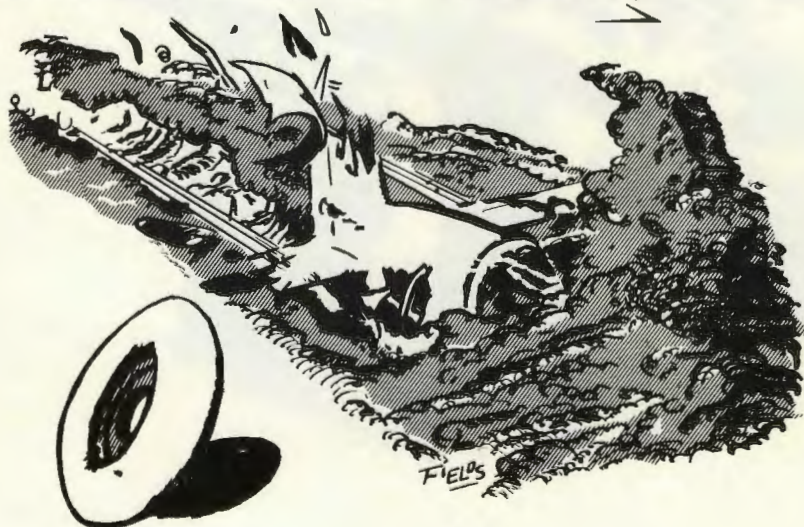
you've missed the point. Accidents almost always result from a combination or series of things that go wrong. Eliminate the built-in tolerances that manufacturers, TOs, and procedures have given you, add a mechanical or human failure, and...BAM! Suddenly it all becomes terribly personal.

I for one would rather have a tiger flying for me than a pussy-cat. The get-it-done guy is obviously going to do more to accomplish the mission than the I'm-alright-Jack individual who could care less. But the thing I want to see in a tiger is a shrewd awareness of danger that will allow him to complete the mission in a reliable and economical manner. Not the pseudo-tiger that wipes his wingman off on a hill, or the aircraft commander that takes out himself and his crew putting on a max performance takeoff show for some popsy he met at the club the night before. There is danger in grabbing the gear handle right at rotation...with today's speeds you have to be quick. But how quick? If the tiger is too fast and winds up sliding down the runway on pressed aluminum he has ignored the margin for error that was carefully built into the system. He also has messed up one of the old man's nails. If the bird blows up it may be that personal

thing we were chatting about earlier. Regardless, the "tiger" ends up in either a cage or a coffin. Either way he is suddenly no longer the great asset he used to be.

I could go on talking about young airplane drivers who love to stand all that power up on its tail to impress the local base ops secretary (she's seen it all before)... or the unauthorized inadequately briefed rendezvous for ACM (but you know the stories). This fine line of "how far" is elusive, and my particular answer is that you have to leave yourself some margin to take care of... that maintenance error (it would be nice to have all our seven and nine level supervisors back on the line, wouldn't it?)...or that busted weather forecast (it still ain't an exact science!)...or that autopilot that went haywire (yeah, designers goof too!). If you fail to leave some margin your chances are about as slim as a two dollar stake in Las Vegas.

And bosses, if you want to save those resources you need so badly, I suggest you start identifying your pseudo-tigers and putting them on a very short lease. Don't cage 'em...just get that much needed effort channeled in the right direction. Properly handled they can win the war for you.





## CREW CHIEF'S STATEMENT

At 0730 Wednesday morning I was getting set for my preflight. Before I proceeded I checked the oxygen cart for serviceability at the oxygen corner inside the hangar. I opened one of the bottles and found that both gauges worked, and that I had about 1300 psi which was enough for all the aircraft I had to do. I then closed the bottle and emptied the oxygen from the gauges and the lines. I checked the nozzle and oxygen hose for serviceability. I then left the hangar with the cart.

I proceeded to a T-33. I always park the oxygen cart about two feet away from the filler valve. Before I did anything else I checked the oxygen pressure in the aircraft, which was about 275 psi. I climbed down, opened the hatch to the filler valve, and removed the duct plug which covers the hole in the filler valve. The nozzle was not seating properly; it was a little looser than normal and there was a slight leakage of oxygen at the moment I plugged in the nozzle. I shook the nozzle to ensure it was locked in, and being careful I held the oxygen nozzle with my left hand as I did not want the nozzle to unseat itself when I opened the oxygen bottle. I opened the nozzle valve with my right hand. While I held the nozzle I opened the left hand bottle on the cart and noticed with a glance that both gauges were working and building up pressure. At the same time a ball of flame came out of the filler valve. This burned my hand. As I let go of the nozzle I shut off the oxygen bottle on the cart and pulled the cart away from the aircraft. While I was pulling the cart away I saw the dust tab fall to the ground and saw some smoke come out of the filler valve, and some on the ground near the nozzle. I ran for help to Line Servicing, telling them that the T-33 was burning near the oxygen filler valve. I was driven to the station hospital.

# OXYGEN

The crew chief, an experienced man, tells the story in his statement. It describes a job he had done hundreds of times before and seemingly contains no irregularities in either handling or equipment... at least it appeared that way at first. But a burst of flame and molten metal badly burned his arm, came close to injuring his eyes, and could have spread causing a serious fire.

What caused the explosion? The unit concerned conducted its investigation in two areas: one to establish the source of the oxygen and the other to discover what material had united with the oxygen. Tests showed that the reduction valve on the oxygen cart would not always close properly despite full movement of the control handle. The only abnormalities in the valve were a slight deposit on the pin valve stem where the rubber seal and the valve housing met, and considerable play around the ball at the oxygen inlet point. It was concluded that the oxygen in the explosion came from the cart, not the aircraft, and that the leaking reduction valve was to blame. The most probable cause of the incorrectly open condition of the reduction valve was a defect in the valve itself and not an incorrect position of the control handle.

The history of oxygen explosions naturally led to a search for oil or grease at or near the oxygen cart or in the area of the aircraft filler valve. There were no traces of such substances





# AGAIN



the filler valve area, the only foreign matter being the deposits resulting from the explosion.

At the time of writing, the investigation indicates that there was undoubtedly a possibility that grease from the wheel hubs on the cart could have become deposited the nozzle. In fact, all three gen carts at the unit had been greased in error by the ground handling section using general purpose grease.

Although the oxygen carts involved are equipped with a small clip on the handle to hold the oxygen filler nozzle, use of this clip is somewhat cumbersome. If the clip is not used and the nozzle left hanging down from the cart handle, the nozzle could easily touch the wheel hubs...and the grease.

In this accident, which is a classic, two substances, oxygen and probably grease, combined

without either being detected. The explosion, as the pictures show, was severe enough to melt the metal on the filler hose nozzle and filler valve, and injure... fortunately not severely... an airman. This accident has given rise to further investigations into the equipment and methods employed in handling oxygen. The need for vigilance in handling this explosive gas cannot be overstated.





a 2nd look

A

# 2ND LOOK



The two fighters approached the auxiliary airfield in close trail formation. When they passed the end of the runway at about 300 feet AGL, the lead aircraft started a climbing turn to the left. With his nose approximately 20 degrees above the horizon, he started a roll to the right. His rate of roll was slow at first and increased as the roll progressed. The number two aircraft started to follow thru the roll, but his position deteriorated to the point that when inverted he was no longer in formation. The lead aircraft completed the roll, but the wingman dished out, hit the ground right side up, and exploded.

The flight leader stated he had not mentioned his intent to perform a low altitude roll in his preflight briefing. He also did not inform his wingman in the air of the impending maneuver. These two pilots, however, had performed a similar maneuver over the same field five days before, and between the two flights, they had discussed the techniques of low-altitude, in-trail acrobatics.

As the accident investigators dug deeper into the background of the flight, they found that both pilots had been briefed not to fly over the aux airfield . . . they were to land from a straight-in, rather than a normal overhead pattern. The board also learned that this

field was frequently buzzed by aircraft that had mission there. They did not land or practice approaches at the auxiliary field. The new base commander had issued orders that restricted passes over the airfield after observing a dangerous low pass a few days after he took command; however, the new procedures were never published as he had directed. The unsafe and illegal buzzing had continued unreported.

When the accident board asked several pilots why they thought unauthorized maneuvers were performed at the auxiliary field but not at the main base, they invariably answered, "Because we knew we wouldn't be violated . . ." The board concluded that a permissive atmosphere existed which was conducive to violation of regulations. A certain percentage of flight leaders, presented with this atmosphere of relaxed regulations, will do exactly what they think they can get away with. These flight leaders, while performing admirably as pilots, fall far short of their responsibilities as commanders.

This accident, then, was caused by failure of supervisors to live up to the standards expected of them.



A second look at these relaxed standards reveals a dilemma facing an officer in a supervisory position who is himself a pilot. The pilot, especially if he is a fighter pilot, feels he must choose between meeting the responsibilities of command and being branded as an overcautious old woman. Since men first started to fly airplanes they have proven their prowess by performing dangerous maneuvers at low altitude. Both the ability and willingness to perform these maneuvers have been equated to the essential traits of a fighter pilot: skill, courage, and aggressiveness. Any unwillingness to perform these maneuvers, suppression of those who perform them, or rigid enforcement of restrictive regulations have been equated with an overcautious, non-aggressive attitude; therefore, the pilot is subjected to a very powerful form of social pressure. He violates flying regulations to maintain the aggressive image that is

most acceptable to the group he lives and works with. The supervisor condones the violations because he is a product of that group and because he wants to maintain his membership in the group. The fact that we have lost hundreds of aircraft and lives in this kind of accident attests to the impact of this form of pressure. And repeated emphasis on flying regulation enforcement, aircrew professionalism, and accident prevention have failed to stop this type of accident.

The irony of all this is that accidents that involve intentional violation of regulations are perhaps the only fully preventable aircraft accidents. Aggressiveness, when directed toward accomplishing the mission, is an essential trait we cannot afford to lose in our pilots. However, the term aggressiveness can not be condoned as the rationale for irresponsible conduct, violation of regulations, or failure to accept the responsibilities of command.



The F-104 had made several hot passes across the range and was pulling off a dry rocket pass when the pilot called that he had lost power and was continuing straight ahead. The aircraft was last seen four or five miles from the range with wings rocking in a nose-high, low-airspeed attitude. Shortly thereafter, the pilot reported that he could only get 80 per cent in military, his airspeed was down to 230 knots, and he was going to make an airstart. He did not eject before the aircraft struck the ground.

A thorough and painstaking investigation revealed the throttle cable had torn and separated in several places while the aircraft was breaking up. Additional rust and corrosion not related to the accident were also evident in the cable. When the investigators inspected the rest of the aircraft in the unit they found two others with frayed throttle cables. Moreover, further investigation of the frays showed inner strands broken that were not evident on the initial inspection. Their conclusion: most probable cause of the partial power failure was throttle cable separation due to age, corrosion, and general deterioration.

Making the F-104 throttle linkage cable a time change item was high on the board's list of recommendations. And certainly it should be! As one after

another of our airplanes go beyond their original planned service life, it is highly important that time change and inspection criteria be constantly reviewed. With the first hint of deterioration or a failure trend, inspections should be intensified and inspection cycles shortened. When regular and frequent inspections establish that wear and tear is greater than originally expected or that deterioration reaches the impending-failure stage after a certain length of time, time change criteria should be adjusted . . . or, as in this case, items that were not originally on the time change schedule should be added to the list.

True, time change and inspection cycles are established by the depot; but the data that shows they need revision must come from the users who are close to the machinery. This means the operators, maintainers, and inspectors are all charged with the responsibility for identifying necessary revisions.

A second look at this accident reveals that another part of before-the-fact accident prevention was missing. Several of our single-engine fighters now have modified fuel controls that automatically provide sufficient power to maintain flight in the event of throttle linkage failure. Why was the '104 left out of the program?



# TURN



# SPIN

By - Captain Max L. Templin  
USAF Fighter Weapons School

**A**lthough the F-100 has been around for over a decade, and a good many pilots are approaching or have passed 2000 hours in it ... it's still our number one snap, roll, and spin bird. Aerial combat, once thought of as a dying cause or thing of the past, is again a reality. This is the only time maximum performance is demanded from the aircraft, and this is the time you can expect the bad things to happen.

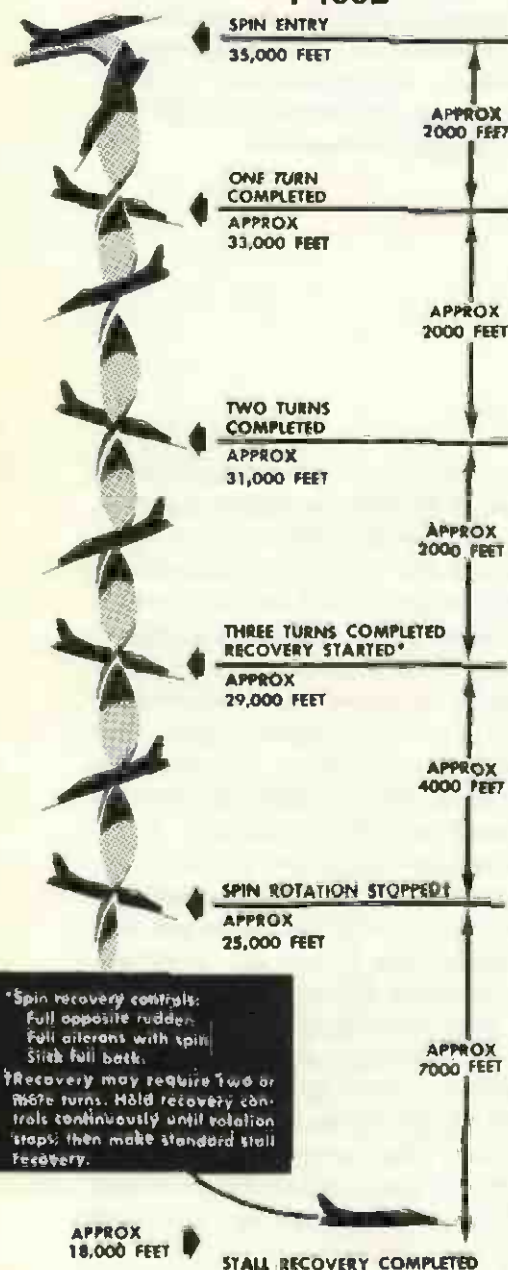
Maximum performance and high angle of attack are synonymous; and the old bug-a-boo, adverse yaw, thrives on high angle of attack. The greater the angle of attack the greater the possibility of adverse yaw. A great many people will say ailerons are the cause of adverse yaw, but ailerons are only one of many things that produce adverse yaw. Actually, any yaw that the pilot doesn't require is adverse or unfavorable, be it in the direction of turn or against it. Any part of the aircraft that is not streamlined will cause a yaw moment that normally increases as angle of attack becomes greater. Aircraft

are designed to be aerodynamically stable if, and only if, everything is operating properly.

Here are some examples of yaw makers that you can detect in a good preflight; improper flap position, warped vertical stabilizer and rudder, bent UHF antenna housing on top of the vertical stabilizer, bent tank fins, warped ailerons and flaps, bent or misaligned wing fences and wing tips, engine misalignment, improperly operating slats, bent drag chute cable fillet doors, warped stabilizers, or maladjusted aft sections. The older the One Hundred gets the more often you can expect these yaw makers to appear.

A good preflight is invaluable, but some things are not noticeable until you are airborne. Take aileron rigging for instance: Only a gross maladjustment can be detected on the ground even with 3000 pounds of hydraulic pressure. Ailerons have a tendency to float in flight and may be in a different position at 300 KIAS than they are while static on the ground; therefore, an airborne rig check is necessary. Airborne, you n

## F-100D





find discrepancies not apparent during preflight because they will be magnified during max performance maneuvers and can cause serious degradation in aircraft performance and handling qualities.

Let's assume that the aircraft made it by the preflight and you are airborne in a clean bird. The check must be accomplished in an aircraft without drag numbers or you are not validating anything. Pylons can be misaligned or warped, and there aren't too many tanks around that haven't been bent or hung crooked. These items on perfectly rigged airplanes have caused many headaches for pilots and maintenance personnel alike. So leave the garbage on the ground.

The first thing to check is that the slats are fully closed at 290 KIAS. Porpoise the aircraft hard enough to check slat operation. The outboard sections should come out first followed shortly by the inboard section. If they are working properly press on to the next step.

Pull the nose up to decrease airspeed to 240 KIAS and trim for takeoff. Do not engage the dampers. The nose should be slightly heavy. Visually check the alignment of the ailerons with the flaps. Ideally, you should see one nice straight line, but don't be too surprised if you don't. The floating ailerons may be with you. The important thing is what the aircraft does when you release the stick. Does it roll toward the high aileron, toward the low one, or does it roll at all? You have serious problems if it rolls toward the low aileron. If it rolls toward the high aileron and you can correct it with a one-half second blast of aileron trim, you're still in business. However, should it take more, be careful, this should wave the

"proceed with caution" sign at you.

Take a look at the turn and slip indicator. The ball should be within one-eighth diameter of center. Retrim for takeoff and accelerate to 500 KIAS in military power using pitch trim only. Make this part of the check at low altitude prior to climbout because of the high indicated airspeed you'll need. As you accelerate check for stick force reversal between 240 and 270 KIAS. This assures a correct trim-for-takeoff slab position and aircraft center of gravity. Release the stick a few times to check for roll tendency and continue to check the ailerons in respect to the flaps ... their position may be changing. If the aircraft rolls or yaws a little at 500 KIAS it is still within limits provided the ball is not more than three-quarters diameter from center and no more than 1 1/4 second of aileron trim is required to correct any rolling moment. This corresponds to one-half second of trim per 100 knots increase in airspeed from 250 KIAS. Although this is within tech

order limits, I strongly suggested the airplane be re-rigged.

Start a military power climb once you have completed this low altitude portion of the check and things are still within limits. The next step is to check engine alignment. Passing through FL 200 with the bird trimmed for hands off flight at 300 KIAS, reduce the power to idle and glide back through FL 200 while holding 300 KIAS. Maximum ball deflection from center is one-eighth diameter. Run the engine alignment check in afterburner using the same one-eighth of ball deflection as maximum tolerance.

Even if the engine alignment checks out, you still have one more check remaining. Remember, you checked the slats at low altitude by porpoising the aircraft; but will they still work at FL 250, at minus 30 degrees C, and under G loads? Don't assume that they will. Prove it! Starting at Mach .8 make a 4 G turn at FL 250 and watch the slats throughout the turn, continuing the turn until they are fully extended. A frozen slat can very easily cause a snap;





so if one section is being stubborn don't press your luck. If the slats are working properly but the bird doesn't seem to turn the way it should, adjust the mirror so you can see the trailing edge of the wing where the ailerons and flaps join. That should help you tell whether you are inadvertently applying aileron. If the alignment is not symmetrical a flap may be out of adjustment and actually drooping under G loads. If any doubt exists make several turns in both directions until you are convinced you are not applying aileron pressure. While making these turns be as smooth and precise as you would be on an instrument check. Enter a smooth coordinated turn, neutralize the ailerons, and use aft trim in conjunction with back-stick pressure to fly the aircraft around. Abrupt or jerky movements of the stick

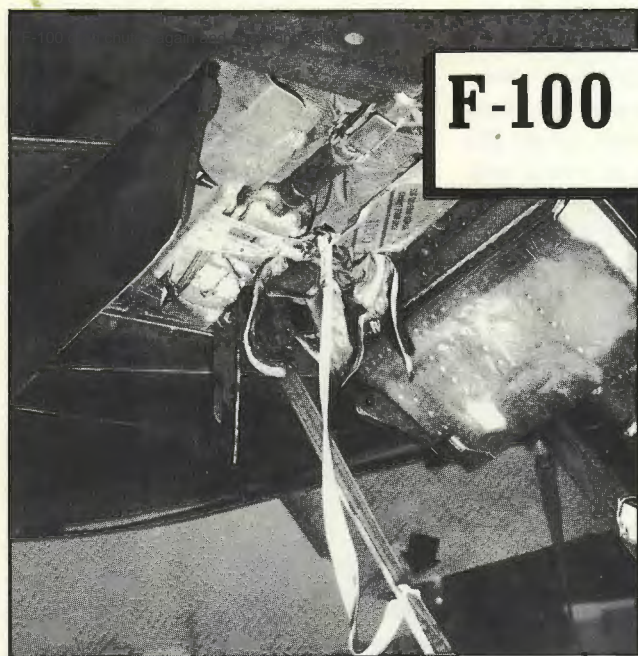
will mask any warning the aircraft might be giving you.

Every once in a while an aircraft will turn better in one direction than the other, even though the aileron-flap alignment is perfect. In many cases this has been attributed to a bent UHF antenna housing on top of the vertical stabilizer or some similar misaligned part of the airframe. Therefore, if you aren't satisfied with the bird's performance give it another going over when you get back on the ground.

This airborne check, along with a thorough preflight, should insure a well-rigged, properly operating aircraft capable of maximum performance. Only one more thing to add... if any discrepancies are noted with trim, slats, or rigging do not attempt any aerial combat tactics involving maximum performance.

Here is a quickie checklist for the rig check:

- (1) Make a good preflight.
- (2) Check slats closed at 290 KIAS after airborne.
- (3) Porpoise aircraft to check flap operation.
- (4) Decrease airspeed and trim-for-takeoff.
- (5) Check alignment of control surfaces visually.
- (6) Release stick and check for roll tendency (1/2 sec trim allowed).
- (7) Check turn and slip indicator for yaw.
- (8) Accelerate in military to 500 KIAS.
- (9) Check roll and yaw (3/4 ball diameter and 1 1/4 sec aileron trim allowed).
- (10) Check engine alignment if required.
- (11) Re-check slats in 4G turn at altitude.



## F-100 DRAG CHUTES Again....

### and Again, and Again

This photo of an F-100D drag chute compartment was taken at a TAC base after the drag chute failed to deploy. The reason for the failure is obvious. The lanyard that pulls the pin holding the liner doors closed is too long. Someone made an unauthorized

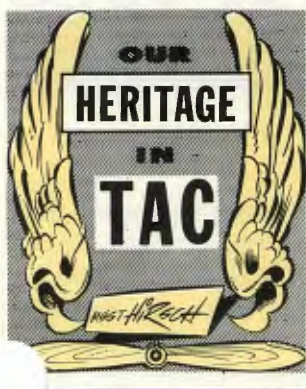
modification on an F-100A bridle by cutting off one of the pin lanyards; and sure enough, the one-pin, A-model bridle ended up packed with a chute for use in F-100D/F aircraft. The photo below will give you some idea of what the different model One-Hundred bridles look like. From bottom to top they are for the F-100A, F-100C (no pins used), and F-100D/F. After noting the length of the pin lanyards, it is easy enough to tell them apart before the chute is packed. Unfortunately, by the time the crew chief gets the chute and the pilot sees it on preflight there isn't any sure way of telling a Murphy'd F-100A bridle without unpacking the pilot chute compartment. You can make a cursory check by tugging on the liner-door-pin lanyard... it should resist. If it pulls out aways before it resists, you probably have a modified F-100A bridle. This bridle won't work in a D or F model 'Hundred so have a closer look at it and get changed.



While we are on the subject of drag chute packing, one unit reported a chute that failed because the pilot chute was sewn to the chute bag and bridle. When the chute was packed, the bridle line was tacked to the pilot chute compartment flap after the pilot chute was installed. Number three cord was used as required by TO 14D1-3-22, but the tacking was made so deep it went through the pilot chute. One strand of the cord kept the chute from working and the crew chief busy changing both tires.

The unit that had this problem now tacks bridle to bag before the pilot chute is installed in its compartment...when and how are your drag chute packers doing it?

Rumor has it that there is a modification in the mill to make the F-100A, D, and F bridles interchangeable. Nevertheless, it is up to you dragpackers to be extra critical during inspection and packing to make sure these Murphy'd drag chutes don't get to the flight line where they are sure to cause trouble.



# 313<sup>th</sup>

TROOP CARRIER WING  
FORBES AFB, KAN

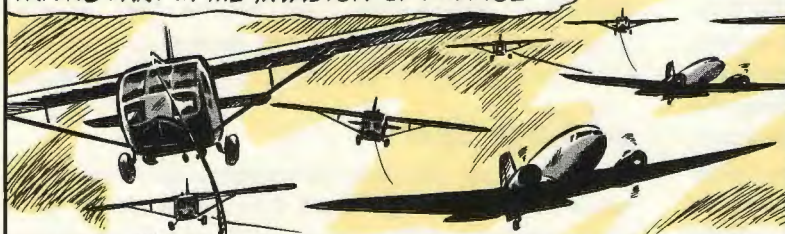
ACTIVATED 2 MAR. 1942

THE 313<sup>TH</sup> TROOP CARRIER GROUP ENTERED COMBAT 9 JULY 1943 BY CARRYING REINFORCEMENTS UNDER HEAVY FIRE DURING THE INVASION OF SICILY. THE GROUP RECEIVED THE DISTINGUISHED UNIT CITATION FOR ITS PERFORMANCE.



TRANSPORTING SUPPLIES AND EVACUATING WOUNDED IN THE MEDITERRANEAN AREA, THE GROUP THEN TOOK PART IN THE INVASION OF ITALY.

THE GROUP RECEIVED ITS SECOND DUC FOR TAKING PART IN THE INVASION OF FRANCE.



THE 313<sup>TH</sup> DROPPED PARATROOPS AND RELEASED GLIDERS DURING THE AIRBORNE ATTACK ON HOLLAND AND TOOK PART IN THE ASSAULT ACROSS THE RHINE. RETURNED TO THE U.S. IN 1945.

IN OCT.-NOV. 1948 THE 313<sup>TH</sup> PARTICIPATED IN THE BERLIN AIRLIFT, TRANSPORTING CARGO INTO WEST BERLIN UNTIL SEP. 1949.



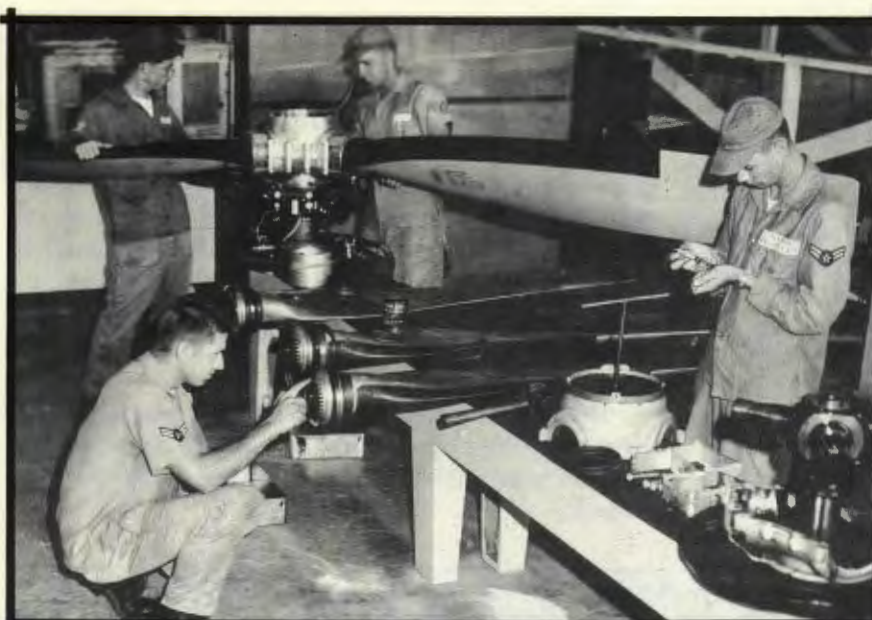
IN OCT. 1964 THE 313<sup>TH</sup> BECAME ONE OF TAC'S C-130B ASSAULT AIRLIFT WINGS. WITHIN THE YEAR, MEMBERS OF THE WING HAVE SEEN DUTY IN FRANCE, PANAMA, CHILI, SAN SALVADOR, AND PARTICIPATED IN THE DOMINICAN REPUBLIC CONTINGENCY.



WITH THIS BACKGROUND AND EXPERIENCE, THE 313<sup>TH</sup> WING STANDS READY TO ACCEPT COMMITMENTS WORLDWIDE AS PART OF TAC'S GLOBAL AIR ARM. PRESENT COMMANDER IS Col. J. N. DONOVAN







hose note flash chock talk

# CHOCK TALK

## *hose note*

An F-100 coming out of overhaul flamed out on runup when afterburner was selected with the aircraft boost pumps inoperative. An exhaustive inspection turned up no cause for the malfunk, so the engine was replaced and the new engine ran perfectly. Inspection of the main fuel hose on the removed engine showed that it looked serviceable, but the entire length of the hose was softer than a new one and when it was flexed there were two areas that were softer than the rest of it. The original hose had apparently been kinked some time since its manufacture in 1959 causing the softness which allowed the hose to collapse when the engine pump placed sufficient suction on it. The report recommended a one-time inspection for kinks or soft spots; and more important, that the main fuel hose be made a time change item and that regular inspections be prescribed in the Dash Six.

## *don't follow me*

An eager follow-me truck driver was running a maintenance errand when he attempted to drive under the left wing of a C-47. He didn't have quite enough clearance. The follow-me sign struck the trailing edge of the Gooney Bird's wing and bent the tip up about eight inches. Also, approximately 18 inches of the aileron was crumbled and warped.

Driving a vehicle under the wing of any aircraft because it's a short route to where you are going isn't the kind of leadership we need. The lanes painted on the ramp are there to be used ... even by the follow-me truck.

## *flash*

Not long ago, a ground crewman rushing to launch his airplane removed a down lock safety pin from a landing gear and immediately turned and ran into a rotating propeller. Suspected cause was listed as temporary disorientation resulting from the aircraft's rotating beacon reflection on the wet ramp. The report didn't mention that engine noise may have compounded the confusion or if foul weather gear obstructed his vision, but they're both equally hazardous. And remember, jet intakes can be just as vicious as spinning props ... no one is immune.

## *adding items*

Here's one that will take your breath away. The pilots of an F-4C got a no flow indication on their oxygen blinker and the pressure went to zero during climb out for an air combat tactics mission. Back on the ground maintenance found the oxygen supply line on the converter had come loose at the quick disconnect. You guessed it! The quick disconnect hadn't been safetied IAW TO 1F-4C-2-7 after the converter was serviced. The incident report mentioned the fact it wasn't an item on the maintenance check list or the preflight work cards, and it would be added to both. I wonder if the guy who didn't follow the T.O. even uses check lists or preflight cards. Maybe the addition should be to the supervisor's check list; an item that says ensure T.O.s are being followed. Adding items to check lists often gives us little more than a place to point the finger next time. It seldom prevents neglect from rearing its ugly head again.



## hold it

hold it

It was one of those airplanes that have the intakes on either side of the fuselage just aft of the cockpit, but that didn't enter the pilot's mind when he opened the canopy after parking and dropped his gear downlock pins over the left rail to the ground crew. That's right ... the pins were sucked smartly into the intake! Then the pilot suddenly started to get the picture and stopcocked the engine, but too late. The compressor section of the left engine received substantial damage. The unit involved has an unwritten policy to shut down the right engine before parking. Could it be that this procedure encouraged the habit of tossing things from the cockpit before both engines are shut down? Some of us have flown birds with the intake up front where it won't gobble up stray items coming from the cockpit. This, too, can build a habit that's unhealthy in two-engine machines! In any event habit or conditioned reaction seems to be the culprit here; crew chief comes to the side of the airplane ... toss the pins to him. If the crew chief approaches the wrong side, it's too easy to instinctively follow the established routine.

There are mighty few airplanes that do not have mechanical downlocks and really require downlock pins before hydraulic pressure is released. Better form a habit that stops you from throwing anything out of the cockpit until all engines are stopped.

## phaulty heater

phaulty heater

Shortly after takeoff, the phlyer began to suspect the airspeed readings he was getting. He joined his Phantom up with a handy nearby T-machine and confirmed his suspicions. On final the airspeed fluctuated a hundred knots. The instrument phyxers ... aw, c'mon ... fixers impounded the bird and found the pitot tube partially plugged with debris. When they inspected their fleet, they discovered the pitot tube heating element deteriorated in 30 of their birds. They UR'd the heaters and recommended that all 63 model F-4s be inspected. And, being the thorough type, they suggested you use a medical flashlight called an otoscope for the inspection. When you talk to supply, they'll call the otoscope Stock Number 6515-550-7199.

## boringly simple

We all feel important when we have done something well; even more so when there has been a challenge involved. But I wonder what kind of feelings have when we do something repeatedly until it

becomes boringly simple? Consider, for example, loading rockets day after day.

Exciting? Hardly.

Challenge? You have done it a thousand times. You go by the loading procedures step by step. You could almost do it in your sleep ... except you might wake up in the middle of a nightmare. So in reality, you do have a challenge. We all have this kind of a challenge, and we call it efficiency or safety.

There is no check list for a man's ability to cope with repetition day in and day out. No real measure of unintentional carelessness. No one in his right mind intends to be the cause of an accident but even right minds can cause them.

Every explosives device is potentially an accident waiting to happen; and if you happen to be involved in handling or loading these devices, then your primary concern must be your attitude toward possible accidents. In the middle of an accident is the wrong time to form a safety attitude.



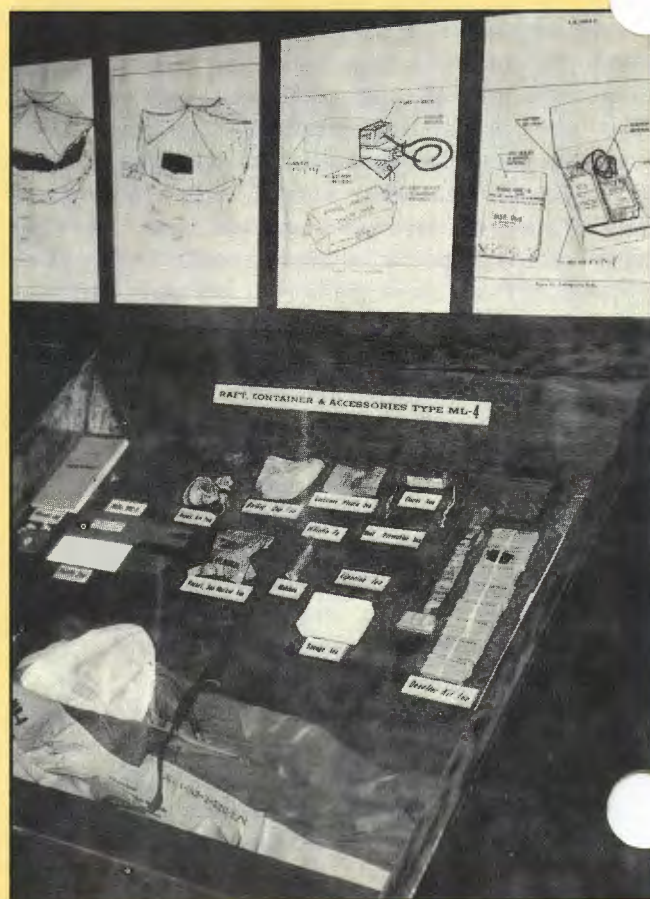
## tumbled tale

tumbled tale

The flight line troops went home at 2300 and left the F-100 aft section tied down to a 300 pound dolly out on the line. The wind had been getting stronger ever since 1800. It was gusting to 28 knots when they left, and no one thought to roll the aft section in a hangar. The Air Police notified the command post at 0315. When the aft section was blown against the fence and overturned it caused 155 man-hours damage to the vertical stabilizer. The slab had to be repaired at the depot ...



# LIFE SUPPORT EQUIPMENT



The Life Support Equipment museum displays and illustrates the contents of survival kits in current use.

TAC's first command-wide Life Support Equipment Conference was held at Langley AFB, 1 thru 3 February of this year. For those who are not familiar with the term Life Support Equipment, it replaces the old Personal Equipment (PE) title that has been around for many years. The new name for PE is more encompassing and rightly includes all the equipment that is used to support an aircrew member's life either in his aircraft or in a survival situation.



Twenty-man rafts are inflated and inspected.





Staff Sergeants McGowan and Towers inspect back-pack parachutes using a locally-designed portable work stand. The stand contains the technical orders and equipment required for inspections and displays a check list on the top for easy reference while work is in progress.

One of the highlights of the conference was an opportunity for the conferees to visit and work in the 4500th Life Support Equipment Center at Langley Air Force Base. The Center is one of TAC's models with particular emphasis on Troop Carrier life support equipment. Technical Sergeant Maurice W. Ouzts, NCOIC, and his 31 Life Support Specialists recently gave the Center a complete face lifting on a self-help basis.

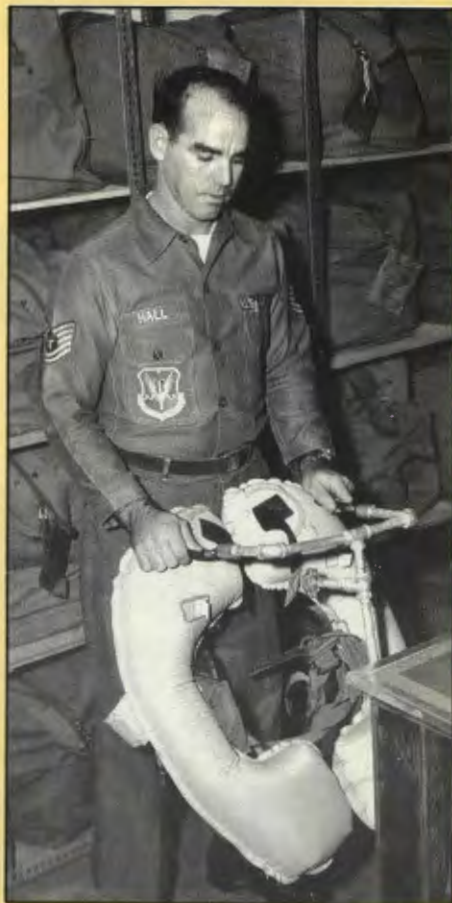
The Langley Center is responsible for the inspection, repair, and general care of over 9000 items of aircrew life support ranging in size from a 20 man life raft to a button compass. With over 4100 life preservers, 3100 exposure suits, 325 life rafts, 200 ted kits, 1200 oxygen masks, 25 e-man life rafts and survival

kits, and 15 one-man survival kits to care for, the men here eagerly ferret out every new work method or time saving device that will increase equipment reliability.

One such device for inflating and deflating LPU-2/P life preservers was designed and built by TSgt Bradley J. Hall. In the past the 4500th Center used a vacuum cleaner for inflating and deflating over 70 life preservers they inspect each day. Sgt Hall and others from the Life Support Equipment Center piped in Ground Power air from an adjacent shop and attached a dual outlet that allows simultaneous inflation of both cells of the LPU-2/P. They also improvised an outlet to inflate 20 man rafts that reduced inflation time from 20 minutes to about 3 1/2 minutes per raft. With this system the

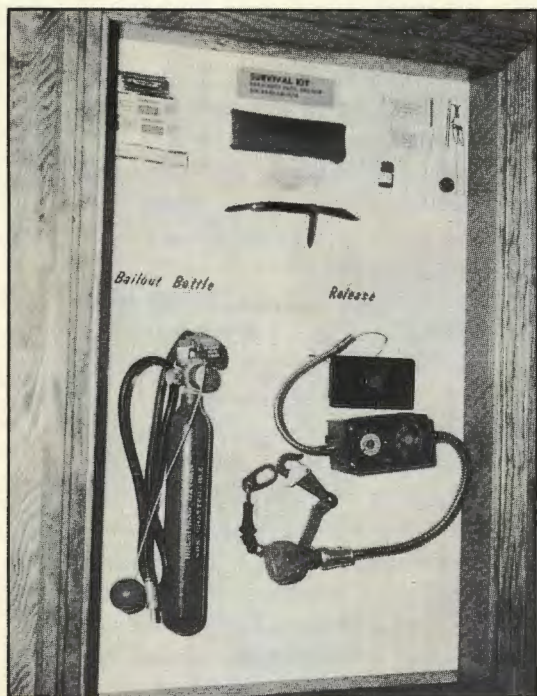
rafts can be inflated through the manifold valve in much the same manner as they are with a CO2 bottle. Therefore, the valve gets checked every 90 days along with the raft, rather than just once every six months.

The aggressive ingenuity of the 4500th Center's personnel is not limited to daily job accomplishment. Realizing the need for an on-the-job training aid as well as aircrew education material, TSgt Johnny W. Vaughn and SSgt Robert E. Towers went to work on their own time to build a life support equipment museum. The museum is completely portable and includes a breakdown of survival kits, life rafts, exposure suits,



TSgt Bradley J. Hall inflates a LPU underarm life preserver on the test stand he designed and built.





A highlight of the museum, this display shows the life support and survival equipment that is packed in a personal parachute.



An aircrew member can easily familiarize himself with the contents of his life raft kit by studying these displays.



oxygen masks, helmets, and parachute equipment. Each kit is displayed in such a manner that you can see what it contains and what is inside each package within the kit. The Center personnel credit the museum as being a key factor in their successful training program that recently won them the base OJT Achievement Award.

The 4500th Life Support Equipment Center is a support unit that is truly supporting TAC's mission. Some of their ideas are new, others borrowed, all are yours for the asking. Aircrews and Life Support personnel should drop in and look over the Langley Center if the opportunity arises. Sgt Ouzts assures us he'll be glad to show you around the Center . . . he and his men are justifiable proud of it!



One of the toughest jobs we have in the survey business is to get people to talk over their problems with us. The general reaction is, "Why tell you what's wrong and then be written up for it? Go find it yourself!"

Well, Surveyors, I'm afraid we brought it on ourselves. For years we've been saying, "We're here to help you," and then we turn in survey reports crammed with tiny little nit-pick items that require answers through command channels. No wonder the doors close in our faces. No commander likes to air his soiled laundry all the way up the line when he can take local action to correct the deficiency. In addition, division, numbered air force, and major air command staffs are forced to wade through a host of minor discrepancies and corrective actions when they should be concerned with only the really pertinent items. As a result the accident prevention effort is degraded in the field and at the headquarters.

How does a survey differ from an inspection? Well, first let's look at the purpose of an accident prevention survey. It is to identify unsafe conditions or trends which, if unchecked, will probably result in accidental loss of men or equipment. When a survey team identifies unsafe conditions it must provide sound recommendations to correct the deficiencies. Our purpose is not just to say, "It isn't safe, so you've got to stop it." Here we safety officers must remember that the nature of TAC's mission requires us to accept some risks in the operation. We do, however, have a responsibility to keep those risks as low as possible without restricting the mission.

For example, a base we visited

TAC ATTACK

# SAFETY SURVEY.....

## or inspection

By - Lt Col Paul L. Smith  
Chief, Safety Survey Division  
Hq TAC

last year had a construction project that made it necessary to temporarily relocate the hot brake area. Inadequate study went into the selection of the new location and it was placed directly in front of the regular hot gun area. When the first pilot with hot brakes taxied to the new area, he found a four-ship formation ... dearming! The guy with the hot brakes was rightfully a little disturbed.

Another base had hot guns swinging through the commander's office, the hospital, and the flight line maintenance buildings ... not once, but twice on the way to the secondary runway. A little work with the local safety officers got both of these situations changed. The mission wasn't restricted; instead it was accomplished a lot more safely.

We on the survey team pick up many new ideas while covering the circuit each year. We see a lot of things that apply to other units, and we try to pass on worthwhile ideas and innovations. Exchange of information is one of the most valuable by-products of a safety survey and will serve as an effective accident prevention tool. We believe in sharing the wealth.

Our team members have two advantages when they arrive at a base. First, their business is accident prevention, and 100 per cent

of their effort is directed toward that goal. They are exposed to the countless problems of each base visited and see how problems have been handled by other units. Secondly, they aren't surrounded by the workaday details that plague the local troops. They often can see the forest better because the trees aren't in the way.

Properly administered, the safety survey is an effective management tool for the unit commander. The two basic resources of a military manager are personnel and equipment. Whenever an accident erodes either, part of the unit's potential is lost. If the survey effort can find just one better mousetrap at each base to pass on to other units, the command effectiveness will be greatly improved. It will help us reach this goal if people in the field will discuss their safety problems with the team. The survey team in turn must move away from the position of inspectors and provide objective efforts to help commanders eliminate accident cause factors. If we are to attain the reduced accident rates we hope for in 1966, we must develop and honor a mutual confidence. Then perhaps the second half of the joke, "We're glad to have you," will become a reality.



# NEED <sup>a</sup> WRENCH ?



from USNASC APPROACH

**W**ell ... take your choice! Do you want a crescent wrench, pipe wrench, monkey wrench, pipe strap wrench, or chain pipe wrench? Or maybe an open end wrench, box wrench, socket wrench, V-mouth wrench, set screw wrench, spanner wrench, stud wrench, or torque wrench? And if that's not good enough how about a pipe and nut combination wrench, flare nut wrench, multisolet wrench, or a handle drive socket wrench?

A big selection ... you bet! But the question is, do you know how to use any of them without skinning your knuckles or exposing yourself to other injuries? Maybe these few hints will help:

- \*Adjustable wrenches should be positioned on the nut or bolt so that the pulling force is applied to the stationary jaw section.

- \*When using a pipe wrench, set it so the teeth will grip the round object with the center of the jaws. This will help prevent the wrench from slipping.

- \*Adjustable wrenches are not intended to take the place of fixed jaw wrenches. They are principally

used to loosen or tighten odd-sized nuts or bolts. Always tighten the adjusting knurl so the wrench fits snugly.

- \*Select the proper type and size wrench for the job to be done. Make sure the wrench handle and your hands are free from oil or grease.

- \*Use wrenches that are in top notch condition only. Using defective wrenches can cause skinned knuckles, strains, and other serious injuries from falls.

- \*When you need a hammer, use a hammer ... not a wrench. Using a wrench as a hammer damages it and could cause an accident.

- \*Place the wrench on the nut so that it fits snugly and in such a position that you will have to pull the wrench and not push it to accomplish the job. Pushing a wrench increases slippage which can result in skinned knuckles and strains.

- \*Get a good solid footing before applying a wrench so that slippage or bolt and thread breakage won't throw you off balance.



# Phyllis plays ...

## The Subtle Art of Signalling

Did you all have a lot of fun "squeezing" last month? Signalling is another fun subject ...

Bridge experts have established various signals for use while playing, all perfectly legal and acceptable. One of the most popular is the high-low, discarding first a high card and then a low card. This tells your partner to keep leading that suit. Similarly, playing first a low card and then a high card would tell your partner that you wish him to play another suit. In using the high-low always attract your partner's attention with the highest card you can afford to throw away ... preferably over a seven. With some partners it also helps to deliver a sharp kick under the table while making the discard. You can sig-



nal with table-chatter while bidding to tell your partner exactly how many cards you have in a suit. Use a sentence whose first word starts with the same letter as the suit you wish to mention. The number of words you use in the sentence tells how many cards you hold in that suit. For example, cough and then say, "Darn this cold," to show a three card diamond suit. Or: "Stop blowing smoke in my face," for a six card spade suit. Get the idea? This is not quite acceptable in most circles, but you can get away with it for years against some players. You can always take up bird watching later on.

Another sneaky tactic is to smile a lot while you are deciding which card to play. You will keep your opponents on edge wondering

what you are up to.

Driving signals are supposed to keep others informed rather than keep them on edge or outsmart them. And they can be just as important to your successful completion of each play in the driving game as they are in a game of cards. I am sure you are all familiar with the standard driving signals. But here are a few more. A ball rolls into the street ... this is a signal to prepare for an emergency stop as a child will probably follow. The car in front of you is wavering ... pass only at your own risk as the driver is probably inebriated or half asleep. A car approaches the highway on a cross street at a high rate of speed ... prepare for an emergency stop, he might not be aware of the stop sign; or perhaps his brakes have failed. A pretty girl is walking down the street ... dodge all male drivers. A woman behind the wheel ... (the editor just tried to sneak that one in).

Signalling in a card game may not make you a lot of life-long friends, but knowledge and use of all the driving signals will help you enjoy a full life and allow you to enjoy the better things.



## TAC NOMINATIONS FOR USAF FLYING SAFETY PLAQUES

- SPECIAL AIR WARFARE CENTER
- 4510th COMBAT CREW TRAINING WING
- 4442nd COMBAT CREW TRAINING WING
- 516th TROOP CARRIER WING
- 481st TACTICAL FIGHTER SQUADRON
- 363rd TACTICAL RECONNAISSANCE WING



Reduce the airspeed by moving the throttle to IDLE and maintain attitude by holding the nose up. When the desired speed has been attained, it can be maintained by varying the rudder.

## SIDESLIPS

Sideslip characteristics are normally good. However, a critical limit exists beyond which the maneuver may progress into uncontrolled flight. The out of control condition is severe.

## STALLS

1G Stalls.

At 1G and gear and flaps up the airplane stalls normally, with plenty of warning. The stall is usually preceded by a loss of lift and buffet about 10 knots

high near the horizon. The rudder should be used to maintain the spin when the nose is at the lowest point of descent. The controls are more effective. Recovery initiation when the airspeed is low will take one half to one full rotation.

## INVERTED SPINS.

Note

An inverted spin is easily recognized because negative-G forces exerted on the pilot will force him against the lap belt.

Inverted spins are usually caused by too much forward stick during recovery from an erect spin. Inverted spins are usually caused by too much forward stick during recovery from an erect spin. Inverted spins are usually caused by too much forward stick during recovery from an erect spin.

# SAMPAN 32,

## where are you ?

"Now that you're the Acting Ops Officer, Sideslip," the squadron commander placed his coffee cup on his desk and leaned back, "I'm going to start feeding you some of the more responsible duties around here."

Sideslip had sensed from the boss's tone that some kind of bad news was brewing. The C.O. went on, "We have to pull Supervisor of Flying in the tower the rest of this week, and I think it would be good training for you to spend a couple of days up there. It'll let you get a better look at the big picture of command control and give you a chance to make some decisions."

Sideslip decided against voicing the remark in his mind and remained silent during the boss's pause.

"I have the regulation here for you to go over. Be sure you under-

stand your relationship with both the tower operators and the command post . . . don't want to get tangled up with other people's responsibilities . . . just follow the reg." He looked up when he found the regulation in the big binder.

"OK, Sir," Sideslip tried to look enthusiastic as he stood up and reached for the book of regs. "I'll give it a go . . . you said tomorrow morning?"

"Yes, Slipper . . . I think it says half an hour before the first takeoff."

Sideslip was still trying to figure out his exact relationship to the tower and the command post when the first flight of the day started checking in on the radio. He had gone further than just the one reg during his studying the night before . . . and learned that as Supervisor of Flying he was

responsible for the safe and efficient conduct of flying about the airfield. That had seemed a rather awesome responsibility, and trying to better understand it, he had discovered the command post was responsible for making the important decisions . . . changes in the schedule, changes in range times, tail number changes, and aborts.

That sounded good and proper, so he had proceeded to educate himself on his relationship to the tower operators. That was pretty simple too . . . he could not interfere with the tower operators' control of air traffic.

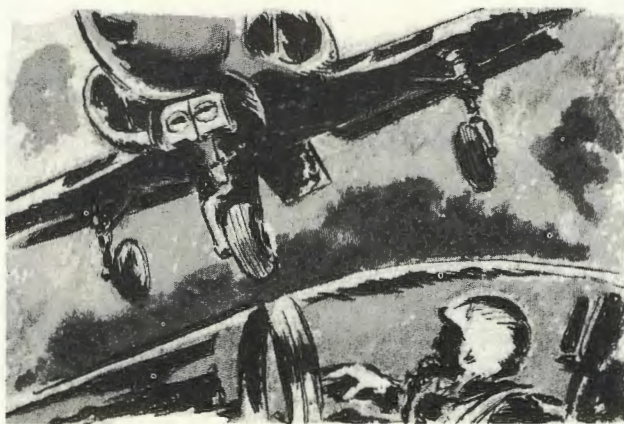
Well, he had his Dash One and check list with him, and he knew that if an unusual situation arose requiring a prompt decision he would be right there with the answer.

As the morning wore on, Sideslip became more and more impressed with the controller's intense efficiency. He had never realized how really busy this air-



field was. The familiar progress one flight after another from check-in to takeoff was proceeding down his schedule without a hitch. It was the traffic that wasn't on the Wing's schedule that impressed him . . . seemingly random scrambles from the alert hangar across the field, T-Birds and C-118s arriving and departing IFR, FCFs coming and going, Logair arrivals, and T-39s full of code sevens with all the bustle and hustle they create.

He was just beginning to understand what the tower controllers were doing and was watching the approach controller shuffle his flight strips around as the second launch started to return. Fascinating! Two on GCA, two making TACAN approaches, one flight making VFR low approaches, and either one flight or two trying to get DF steers . . . he hadn't figured that out yet.



"Something just fell off that bird on final . . ." The sergeant's calm voice turned all eyes to the cloud of dust off the end of the runway.

"You just dropped your tanks, Lead," boomed from one of the speakers.

"Rog, 32," another voice said, "got a pretty big jolt . . . ah, tower, Sampan 31 . . . looks like

my tanks just came off . . . I'm going around."

After the tower operator rogered, the air was blocked by two simultaneous transmissions. ". . . take a look and see how much damage they did, 32," came out of the tail end of the garble.

"Rog . . . I'm going to get a closer look right now."

Sideslip watched as the airplane without tanks flew the length of the runway, its gear and flaps still down. The gear looked odd, but he stopped watching it to look at Sampan 32, the wingman, who was breaking away and appeared to be circling back to where the tanks dropped.

"Tower, Buzzboy Bravo Flight." The radio interrupted his attention again.

"Loud and clear, Buzzboy Bravo . . . go ahead."

"Are you close enough to see anything yet, 32?"

"Just about there . . . can't tell much from here . . . dust . . ."

Sideslip tried to attract the attention of the controller holding the mike, "Say . . . ah, where's 32 going?"

"Tower . . . Buzzboy Bravo is anchored five miles out over the highway cloverleaf at six thousand. We'll give you a call in about three minutes when we start our fly-by."

"Roger, Buzzboy." The controller didn't appear to be concerned about the stray wingman who was now diving at the cloud of dust where the tanks fell.

"Sampan 31," the tower controller went on, "we're going to have a fly-by over the north side of the field in about four minutes . . . what are your intentions?"

"Hey, Lead . . . looks like you bombed your tanks right on that construction area on the new highway. Can't tell if you hit anything, but there is a pretty big crowd forming."

Sideslip was trying to tell the controller to call 32 and have him stop making low passes on the highway when he saw two birds on final.

"Sampan 32, Tower . . . you are in the approach zone. You have two aircraft approaching above you at nine o'clock . . . continue straight ahead and re-enter normal traffic."

"Sampan 32, this is 31 . . . uh, where are you? How's my gear look? They all went unsafe and half a dozen circuit breakers popped when the tanks fell off."

"Tower, Buzzboy Bravo with four, will commence our fly-by in one minute."

"Roger, Bravo, . . . your traffic is one climbing to enter initial from the left, one on outside downwind, and a flight of two touching down."

Sideslip was getting worried about 31. Nobody else seemed very concerned . . .

"Tommy, this is Vern in Mobile . . . what's your fuel?"

"This is 31, I've got 1500 . . . but, ah . . . that's what I had on final. Maybe the gage quit when the circuit breakers . . ."

"Pffsst . . . down to 900 . . . like, this is Sampan 32 on initial. I'll be minimum fuel on the break,



Tower."

"Sampan 32, report gear down, cleared to land." The controller was beginning to sweat as he turned and looked up at Sideslip standing beside him. "Buzzboy Bravo . . . delay your fly-by, minimum fuel in the pattern and possible gear malfunction . . . ah, Sampan 31, what are your intentions?"

"32, did you get a look at my gear?"

"Negative . . . I thought you wanted me to look over where the . . .!"

"Tower can you get someone to look ME over to see if the tanks damaged my gear?"

"Buzzboy Bravo here . . . we can send a guy over to check your gear if you want."

"32, this is Mobile . . . it looked like you'd lost pylons and everything when you went by . . . and your gear fairing doors are missing on the left main. Do you want to make a pass again for me to check?"

"Negative, Mobile . . . I don't know how much fuel and most of these circuit breakers won't stay in . . ."

Sideslip needed no more; "Get the crash crew out there by the runway. He's got troubles . . . and damn little fuel!" Two of the tower operators jumped to start the emergency notification.

"Sampan 31, Sampan Test 03 here . . . I'm north of the field . . . I'll look you over . . . where are you now?"

"Tower, Buzzboy . . . how much delay on our fly-by? Are we cleared to start in?"

"Test 03 . . . I'm on the 200 radial about five miles."

"300?"

"Negative, about five miles bearing 020 . . ."

"You say heading 020, 31?"

"No, no . . . north of the

TACAN heading south . . . can you get here in a hurry?"

One of the controllers handed Sideslip a telephone. A voice said, "The General wants to talk to you . . ."

"Sideslip? What's going on out there? What's the story on the emergency? Why can't he get his gear down?"

"His gear's down, Sir . . . ah, well, . . . he had them down on final and . . ." He frantically scanned the runway when he heard the controller in the background ask the chopper if they had a doctor aboard.

"What's his status right now?" the General bellowed thru the phone.

"That's what we're trying to determine, sir . . . there's a great deal of confusion . . . er, activity up here, sir." The receiver clicked in Sideslip's ear. He handed the telephone to the man seated in front of him and tried to catch up with the situation.

A new voice on the radio said, "Tower, do you want me to go check his gear?"

Sideslip grabbed the mike from the controller's hand. "Anybody check him out . . . 32, you'd better declare an emergency . . . Test have you found him yet?"

The controller scowled at Sideslip and took the mike back. Before he could key it Test 03 was on the air.

"Rock your wings, 31 . . . rog! Got you in sight . . . hold steady, be with you in a pffsst-zsshrr . . ."

". . . your horn blowing, Tommy?"

"OK, Tom, your fairing doors are gone on both sides . . . I'm moving in under you."

"We have the medic on the chopper . . . we'll pick up the Doc if he bails out . . ."

"Looks like the gear's down

and locked to me . . . doors gone . . . wires and things hanging, gear's OK. . ."

"Can I land it?"

"It's your choice, Tom . . . they look alright to me."

Sideslip had the binoculars now and saw the two airplanes turning toward the field. They appeared to be two or three miles away.

"Tower, 31 . . . I'm going to land, straight in . . . carry 20 knots extra, fuel unknown . . . may flameout . . ."

"Buzzboy Bravo Flight, let's go to squadron channel."

"Two."

"Three."

"Pffsst . . ."

". . . your speed up . . . don't be afraid to use power as long as you've got it."

The radio was silent as everyone watched the two aircraft on final. They were fast but it looked good to Sideslip. They were over the overrun when Test 03 was ahead of Sampan 31.

"Flameout!"

"You've got it made . . . going around."


A telephone rang as 31 touched down. One of the controllers handed it to Sideslip and said, "Command Post."

"Yes, Sideslip here," he saw the drag chute blossom and the tail hook come down. "He's okay . . . got a good chute and his hook's down."

"You'd better get down here, Sideslip . . . the General just got a call from the supervisor of that highway construction . . . something about dropping two bombs on a dump truck and then simulating strafe passes when a crowd gathered. He stormed off into his office mumbling that he was going to find out what the Supervisor of Flying had been doing."



# TAC TIPS



## APPROACH END SENSE

Following utility hydraulic failure and pneumatic system problems, an F-4C crew decided to make a 180-knot, no-flap, approach-end engagement on landing. All went well . . . the Phantom pulled out 900 feet of BAK-12 tape before it stopped. When they taxied out and looked over their steed, they found the flares hanging half way out of one SUU-25 pod on an outboard pylon. Since the pilots hadn't even attempted to release the flares during flight, all hands concluded that the flare had been partially released during the rapid deceleration of the arrested landing. Had it come all the way out, it would have most likely ignited and presented an extreme fire hazard to the airplane. The report recommends that you expend or jettison all flares in SUU-25 dispensers before attempting an approach-ender. Sounds like a pretty good plan! !

## KEEP YOUR LID ON

It's pretty safe to say that almost every fighter pilot has had a knob come loose, a pencil drop, or some other pieces of paraphernalia get away from him while airborne. Here's something to consider if you fly one of those birds with the cockpit forward and the intakes aft.

The item that caused the trouble this time was a pilot's check list that got away from a One-oh-five driver during some in-trail acro. He was unable to locate it in flight. After a routine landing, the pilot stopped on the taxiway, opened the canopy, and continued to his parking area. As soon as he shut down

he unstrapped and looked for the checklist again, but no joy. He asked the crew chief to check the taxiway; again no check list.

Being a sharp type the 'Five driver requested the engine be checked for FOD. Sure enough, that's where the remains of the check list were found, along with a N2 compressor damaged beyond limits. The check list had fallen from the cockpit and been ingested by the engine when the canopy was opened after landing. The pilot did the smart thing when he couldn't find his check list and called for an FOD check. Best we heed his misfortune and stow the publications, caps, and pins in the map case. In event you misplace an object during flight and can't recover it, keep the canopy closed until you have shut down the engine or engines. It may save a few hundred man-hours of repair.

## CROSSED SIGNALS

The drag-chute-pick-up crew was in position and had parked their truck approximately ten feet from the edge of the taxiway when the RB-66 taxied into the drag chute jettison area. The helper on the drag-chute-pick-up detail gave the signal that he thought meant drop the chute. The pilot thought the signal meant clear to taxi, and he did while watching the airman signalling to him. Crunch! The pick up truck lost its aluminum cab and part of the tail gate and the RB-66 needs a new fiberglass nose cone on the left wing tip pod.

Despite the fact that the truck driver parked too close to the taxiway and the drag-chute-pick-up



helper gave a signal that misled the pilot, the damage could have been prevented if the pilot had paid more attention to his surroundings. Taxi signals are kind of like the upper air winds you get before takeoff ... helpful, but not always too accurate.

## AW, C'MON GUYS

So help me, it's a direct quote from a KC-135 incident report ... "AFTER ROTATION ON T.O. NR 4 ENGINE BACKFIRED APPROXIMATELY FIVE TIMES. VIBRATION WAS FELT THROUGHOUT AIRCRAFT. ENGINE OPERATED NORMALLY AFTER POWER WAS REDUCED ..." We'll reserve our comment on this back firing phenomena until we have a chance to look further into it.



## D-RINGS, AGAIN

During a recent visit with Captain Dale Shaffer, Chief of Safety at the 31st TFW, he reminded us of an old problem that has cropped up again on our personal parachutes. While we were talking, he donned a chute from the rack, casually snapped the chest strap, and asked if anything looked wrong. It took but a second to register ... have you spotted it yet?

The chest strap fastener is SNAPPED OVER THE

D-RING!! For some reason the left side of the chest strap is very short, and the snap fastener closes on the D-ring unless you make a conscious effort to keep them apart. It could cause you a great deal of grief and anguish if the time comes to use the nylon.

## WORD TO THE WISE

The flight lasted three hours and five minutes. By the time he landed, the pilot was experiencing severe discomfort from a burn under his oxygen mask. It turned out that he had stored his flashlight in his helmet bag between flights and acid had leaked from the batteries onto his mask.

## SURPRISE !

The T-bird had just taxied in from a night flight. IP, in the rear seat, was reading the cockpit post-flight checklist to his student in the front seat. When they got to the part about installing seat pins in the armrests, the canopy abruptly rose and then fell back on the airplane. The front seat pilot later explained that as he twisted in the cockpit to insert his pin, the knee-board that he had previously stuffed in his right trouser pocket caught on the alternate canopy jettison handle on the panel in front of him. Pilot error the report stated, but this is one handle that has moved around the old T-bird cockpit as often as any control in the airplane ... and the pilot in front seat was an old head. He may very well have been especially careful not to disturb the right side of the seat ... where the canopy jettison handle used to be. Now, about that instructor ...

## PHRACTURED PHANTOM

The Phantom Phlyer received a surprise when both his inboard pylons jettisoned inadvertently as his chariot broke ground on takeoff. The pylons had been loaded with two 750 pound bombs each on triple ejector racks. The pilot had his wingman look him over in the air and no damage was noted. But when he landed the aircraft pulled to the left, and he found himself heading into the toolies about 2000 feet after touchdown. Although he tried to use brakes on the wet runway to maintain directional control, he continued 500 feet into the sand, the nose gear collapsed, and the fuselage buckled forward of the windscreen causing major damage. Investigators determined that the left main tire was damaged by the stores or pylons when they jettisoned and the aircraft landed with its left main deflated. This possibility should be considered any time that a Phantom sheds its stores with the gear out in the wind.





# He'll be BACK

**S**am and I usually join up at the chow hall to plan our evening activities. We've roomed together almost two years . . . be two

years next month . . . and except for that spell that I did on night shifts, we've pretty much travelled together. You know that, you al-

ways see us come here together.

Well, that's why I was so surprised when he didn't show up for chow. There's two things he'd never miss . . . that's coming here in the evening and going to chow. So I asked some of the guys if they'd seen him.

I thought maybe he had to work late or something but at first nobody'd seen him. Then George Wilkins came in. He works on the crew with Sam.

George said the last he'd seen of Sam was right after that ruckus over loading the dart for the afternoon mission. I didn't understand all of it then; but what I got from some of the others, he'd been assigned to load the dart and then report back to the shop for some



more work. Well, it took them over an hour and a quarter, I guess, from what George said.

Yeah . . . that long, because they'd no more'n loaded it when somebody came along and said that wasn't the right bird! It had gone out on pre-flight and they were using the spare.

No . . . that's just it, nobody got around to telling the armament shop about the change.

Well, while they were down-loading the dart and that tow-reel rig so they could move it all to the spare . . . all the time the Line Chief kept hollerin' at 'em that the pilot would be at the airplane any minute.

I don't know . . . but looking back, he sure shoulda asked him which airplane the pilot would show up at!

Anyway, I guess they got it down to the spare bird . . . you should see how far it is . . . all the way down at the other end of the ramp. And the pilot showed up while they were runnin' pre-loading checks on the bird. George said he stomped around real impatient like until it was all loaded. The mission would be delayed, the pilot said . . . and all because the dart wasn't loaded on time. Like it was Sam's fault, I guess.

They were picking up their gear while the pilot strapped in. From what George said, they weren't half way across the ramp when the Line Chief drove up in his truck and told them all to jump in.

The spare had blown a starter, he'd said, and they were going to load the dart on one of the shooters so the whole mission wouldn't be a loss.

I can imagine the confusion and rush on that one . . . they called out another crew to download the guns and rushed Sam and his crew

around to get the tow reel and dart off the spare and back up to the front line. Even Old Hennessey, from the armament shop, was out there by then telling them how they only had so many more minutes before it became a late take-off, and that they'd better hurry. You don't know him . . . he can really make you nervous when he's like that.

Well, George said they got it loaded somehow, and the pilot was still fuming at Sam when he got in the cockpit. He got off . . . but I guess it was a late takeoff.

Anyway . . . the last George saw of Sam was when the guy on the dispatch desk back in the armament shop told him they had two jobs that'd been waiting an hour for Sam's crew to show up and the Captain wanted him to report to the office to explain why he'd been so long.

Well . . . you know Sam doesn't get mad very easy. But when he does lose his temper, it's pretty awful. So I was kinda scared about what happened in the Captain's office.

I waited around the chow hall for a while, and when he didn't show up, I went on to our room. And there he was . . . lying on his bunk just staring straight up in the air.

He said real quiet that he didn't feel like eating. I waited a bit hoping he'd say something about what happened, but he didn't say any more. Then I figured he'd pretty soon start to get ready to come out here. I knew he wouldn't miss one evening if he could help it. He's talked a couple of times about how much the two years with you have meant to him . . . how you've changed his whole outlook and with what you've given him, he's gonna make something of himself.

When I'd finished my shower and was dressing he was still lying there staring. I finally asked him if he was coming out tonight and he said he didn't guess so. I said something about that captain must have really got to him, and he sat up on the edge of his bunk.

The Captain was nothing, he said, compared to what the Colonel gave him . . .

It turned out that he'd just started the other job they had for him, after his little bout with the Captain, when somebody said the Colonel wanted to see him.

The Colonel really tore into him, I guess . . . said he'd left the cutter cartridge out of the jettison system and the cable cutter on the dart didn't work. The pilot couldn't jettison the dart and had to drag it off on the gunnery range.

Sam talked real quiet and slow, like he was talking to himself . . . said the Colonel was awful upset. He didn't accept Sam's statement that they had used the checker . . . said he should have visually checked the cartridge, and all that. Can you imagine? With the pilot and the Line Chief and Old Hennessey bugging him to rush . . . they blame Sam?

Well, the Colonel told Sam he was taking him off orders as a Load Crew Chief and putting him back in training status. You probably don't know, but it was the biggest thing he'd done . . . work up to have his own crew . . . other than this here in the evenings.

Then he saw I was all ready to leave, and he said for me to tell you he wouldn't be out tonight . . . he didn't care anymore, he said.

He's real upset, you know, and I'm sure he doesn't mean it . . . he'll come back . . . can he take the exam next week, or does he flunk the calculus course?



# Recognition

## Maintenance Man of the Month

Technical Sergeant Harold C. Smith of the 464th Field Maintenance Squadron, Pope Air Force Base, North Carolina, has been selected as a Tactical Air Command Maintenance Man of the Month.



## Crew Chief of the Month

Technical Sergeant Arnold Cross of the 314th Organizational Maintenance Squadron, Sewart Air Force Base, Tennessee, has been selected as a Tactical Air Command Crew Chief of the Month.

## Pilot of Distinction



Captain Robert H. Morgan of the 4520th Air Demonstration Squadron, Nellis Air Force Base, Nevada, has been selected as a Tactical Air Command Pilot of Distinction.

During an official aerial demonstration of the USAF Thunderbirds, Captain Morgan was flying line abreast with the lead solo pilot at 425 knots IAS and approximately 50 feet off the

water. As he raised the nose of his F-100 to commence the four point formation roll his aircraft struck the first of two sea gulls. He noted a hole in the left side of the cockpit and a definite loss of pressurization. After starting roll-out from the third point of the roll in a nose low vertical bank at approximately 50 feet off the water, the aircraft struck the second bird which shattered the canopy. The bird continued into the cockpit, striking Captain Morgan a severe blow on the head above his right ear. His left arm and hand were knocked off the throttle and pierced by the pieces of canopy. Although dazed from the impact, he completed the maneuver and immediately turned his aircraft toward the recovery field.

Captain Morgan successfully landed his F-100 with the cockpit littered with broken canopy pieces and the remainder of the bird. His exceptional calmness and presence of mind, even though dazed and unsure of the immediate aircraft condition, qualify him as a TAC Pilot of Distinction.



## A Letter from

# TAT

January,  
on the road to SEA

Dear troops,

Now that enough food has gone down the hatch to erode some of the more gnawing memories of this tiger's stay at Stead, I'll scribble a few paragraphs on the fine art of practicing how to be miserable.

One of the survival lecturers made a comment I'd like to underline in red. He said every aircrewman owes it to himself to find out what the PE troops are jamming into his survival kit ... and to try and get them to correct any noticeable errors.

Of note, the people running that school out there apparently didn't listen to this lad. They issued us three cans of survival rations to take on our hike thru the hills. Those cans contained two date bars, a few cubes of sugar, two cereal bars, and I disremember how many meat bars. Meat bars ... that's pemmican, supposedly the foundation of your diet during this little game.

I heard that most of the previous class had trouble eating the pemmican. Obviously they didn't prepare it right ... tried to eat it raw.

Having a cast iron stomach I



anticipated no difficulty. Hoo boy! Best technique seemed to be to ration it out a bar a day, supplementing it with other furnished food, plus anything we could scrounge off the country. Many snares later we gave up the scrounging bit.

Bar number one went down well enough. Most of us in the group cooked it according to the directions and actively wondered why our predecessors were so bitter about the food.

Two bars and two days later about half the troops were unable to keep it down and most of the rest of us could tell our turn wasn't far away, cast iron belly or no. The lesson is rather pertinent ... if your PE troops are stuffing that stuff in your survival kit, try eating it a few days to see if you can hack it.

Actually, I found out after it was all over that TAC squadrons are supposed to have removed pemmican from their kits and replaced it with jelly and fruit bars ... then I started wondering why the survival school forced the horrible pemmican on us for training. It's bad enough hiking

three days thru deep snow on two date bars, a pair of cereal bars and a bottle of cough syrup without having your rations make you sick. The cough syrup has sugar in it, kof-kof, and they passed it out free to those who "needed" it.

We had trouble with the survival canteen. You know, the plastic job with the roll up top. By the end of our trek most leaked like a G.I. raincoat. Cold weather and having to tug the critters in and out of the cases we made to protect them apparently caused the problem. Were I to do it over I'd take a length of plastic tubing and use it as a straw. This would also keep a fella from spilling water all over the place while trying to get a drink in freezing temperature.

Flashlights gave some trouble in the cold weather. Penlights wouldn't hack the program at all while it took two sets of batteries to carry the next largest size thru. I'm going to equip mine with either Mercury or Alkaline batteries. In fact, this is a pretty good idea for any flashlight you carry while flying. These batteries hold up much better than the regular issue when they're not in use and last longer while being used.

Back to the survival business ... I guess that course out there is a good thing; but I couldn't help wonder how many troops are going to eject carrying one each rabbit, a shovel, a hand ax, double sleeping bags, and a pair of snow shoes while wearing heavy overshoes over their flight boots.

With that tantalizing thought I'll get back to work and try to memorize the emergency procedures for the O-1E before someone straps me in one.

TAT



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## A COMPARISON OF TAC ORGANIZATIONS

### ACCIDENT FREE

ACTIVE	MONTHS		ANG/RES
354TFW	10	6	123 TRW
8TFW	7	5	121 TFW
4500ABW	54	109	434TCW
4442CCTW	37	70	435TCW

#### F-84

FATAL - Struck perimeter fence and RR tracks in nose-high attitude after TO. Acft destroyed.

#### F-100

FATAL - Dropped out of formation after channel change in letdown, not heard from again. Acft destroyed.

OR - Left gear collapsed on landing, off runway, sheared nose and right main. Pilot uninjured.

### DEC TALLY

UNIT	MAJOR	MINOR
401TFW	1	
363TRW		1
317TCW	1	
4411CCTG		1
108TFW	1	
113TFW	1	
127TRW	1	

#### F-105

MAJOR - Left gear collapsed on landing, ran off runway, sheared nose gear. Pilot uninjured.

#### F-101

MINOR - Severe compressor stall in flight, extensive damage to left intake.

#### C-130

6 FATAL - Seventy deg climb on TO, descended from 600 ft ceiling in 60 deg dive. Impact 5500 ft from start of TO.

#### T-33

MINOR - Canopy accidentally jettisoned on ground.

### MAJOR ACCIDENT RATE

TYPE	TAC	ANG	AFRES
ALL	8.7 10.5	13.2 8.8	1.7 1.7
A-1	15.7 10.7		
F-84	0 21.6	15.8 12.4	
F-86	121.6 0	31.1 16.3	
F-100	14.4 18.9	17.0 10.2	
F-101	0 20.1	0 —	
F-104	23.3 12.1		
F-105	22.3 26.7	46.5 0	
F-4	9.7 4.9		
B-57		12.3 0	
C-47	0 0	0 0	0 0
C-97		6.6 15.3	
C-119		0 0	1.3 1.9
C-123	0 8.6		11.0 0
C-130	1.8 1.2		
T-29	0 0		
T-33	0 0	5.3 0	
T-39	0 0		

1965

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