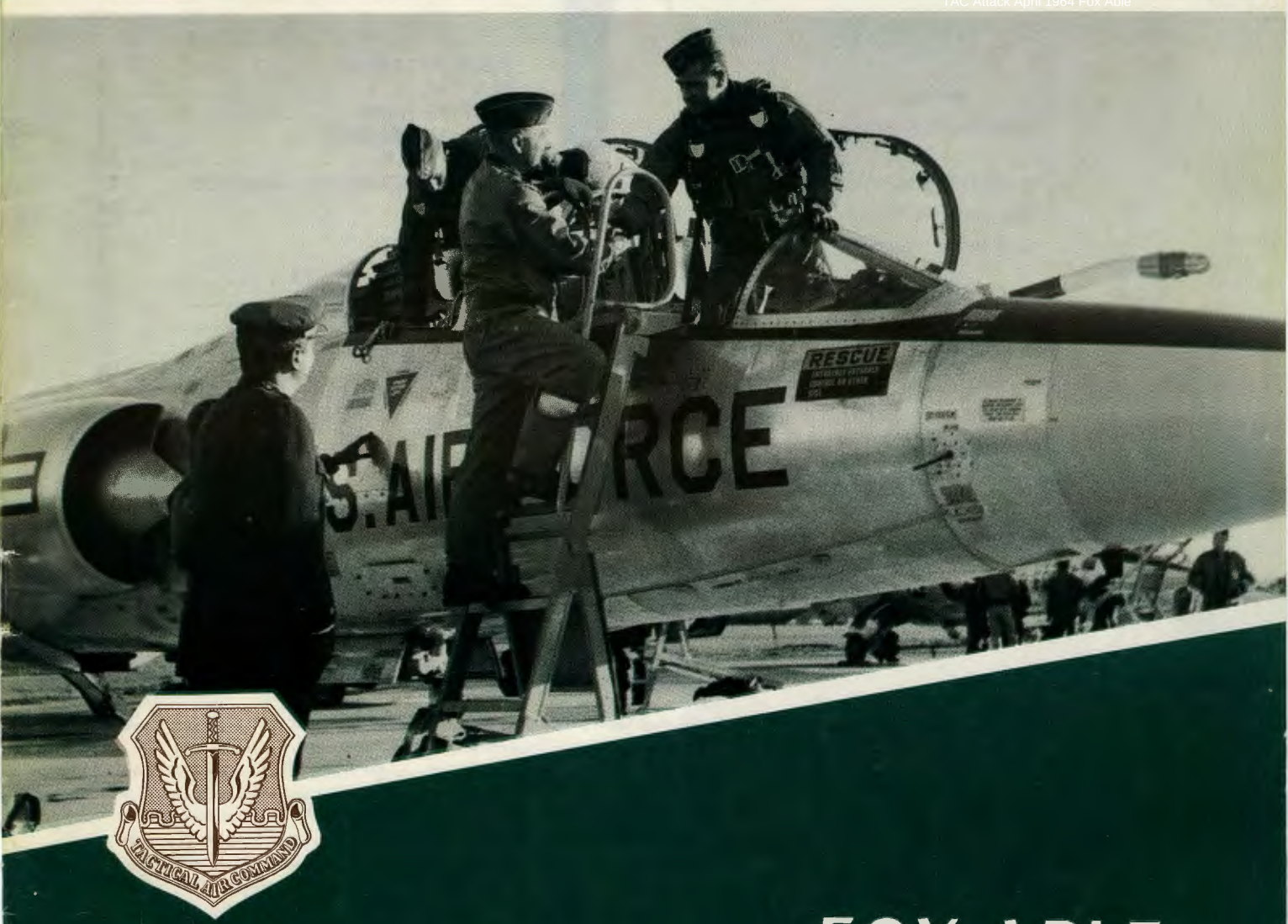
APRIL 1964

TAC ATTACK



TACTICAL AIR COMMAND

FOX ABLE

TAC ATTACK

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479th F-104s arrive at Moron, Spain after 6150 mile flight

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a Commendation

a commendation

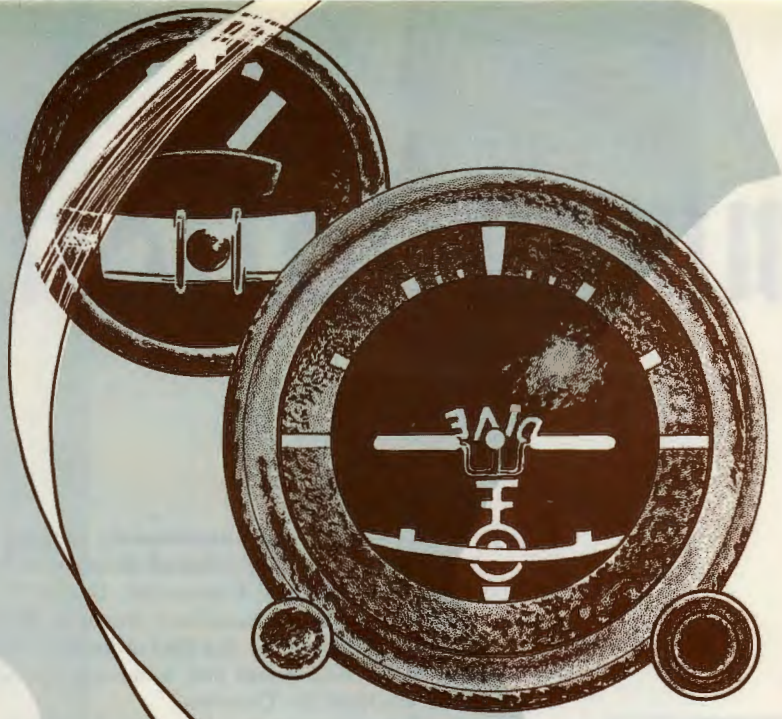
After the American Legion unanimously adopted a resolution citing the outstanding accomplishments of Tactical Air Command, their National Commander, Daniel F. Foley, presented TAC an engraved scroll at a dinner in Washington honoring the Congress of the United States. It was my pleasure to attend this dinner and to accept the scroll on behalf of the Tactical Air Command.

The scroll emphasizes the fact that the Tactical Air Command has tactical air forces overseas and in the United States which are fully qualified and currently equipped to engage in any type of combat. These forces have proven their readiness and capability to carry out the assigned mission of tactical air support anywhere on earth they may be required. No finer compliment can be paid to a military organization.

This scroll is a positive indication that your hard work and dedicated efforts are being nationally recognized and appreciated . . . that others realize our mission is as important as it is diverse and difficult. Our aircraft have carried the TAC insignia from the Andes to the Himalayas, and to every hot spot on the globe. Our command is being recognized as a dependable and effective instrument of national policy.

But we cannot be complacent. One area in particular which needs considerably greater effort on our part is flying safety. A command's record in flight safety is a direct reflection of its overall management competence. As a major air command we are still having far too many avoidable accidents. Some of these accidents were caused by mechanical failures and to stop these losses, maximum efforts are being made at the highest levels to improve the reliability of our equipment. However, many of our other accidents are due to personnel errors, both supervisor and operator. These we can prevent--and we must.

W. C. SWEENEY, JR.
General, USAF
Commander



Disorientation

disorientation

A GREAT MANY words have been written about spatial disorientation, vertigo and the other sensory illusions. Unfortunately most writers seem more concerned with what each sensation is, and the theory behind the causes, than they are in the practical causes and cures.

As pilots, most of us are not too interested in exact definitions and fancy footwork. If we've been flying for any length of time we have encountered one or more forms of disorientation and know they exist. For our purposes it is enough to know that all of these sensations have one end result - disorientation. The victim doesn't know which end is up and it worries him. I might add, that the worse it worries him, the harder it will be for him to get right side up.

Actually, what we want to know is how to avoid disorientation and, once we have encountered it, what to do about it. So much for the preliminaries, now let's get to work.

Worry helps induce disorientation . . . be it worry about personal problems, or worry about your ability to find the direction of up. So does hypoxia, fatigue, hangovers, colds, upset tummies or any other illness. Poor eating habits, too much smoking, poor physical condition, lack of sleep and a host of other similar factors can all make you more susceptible.

It takes no great brain to see that many of these are under your control thru proper rest, eating habits and moderation. Physical condition - meaning the kind that is effected or corrected by the 5BX - has more effect than most of us would like to believe. Don't delay, start today.

Moving your head around too much while on the clocks can set you up for a case of confusion, as will lack of confidence and insufficient instrument practice.

Some character named Arm-

strong came up with an explanation. He said, "most of the time spent learning instrument flying is nothing more or less than learning to ignore the false sensations from the organs of equilibrium. No one ever learns instrument flying who has not been thoroughly convinced that his sensations are always wrong whenever they disagree with the instruments."

He is right, instrument flying is mind over matter and this is why such factors as fatigue, hypoxia and minor illnesses have bad effect. They make you less able to control your mind. Others, such as colds and moving your head around too much increase the number of false sensations.

The age old cure for disorientation is to believe your instruments. This is easier said than done. Ask anyone who has been forced to believe them in order to recover from a bad situation! However, it is the only course of action that can succeed. On a black starless night, or in weather, you must believe them. You have no other choice. But even then, it takes self discipline.

In the modern fighter, the attitude gyro is primary. The altimeter, airspeed and compass are back up. I have heard many bar stories about needle-ball flying with a jet. I have done a fair amount of practicing, and have come to the conclusion that a competent pilot can maintain control on partial panel. However, I seriously doubt if more than one pilot in a hundred could regain control were he to get disoriented on partial panel in a high performance jet. I know I can't. The bird just doesn't give enough time once it gets started downhill.

Most pilots center their whole effort around the attitude gyro, and stick and rudder. Give some unusual positions to a few pilots. I'll give you a dollar for every one who recovers from a nose low, speed increasing situation by reducing power and extending speed boards if you will give me 50 cents for everyone who wrestles the aircraft into a gentle climb without using boards or throttle. Most examiners say nothing when this happens provided the recovery is prompt. BUT a practice recovery should be prompt. Hell, the guy knows he is going into an unusual position. He also knows that the instruments are all working, has no apprehension since he can always peek if things get out of hand or can let the instructor get him out of trouble. He has everything running for him. In an actual sweat, everything will be against him. He will be surprised, won't be too sure of either his instruments or himself and is going to be darn slow. If he was flying wing when trouble developed, it will take him 15 to 25 seconds before he will really get started on his recovery. That's right, 15 to 25 seconds. This has been tested. This is why you should always go thru the complete basic procedure when you practice. You want to develop a canned, completely sterotyped response.

Let me show you an example that happened this year. We had two more near carbon copies last year.

A flight leader had his flight go into echelon as he approached a tanker for a night refueling. The number two pilot watched the element start to cross under. As he watched, the element leader's nose and left wing dropped and the element leader called, "I have vertigo!"

Number four said, "Break it off, Three. You are in a 90 degree left bank!"

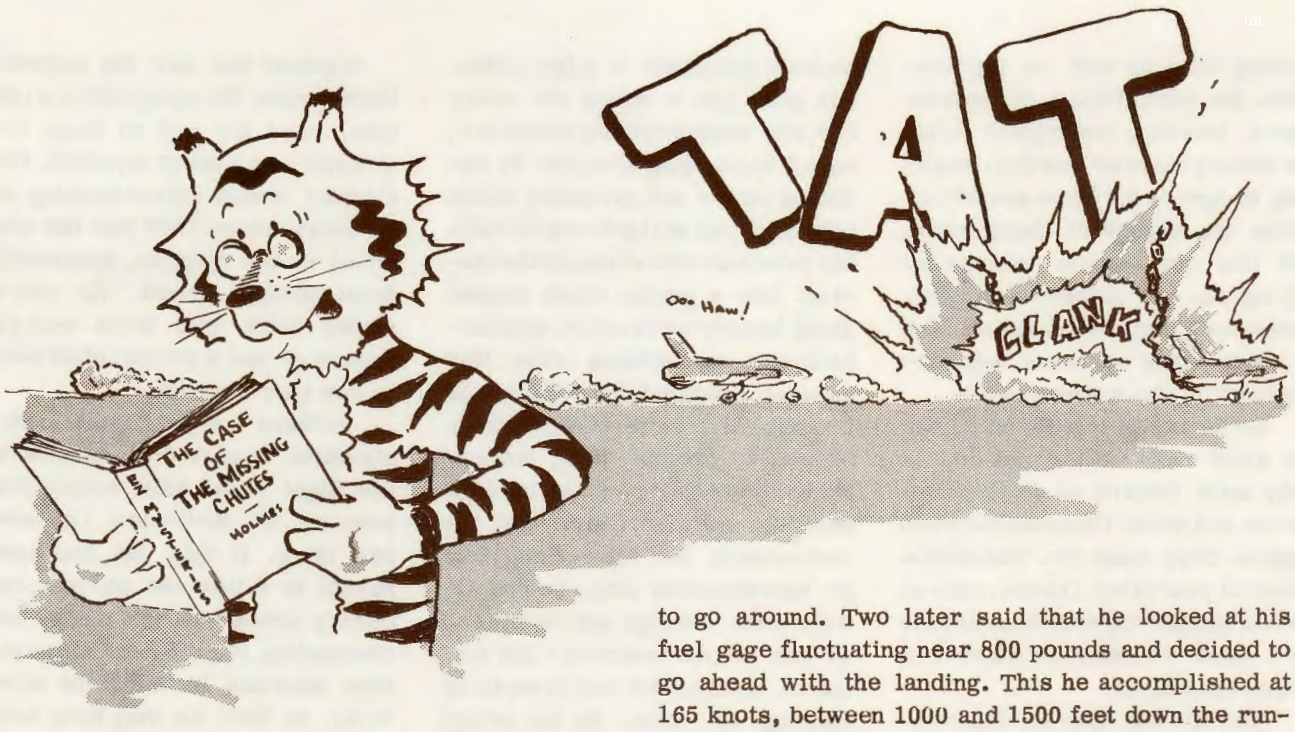
Number two saw the element leader enter the undercast in a left turn, nose low and so steep the aircraft was almost inverted. The element leader called ejecting as he crossed thru 7000 feet but was killed in the ejection, apparently from excess speed. He was a senior pilot with three ocean crossings and a pocket full of time in this type aircraft.

Perhaps some more constructive chatter from others in the flight would have helped him recover. We don't know. I do know one thing. If this lad had been forced to follow the correct recovery procedure for a nose low descending situation on all practice sessions he might be alive today. In fact, he may have been able to recover . . . I mean this bit about checking air speed during the recovery. If above normal cruise and increasing, react by opening the dive brakes and retarding throttle.

At the very least he'd have been able to eject subsonic. At the most, he'd have gained time to settle down on his instruments and overcome the false sensations.

To sum it up, keep in good shape, be moderate with your habits and practice the approved recovery. This will help keep you out of trouble. One last comment. The experts say that reaction times are much longer than they should be because pilots look at their instruments and understand them but can't bring themselves to believe in them.

As we've said, this isn't easy when you are a little scared and all your senses tell you the instruments are wrong, but it is a must. So force yourself to follow the instruments, and then argue with your senses, you'll shave many seconds off your recovery.



A HALF DOZEN F-105s returned to their overseas home from a nav training flight, arriving with about 4800 pounds of petrol on board. They slid down the slide in two three-ship sections. The first section made a low approach and cancelled IFR, intending to fly locally for about ten minutes. The second section penetrated five minutes after the first, cancelled IFR, but the leader decided each would land from a straight-in approach due to deteriorating weather...a rain shower was moving in. Number Four landed first. Visibility was so bad on the approach he told Five and Six to get GCA approaches. Meanwhile, he failed to get a chute and engaged the barrier. This closed the right hand runway just as the field went below minimums. The other troops stayed VFR to wait out the rain. When it lifted, Six had a go at landing on the left hand runway. Again, no chute. The anti skid cycled constantly, so he turned it off and promptly blew both tires. The aircraft slid to a stop 3000 feet from the far end of the runway.

The others diverted, separately, to a nearby airfield sporting a bit over 8000 feet of concrete. All knew that Four's chute had failed. Three arrived first, with One and Two close behind. His chute failed, and into the barrier he went. Number One was already on the runway by this time, with Two some 4000 feet behind him. He also failed to get a chute, but managed to get stopped short of Three.

Just before Two touched down, the tower told him to go around. Two later said that he looked at his fuel gage fluctuating near 800 pounds and decided to go ahead with the landing. This he accomplished at 165 knots, between 1000 and 1500 feet down the runway. Again, no chute.

He steered from the left to the right side of the runway to avoid the other F-105s and stayed off the brakes because he was afraid of blowing a tire and swerving into them. He says he hit the switch to extend the hook, but the hook was still stowed with the squib unfired when the whole works slid to a halt after shearing all three wheels in the overrun. Of note, the fuel gages checked out OK and investigators, suspicious rascals that they are, drained over 1200 pounds of fuel from the bird.

Unable to land at this base, number Five went back to the home drome and landed on the right hand runway. Once more, sigh, no chute. However, he got stopped OK...the only one of the bunch who was able to turn off the runway and taxi in!

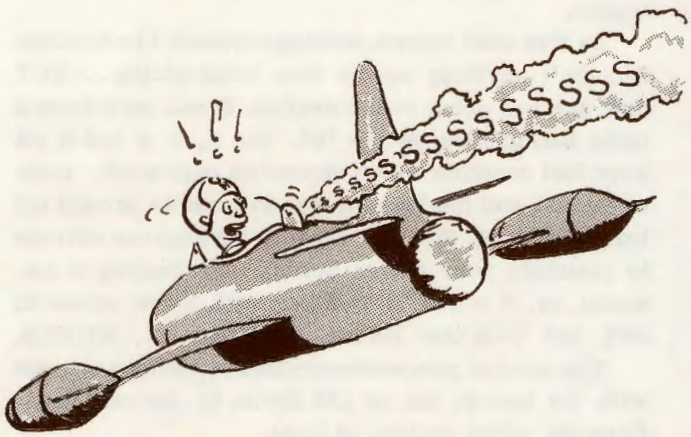
Shades of '54 or '44! This one looks rather casual to be a 1964 operation involving two and a half million dollar aircraft. Number Two didn't, or wouldn't, use heavy braking because he leaped off with a tire that was cut to the cord...cleared for a one time flight. Good grief Charlie Brown! And in the year 1964 of our peace time Air Force! Wouldn't you know he'd compound it by landing long and about ten knots hot? He might have gotten away with it, except transient maintenance batted 1000 on the drag chute installation. They installed the pilot chute bungee D-rings on top the striker plates instead of under them. I understand this is a real Murphy area...that the darn thing just cries to be installed wrong. Regardless, as expensive as these birds are you'd think

someone in transient alert would have checked the TO to make sure they were doing it right.

There are those who will say these aircrews should have checked the chute installation . . . that this is a pilot's responsibility at transient bases. Perhaps, but they shouldn't have to. They should be free to attend to flight planning and other strictly flying matters. Judgin' from this fiasco, they could well have spent more time in this area.

From the security of my swivel chair I question a lot of things on this one . . . the flight that diverted was apparently starting to hurt for fuel when they arrived. Perhaps this is why they took close spacing. From past experience, I'd say that this is the very time a pilot should take a little extra spacing - intelligent spacing - and keep his pattern a little on the loose side so he'll be sure and make it on the first try. It takes a whale of a lot of self discipline, but . . .

A final point. The right hand runway at home plate is 12,000 feet long while the left one is 10,000 feet. Even wet, this should be enough to handle a chuteless 105 with 4800 pounds on board. Stopping distance using light braking is advertised to be less than 8000 feet without a chute. Offhand it looks like five out of six had been spoiled by that long runway and had gotten sloppy. I've seen this happen many times in the past and the results have always been the same. The man who said to plan and fly each landing as if the runway were wet and the drag chute would fail, knew what he was talking about.



AFTER ABOUT TWO hours flight, a T-33 pilot noticed fuel consumption was exceptionally high. He brought the bird in and found that the fuselage filler cap was unlocked and that large amounts of fuel had siphoned into the engine bay! This guy was riding a bomb!

The filler cap assembly looked all right - including the O ring seals - but the unit replaced it anyway. All kick the tire types who have survived to this late date, please take note. The Santa Anita cap is NOT completely goof proof.

"HEY TAT," one of the office fighter types asked, "what would be your opinion on clearing into an airfield carrying a hundred and a quarter?"

"What type bird?"

"That little airliner."

"The T-39? Ahh, well, to be perfectly honest, I'd have to be pushed into it. I don't mind the ceiling so much. It's the quarter of a mile that bugs me." I scratched an ear, wondering what he was driving at.

"I agree, especially with hotter birds like the F-100. I gather you'd consider it an emergency then?"

"Frankly, yes. However, there are a lot of factors. For instance, strobe approach lights would help you accept a quarter of a mile vis just a bit more gracefully because you can start getting lined up much sooner . . . they help extend the visibility. The type airplane plays a big part, too. What would be easy in a goon is tense in an F-86 and downright hairy in an F-100. What you trying to do, anyway?"

"Oh, we got a letter in from USAF wanting to know how we feel on the subject. They cited 60-27 which directs commands to establish airfield instrument minimums as low as possible so as not to restrict things in case we really have to operate. They said the present criteria doesn't take approach lighting into consideration and also mentioned the difference in aircraft."

"Sounds like we're thinking about alike. Except for one thing, they could set their minimums as low as the slow flying types can hack with all approach aids working. When I get ready to clear in, I'll look at the approach plate, the weather, the notams and myself. If the runway is real long, there is no precipitation, the approach lights are working and I've done pretty good on recent approaches, I'll add a bit to their minimums to compensate for my aircraft and scrub if they don't have it. On the other hand, if the runway isn't so long, drizzle or rain is forecast, the approach lights are not amed out and I had problems on the last approach I flew or haven't made one for a spell . . . well, I will add a hundred and one for each strike against me and use that as MY minimums.

"This is a difficult area to legislate and you should be able to put minimums as low as you dare and then

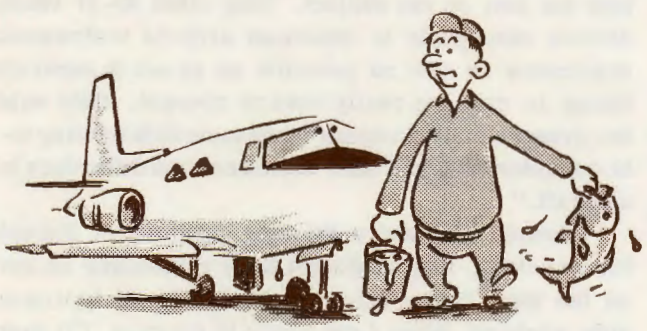
let pilots, operations officers and commanders use their judgment to consider the many variable factors before launching or before ordering someone to launch."

"Yeah, I know. But false pride will keep some from admitting that they or their people can't hack the published program and . . . "

"You right, that's the one thing that shatters the whole concept. But tell me . . . how do you legislate good common sense?"

AFTER AN HOUR and a half at 35,000 a T-39 crew noticed the elevator control was getting stiff, but pressed on. A half hour later the elevator was completely frozen. They made an enroute descent to 4000 using trim and power changes to control attitude, then descended to 1000 feet using speed brakes and power. With the temperature at 70 degrees, they held 1000 feet for 15 minutes in an attempt to thaw out the controls, but fuel was getting critical so they had to get their little liner on the ground.

The pilot set up a GCA approach using trim and throttle. All went well until he reduced power for landing...the nose dropped rapidly and both troops reacted - instinctively - by hauling back on the yoke. It broke free in the nick of time and the landing was a success. Whew!



Maintenance types found about two gallons of water sloshing around under the floor board of the pilot's compartment. The elevator had been truly frozen frozen! The water apparently came thru the pilot's sliding window and from around the main entrance door when the bird was parked. Maintenance types should check for water by removing the air inlet grill, under the pilot's seat, and the grill on the floor forward of the main entrance and feel for water in the bottom of the fuselage.

By the way, if you are ever forced to land with a locked elevator control...set up a flat approach at correct approach airspeed with about 300 foot/min rate of descent and, as long as you are aimed for the proper touchdown point, hold what you've got right down to touchdown. Do your aiming early, then avoid late corrections. If you feel the need to flare the aircraft, ADD power just before touchdown.

Do not retard throttle until after touchdown or you'll drop in. Don't carry excess speed or you will bounce and may be unable to recover. This is a sticky, tricky business, but it can be done - especially if you don't have chutes and must come home with the bird.

SHORTLY AFTER LAUNCHING an H, a TAC troop noticed slight oil fumes. He reduced power to 85 per cent and turned toward home and the fumes seemed to quit. He reapplied power, intending to climb up to 20,000, but the fumes returned. At full throttle he could only get 94 per cent. He flew directly into the precautionary landing pattern, entering high key at 8000, holding 80 percent. At this point the command post advised to maintain 80 per cent or above, to go 100 per cent oxygen and to dump cabin pressure.

The pilot turned base at 3000 feet, 240 knots. He realized he was high and hot and took it around onto a short downwind, using full throttle...which gave 93 per cent. On the go, oil pressure dropped from 25 to 10 psi then stabilized at 20 where it held until he made a successful landing. He shut down after he taxied clear of the active.

The excitement was caused by a broken duplex bearing oil supply tube that drained all oil from the engine.

As I've said before, nothing succeeds like success and ain't anything easier than hindsighting...BUT this one has some real potential. First, let's have a little background on the '86. The A, E, F and H all have fuel controls which depend on engine oil. Lose engine oil and the fuel control will add to normal oil loss problems. For this reason, the dash one advises to maintain your power setting until landing is assured, or, if power is less than 80%, to add power to 80% and hold that UNTIL LANDING IS ASSURED.

The normal precautionary landing pattern is made with the boards out at 185 knots, 63 per cent using flaps for added control on final.

Now, let's get out our hindsight glasses and run back thru this one to see what we can learn. First, I wholeheartedly agree with this lad's action when he first smelt oil...the turn toward home. Apparently "slight" was somewhat more than is normally encountered in an aircraft, else he wouldn't have re-

duced power. If so, he should have headed toward low key.

He didn't, instead he added power and got more fumes. Now, he knew the trouble was for real.... I'll assume he was beyond low key and will string along with the high key bit on one condition... that he had enough confidence in his ability to consider a safe landing assured at this point and that he assumed normal precautionary landing configuration, power setting and speed.

As I see it, he must either do this or maintain 80% and make a more or less normal pattern, pulling power off when it's in the bag. Either course of action is far better than attempting a precautionary landing pattern with an abnormally high power setting. It can't be done without going 'way out in the boondocks on downwind, base or both... to do this louses up a fella's judgment. This lad was successful because he was lucky and this tiger hates to trust his skin with that fickle gal.

WITH SUMMER VACATION just around the corner this is hardly the time to discuss education... unless you believe that there is as much to be learned out of school as in. You know, things like how to swim, how to climb ropes, sail boats, do things and build things. Yes sir, as far as I'm concerned, education is a broad subject that is always timely ... and right now I feel inclined to talk about my favorite phase - tiger teaching.

Most old timers cling to the belief that the old school turned out the best product . . . that natural attrition will always get rid of the weak. They figger any pilot training program that sports a low accident rate is just passing the accident burden on to the next level.

Reminds me of when I tried to teach my eldest to swim. It was quite a struggle and I eventually gave up in disgust. The kid just wasn't cut out to be a swimmer, was scared stiff of the water at an age her dad was romping and diving in the stuff as if born there.

Some will claim this tiger was too tender hearted and shoulda pitched the kid out into the pool to let nature take its course. This might have scared her to the point where she never would have been a swimmer. As is, a few well programmed lessons by an experienced teacher did the trick and today she qualifies as a strong swimmer by anyone's standards.

I believe this flying business works the same way ... that the majority of students can be made into competent pilots without killing off the weaker... that most can be brought up to elite standards by carefully, gradually exposing them to their ultimate environment.

However, I also believe some are incapable of reaching the level of a fully operational fighter pilot and that they should be firmly but gently sidetracked into less demanding careers as soon as they have been given a fair chance to prove themselves. By less demanding I don't mean copilot on a goon, either. I am equally firm in my belief that training programs are not complete unless they eventually expose each graduate to the full range of hazards associated with his profession. The ones that fail to do this are the ones which pass a c c i d e n t s on to the next level . . . needless accidents, since properly graduated training will permit safe exposure . . . check the record on operation Night Owl if you want an excellent example of a properly graduated program.

Flight leaders take note . . . when a new head is assigned to your flight, your first chore is to completely evaluate him. This evaluation goes over and beyond the normal formal type given by the local SEF. The SEF ride indicates his ability on <u>one</u> ride under <u>one</u> set of conditions. You must determine how he performs on a daily basis . . . how he reacts to the unusual . . . and at the same time must determine his depth of experience. This sounds more complex than it is. You're just finding out what kind of head he is and then making sure you are not plunging him in over that head. As time goes by you'll edge him in deeper and deeper until he can hack a nasty weather penetration with the best of 'em or hassle thru ACM right up to the feather edge where fights are won instead of lost.

Only one thing to remember. If in doubt, it's better to proceed too slow than too fast.

—*TAT*—

Looking thru the January Airscoop we spotted this bit on handling emergencies. Basically the idea is good, so we'll pass it on to you.

Helping Hand

THERE ARE not many of us that would admit, or believe that our judgment is adversely affected while experiencing a serious emergency. A check into the fatality files of "good pilots" who have gone in with their aircraft during emergencies should quickly disprove this theory.

Jet fighter pilots are a proud and professional group of individuals. Because their job calls for performing all functions an entire crew performs in a multiplace aircraft, fighter pilots are generally reluctant to accept outside advice on how to fly their aircraft. Recently a safety poster was distributed stating "Pride Goeth Before a Fall." That phrase is very apropos to this article.

It is not always possible to determine how an individual will react to a serious emergency. If you are escorting an aircraft that is experiencing an emergency, your first assumption should be that the emergency IS affecting the pilot's judgment. If this assumption later proves to be incorrect - nothing is lost. However, if it was correct you may save his aircraft and his life.

Here is a list of items an escort pilot should be prepared to do if the pilot of the emergency aircraft does not have complete control of the situation. Every emergency is different and all of these items may not apply to a specific case. However, be aware of what you should do, if the need arises.

* Turn your IFF/SIF to emergency.

* Read the checklist to him.

* Look his aircraft over from all sides for tell-tale signs, such as leaking fluid, smoke, and loose panels.

* Navigate for him.

* Help him select the best emergency field.

* Get GCI assistance if available and necessary.

* Look up airfield data . . . runway direction, length, and elevation.

* If landing at an abandoned airfield, go down and check the runway for such things as ditches across the runway, fences, holes, barriers, approaches, and debris.

* Make the radio calls for him, i.e., declare emergency, get clearance, check weather, what type barriers, etc.

* Remind him of aircraft checks to be accomplished . . . fuel management, defrosters, hook lanyard, etc.

* Advise him to jettison his external stores when over a cleared area, if necessary.

* Follow him through the landing pattern until safety dictates you go around. This item is probably the most important of all. If it appears to you that you could not make a safe landing, with an aircraft that is functioning normally, surely the pilot with the emergency to contend with is not going to be able to make a safe landing. If his approach is definitely unsafe, ORDER him to take it around, regardless of rank. Many good pilots have been killed attempting to get a crippled aircraft on the ground out of an SFO; their pride wouldn't let them execute a low approach for another try. If the aircraft quits on the go around, the pilot should have enough altitude to eject. Losing an aircraft has always been much better than losing both an aircraft and a pilot.

A word or two of caution. Only one aircraft should squawk on the IFF. If two or more squawk it can clutter up the radar scope and confuse the issue . . . particularly if the blips overlap.

If the troop is doing reasonably well, be VERY careful not to completely take over the initiative. He may reach the stage where he WAITS for you to call the shots and tell him what to do. This is dangerous because he is the only one with first hand knowledge of his aircraft condition; yet, if you destroy his confidence in himself, he may attempt a course of action which isn't practical but which appears feasible to an outside observer. Also, there is always the possibility that he will lose his radio and if he is waiting for you to tell him when to go . . .

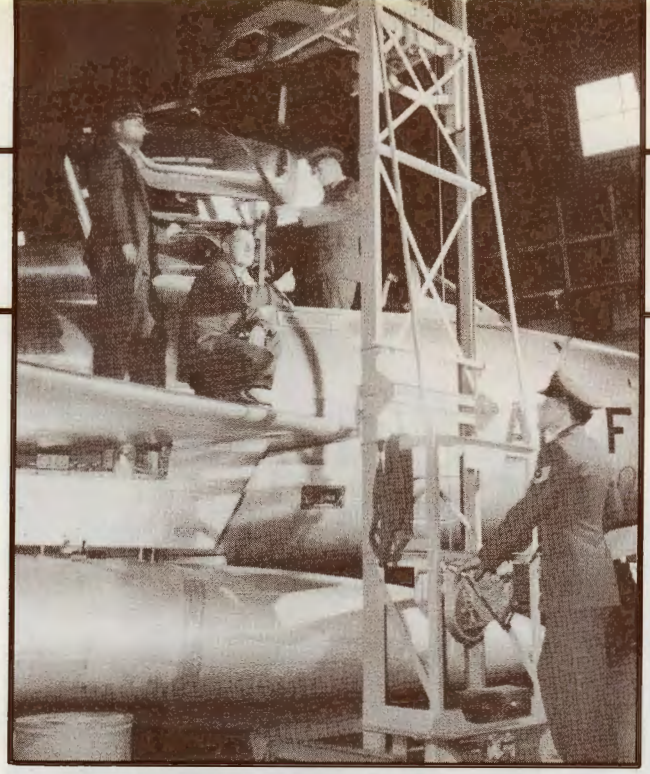
Handling emergencies requires both finesse and skill. Teamwork and good air leadership can save the day and keep many emergencies from becoming tragedies.

THE SETTING SUN gave the western edge of the undercast a brief rosy glow as a lone F-84 pilot reported over the fix and started a radar let down to an ANG base. Passing FL 240 he received and read back the altimeter setting, 29.03, and entered the clouds. Things looked pretty good. The weather didn't sound too bad, 2000 broken, 2 miles in rain, but there were two factors not covered by the report . . . heavy rain showers were drenching parts of the area, and although there was plenty of daylight at altitude, it was a black, black night below the overcast. Approach control handled the letdown from about 8000 feet. With no precision radar, the best they could do was give him vectors to a final approach course. At 1500 feet, 5 miles out, he was cleared to minimums which were 800 feet (650 AGL) and cleared to land. The aircraft crashed and the pilot died 2 1/2 miles from the runway.

The cause of this accident will never be positively established. The investigation board was left with bits and pieces. The facts aren't available, but the possibility is clear. Take a look at the altimeter setting. The difference between 29.92 and 29.03 is 890 feet . . . 890 feet LOW!!! A quick check over the flight path shows that if the altimeter was set at 29.92, the aircraft would crash just where it did. Add, to this already grim situation, the fact that the visibility from an F-84F in rain at night is practically zero, and you have an accident.

Before you are too harsh with this man . . . when was the last time you made a surveillance approach in bad weather? Nearly every base you fly into has precision approach (GCA or ILS) equipment. During most weather approaches you are given information on altitude and don't have to rely entirely on your altimeter. Second, how many times in your flying career have you started down final approach only to find the weather so low that you never break out? Let's face it, 99 percent of the time the weather is below minimum, you and I are on the ground (and glad of it!)

What does all this add up to? You are the only one who can prevent a mis-read or mis-set altimeter. Using pressure altitude (29.92) in the high altitude structure can generate some tremendous errors even on a local flight if you forget to reset. Remember, if the field altimeter setting is lower than 29.92, you will be lower than you think. So, if you just can't remember to set your altimeter, or are careless when you set it, please don't fly lead!



Chock Talk

PORTABLE HOIST

Last October MSgt Albert Neuman and TSgt Robert Kelly of the 179th Tactical Fighter Group, Mansfield, Ohio, spotted this movable device when they were on a mission to the Erie Ordnance Depot (Army). They realized it could be converted into a portable hoist and advised their commander. He approved and the Army shipped one to the 179th for further research and development.

A sling and hook were added and a $1600.00 Army surplus guided missile fuel servicer became operational as a portable hoist. The new hoist is used to install and remove tail pipes, canopies, ejection seats and other light, but cumbersome equipment. Two men can handle such jobs safely and quickly while formerly four or five men were needed.

At present, 16 ANG units are using these hoists at an estimated $25,000 savings to U.S. taxpayers.

SMALL TURBINE FIELD MAINTENANCE

The head shed has directed that the propulsion branch of field maintenance squadrons take the responsibility for field maintenance of small gas turbines such as auxiliary power units and aerospace ground equipment. The APU and AGE engines are similar to other jets and the directed action should conserve skilled personnel, test equipment, spare parts and facilities.

Complete field maintenance on these small turbines - including the compressor sections of jet engine start carts such as the MA-1A - will be performed in the jet engine field maintenance shops using 432X0 skills. Field maintenance on hydraulic pumps, test stands, generators, air conditioning units and other related accessories will stay in the 42 accessory career field and AGE maintenance functional areas.

In TAC, the change will become effective 1 July of this year. Manpower authorizations will continue to be authorized as per an analysis of AFR 66-1 workload data.

TOC TROUBLE

After the number two engine AC generator failed followed by a number two fire warning light, a C-130 crew shut down the engine. However, RPM remained at eight percent. Shortly, the crew noticed that number one oil temp was quite high. This was accompanied by loss of torque and a momentary overheat light. They made an immediate landing just as the number one overheat light came on steady.

Maintenance personnel had failed to comply with a TOC which replaces the old cast-iron bodied engine air shut-off bleed valves with aluminum alloy valves and the number two valve ruptured.

X-RAY

Portable X-ray can be used to locate defects in aircraft structure without disassembling the structure. Fatigue cracks, stress corrosion, and overload damage will all show on an X-ray photo. This technique also comes in handy for other uses. One simple electronic assembly was suspected of having a solder joint pulled apart in manufacture. Parts in stock were X-rayed thru the airtight waterproof packages and rejected items returned to the depot all without breaking open a package.

X-ray will show pit corrosion on the inner diameter of aluminum and steel tubing, will detect water in honeycomb structure, locate machinery flaws in silver soldered or brazed joints and do many other difficult inspections. Have you taken action to get X-ray technicians and equipment for your maintenance section?

WHEEL WOE

A T-bird pilot noticed one tire was worn to the cord after he parked at an enroute stop. Transient maintenance changed the wheel and he was soon taxiing out to the active.

Making a left turn to line up for takeoff, the nose wheel cocked to the left. He managed to get it straight only to cock it to the right. This was accompanied by an unusual noise . . . not to be confused with the sound of gnashing teeth. The pilot stopped and had his buddy get out to have a look.

The wheel was almost off! An investigation followed . . . it seems the retaining nut had split where the cotter pin was installed and the nut was forced off by side loads. T-bird maintainers will do well to pay close attention to the condition of these nuts.

CLOSE CALL

On the eleventh, a C-119 unit reported that they were having difficulty obtaining proper throttle adjustment after TO 1C-119C-511 was completed. The TO does not give adequate instructions . . . the reverse switch could engage with up to 1900 RPM with controls rigged in accordance with the TO and it could take up to 50 inches of power to release the gust locks.

The unit pointed out the need to follow 1C-119C-2 procedures very closely after this mod was made and advised that the dash two be changed to specify the proper rpm for reverse switch actuation, step-by-step instructions on adjusting the gust lock switch, and to show a correct picture of the throttle rigging plate along with rigging instructions for the reverse switch itself.

On the 14th a message came thru from another unit telling of a C-119 crew who suddenly lost 400 feet in the traffic pattern when a check pilot retarded throttle to simulate a dead engine. The aircraft started a roll to the right into a nose low steep spiral. The IP correctly diagnosed the problem, that number two had reversed, and had the pilot feather it, which permitted them to regain control. This message gave no reason for the reversal, but a follow-up message attributed it to a main landing gear oleo safety switch coupled with improper spring tension on the throttle lever mechanism.

This follow-up message kept the safety people from putting two and two together. Regardless, messages had gone out trying to confirm the problem mentioned by the first unit . . . however, nothing had been passed on to the field. Then two more messages came in. The first was a follow-up to the follow-up message on the inflight prop reversal incident. This pointed the finger at the reverse micro switch adjustment. The other told of a C-119 that had a prop go into reverse as the pilot reduced power and started to flare the aircraft for a landing.

The pilot felt the wing drop and heard the prop go into reverse, corrected with rudder and aileron as he advanced the throttles. He managed to keep from damaging the machine, but the landing was a lulu. The aircraft had been modified with TO 1C-119C-511 and the reverse switch was not properly set.

This is when all C-119Cs were grounded until checked for proper reverse switch rigging.

Meanwhile, there came a rumble thru the grapevine about an aircraft on a test hop. When the crew retarded throttle, the prop went into reverse and refused to feather or return to normal. After making a horrendous effort to regain control, the crew decided to abandon the aircraft but were unable to get the cabin door off. At the last moment, the prop responded to corrective action and the crew recovered about 200 feet from disaster.

We may never learn why an incident report never came thru, but one should have. Who knows, it might have been the key element to this little drama and would have helped get these birds grounded and fixed before the last incident. Only skill and much luck kept any one of these from being a bad accident . . . and we can't afford to trust in luck.

CANNIBALIZATION

Your K-18 Reports - that's the monthly maintenance data analysis - don't always give enough documentation for cannibalization actions on AFTO 200 series forms. This keeps AFLC from getting enough data on cannibalization to help get supply support straightened out... doesn't show how many direct maintenance manhours are being spent in productive labor and makes everyone wonder just how accurate the rest of your maintenance data really is.

More important, some cannibalization actions come thru the maintenance data collection system without the chief of maintenance approving the AF Form 991, record of cannibalization. This could mean that someone entered the wrong action taken code on the AFTO 200 series forms or, much worse, that cannibalization of components was uncontrolled. Either way a thorough investigation of the circumstances must be made before the deficiency can be eliminated.

It behooves each chief of maintenance to again look at the wealth of information in the TAC K-18 report... if he finds discrepancies in cannibalization procedures, he should take action to eliminate the problem at its source. This headquarters will be issuing further instructions to the individuals most concerned so positive corrective action can be taken.

LIGHTNING STRIKES

The FSF Mechanics' Bulletin warns maintenance men to look their birds over high, low, wide and good after they get their feathers singed by lightning. They cited a Convair that got hit while cruising at 10,000 feet near a front. It took a complete periodic to find all the damage, which included a deep burn on one prop blade of the left engine, holes burned thru the left wing panel and left flap, plus a damaged thrust bearing in the left engine.

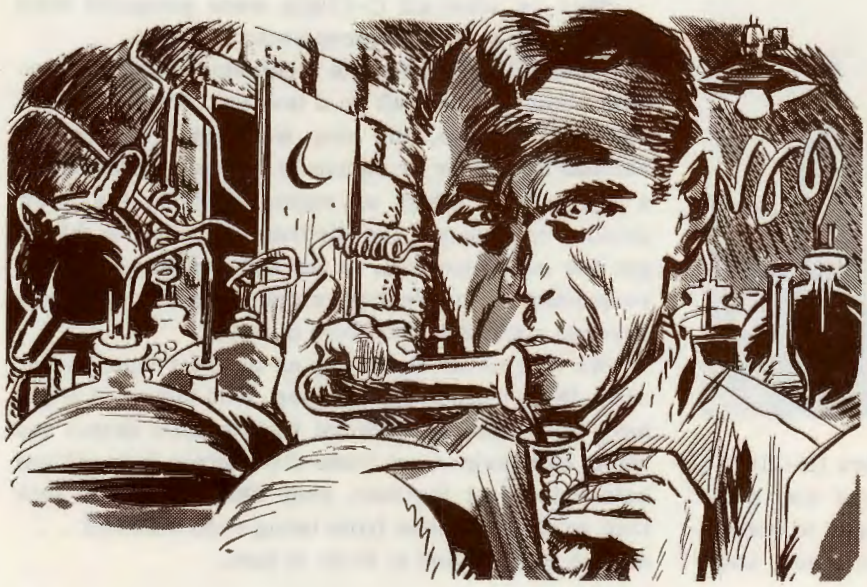
A Gooney was struck while in light rain at 8000 feet just under broken cumulus. The radome was damaged along with the elevator torque tube plates. The left elevator discharge wick was burned completely off. Hot stuff, neh?

HOT LIGHT

As a mechanic worked on a fuel line, fuel sprayed out of a connection and hit an ordinary extension light with a wire guard. The fuel ignited immediately.

The mechanic received third degree burns on his right hand and wrist, the aircraft was completely destroyed and the shop and hangar were badly damaged. All because someone used electrical equipment not approved for use in hazardous locations.

SPECTROMETRIC OIL ANALYSIS



By CWO W.E. RUST
HQ TAC DMEM

IN SO MANY many words, the message said to ground F-105 number 665... that its engine was about to come unglued. Unfortunately the engine on 665 came unglued the day before the message arrived and the aircraft was in bits and pieces. The man who sent the message wasn't playing a hunch. Instead, he was on the staff of the Naval Air Station Laboratory at Pensacola, Florida, and sent his message after seeing a lab analysis of an oil sample from the engine of 665.

If the message had arrived

just a little sooner he would have stopped an accident. The mere fact that he almost stopped an aircraft accident is exciting news and a strong endorsement to a new phase of an up-and-coming technique called spectrometric oil analysis.

And what is spectrometric oil analysis? Basically it is a laboratory technique for counting the tiny metal particles that are suspended in a sample of oil taken from an oil lubricated engine.

By monitoring oil samples taken at specific intervals and establishing thresholds or limits for the amount of metal in them, any internal breakdown can be detected and corrected before an actual failure occurs. It takes careful but routine sampling and analysis.

The technique was pioneered by the trucking industry and the railroads. They used it to monitor the condition of their diesel engines. As early as 1955, the Navy set up a trial program on reciprocating engines with very favorable results. In 1961, the Army recognized the potential of this analysis and set up a trial program at Fort Rucker and extended it to include helicopter gear boxes. The Air Force got on the wagon when CONAC started using the technique in 1962. Up to this time only reciprocating engines were being tested.

In April of last year, TAC started the first tests on turbo jet engines. Our program was established under AFSC's Systems Evaluation Group, Task 314705 and TAC Test 62-26 using Pensacola Naval Air Station O&R Laboratory. The test program was developed in three phases.

Phase One, TAC collected an initial oil sample from all the engines being monitored under the test and had the samples analyzed by the Naval Air Station Laboratory at Pensacola, Florida. The oil analysis was compared with teardown reports on engines showing high metal content to determine the correlation between the metal content in the oil samples and actual engine condition. This data was used in conjunction with data accumulated in phase two. Phase one was completed 14 Nov 63.

During phase two, oil samples were collected every ten flying hours. Collecting samples over a period of time let the testers compare the effect that many different climatic and operational elements had on the oil sample analysis. This phase was run concurrently with phase one and the data from both phases were combined and used to establish threshold limits for the J57, J75, and J79 engines. Phase two was also completed 14 Nov 63.

Phase three is still in progress. During this phase, oil samples are still being collected every ten flying hours. Whenever a spectrometric analysis indicates that metal content in the oil has reached or exceeded established threshold limits, the NAS Laboratory notifies the owning organization and recommends specific action to take on the engine.

Threshold limits are measured in parts per million for each element the spectrometer is calibrated to detect. A complete set of limits must be established for each type engine being monitored under the test program. These limits show when engine oil wetted parts are wearing excessively and indicates when maintenance should trouble shoot or remove the engine. Limits have been established for aluminum, iron, chromium, silver, copper, tin, magnesium, and nickel.

To get a good cross section of TAC's operation, several bases were designed to participate in the program . . . Myrtle Beach, Seymour Johnson, Nellis, George, and ultimately MacDill AFB, to include the F-4C.

Results of the test thus far have been highly encouraging. Several engines have been identified as having an excess or unusual internal parts wear and have been removed for trouble shooting. Two of the engines required gear boxes and accessory drive replacement, accomplished at base level. Five were sent to the depot for TDR. Two TDRs have been completed. Bearings were failing in one and gearbox screws had failed in the other. Three engines have just recently been removed as the result of a one-time sampling and analysis of all TAC F-105 aircraft. These engines will be trouble shot at base level in an attempt to determine the source of metal. The significance is that there was no external indications of impending failure in any of the engines removed. The potential value of this should be apparent to all.

Everyone closely associated with the program has long recognized this potential and this is one reason the program was expanded to include all TAC F-105s.

There is a definite correlation between the amount of suspended metal in the engine oil, as determined by spectrometric analysis, and the reliability of the engine. At this time, we are making a concerted effort to expand the program to include all jet aircraft within TAC. We believe spectrometric oil analysis will definitely prevent accidents caused by in-flight engine failure.

FOX ABLE

Preparing for the big mission.

Approach

BY MAJ
AND

As F-104 t
Massoni observ
ployment from
Major Massoni
F-101s and 10
round-out his s
from the west c

GEORGE AFB, 21:31 PACIFIC At full power everything looks good. Back to 80 then up to a hundred . . . no compressor stalls and everything is in the green. But . . . what the hell am I doing out on the end of this runway on a dark, dark night getting ready to blast off on a ten hour haul? I signed on as a DAY fighter pilot!

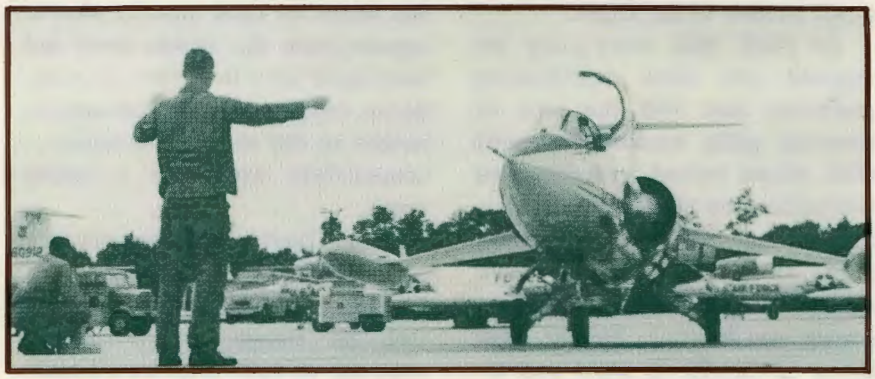
I delay until my wingman has had plenty of time to check his instruments, tell him to release brakes, then move my throttle outboard as I ease off the pedals.

Unleashed, my F-104 pushes me gently but firmly back against my chute as I aim it down the runway. I lift it off, get the gear up, then the flaps and finally come out of AB. We hold 345 degrees until picking up the Palmdale 045 degree radial. By the time we turn

ing the SAC KS-135 for that all important drink.

OR ROBERT J. MASSONI
THE ATTACK STAFF

eam chief for 4450SEG, Major ed the latest 476th Squadron de- TAC's airborne command post. has made six deployments in 4s, and relied on experience to tory of TAC's first deployment coast direct to Europe.



Parking, after over ten hours in the air.

All aircraft were promptly serviced and readied for a mission.

outboard on the radial, I have settled into a comfortable position on the flight leader. We have a long way to go and there is no sense working any harder than is necessary to maintain a safe position.

This flight is the end result of a great deal of planning, hard work and training. I guess it all really started when we began using SAC's KC-135 tankers for refueling. No reflection on the old KB-50s, but it sure is nice to have your fuel truck in formation with you instead of having to make a rendezvous with it . . . particularly over the empty ocean. On this trip, we expect to pick up six KC-135s near Amarillo and fly four fighters to each tanker.

We'll drop these tankers at Fredericton, Canada, and pick up eleven new ones, riding two fighters per tanker on to our destination at Moron AB in Spain. After the fifth refueling, only 18 fighters will proceed the rest of the way across the pond. The spares will return.

This was a carefully planned, carefully coordinated deployment. Each of us had practiced night refueling off the KC-135, had made at least three practice penetrations, C-11 style, for every one of the fourteen bases we had selected for emergency use along the route.

Colonel Darrel S. Cramer, Vice Commander of the 479th, along with Captain George L. Schulstad and Captain Albert J. Eells, had flown an 11 hour test mission earlier in the month to check aircraft reliability. We had carefully selected the aircraft we planned to use, had worked closely with our crew chiefs and had debugged them of every minor squawk we could uncover. We had flown them enough to make certain that their oil consumption would be well within limits and that no other problems would develop.

Our route was planned to the nth degree. We knew just exactly how much wind - or how little wind - it would take to force a no go, and were thoroughly briefed

on all phases of the flight.

At 0900 this morning we checked into crew conditioning quarters, and with the help of sleeping pills, sacked out until 1700. As we rested, ground crews preflighted the birds. Admittedly, they weren't the regular crew chiefs, since our regular crew chiefs were already in place at Loring or Moron, having gone ahead in MATS C-133s and C-135s.

At 1700 we rolled out of the pad for steak and eggs, then made a quick check of our birds. Satisfied that everything was OK, we got a final briefing to review minor last minute changes and, of course, the weather which was nearly perfect... only light cirrus clouds at our flight level and a 90 knot average tail wind for the whole trip.

The radio gains my attention. Someone with tip tank trouble . . . he can't get them to feed and must return to George. Our first abort.

We whistle on into the night, consumed with the monotony of stateside cross-country flying. Tuning TACAN, we check ground speeds and fuel consumption. At this time of night, the centers are not requiring position reports, but I still monitor our progress and keep my form 21a up to date.

Nearing Amarillo, the moon rises. I wonder, briefly, if the planners took this into consideration, knowing that it will ease our refueling once we rendezvous with the tankers.

We pick up our tankers easily and on schedule. One by one we hook on to refill the thirsty birds. Radio chatter is at a minimum and everything goes according to the book. In fact, I guess the manual is the main reason it does go so smoothly. With everything in black and white we know exactly what to expect from the tanker crew and they know what to expect from us. Being from different commands, makes no diff to this operation... cooperation would be a better word.

Near Dayton we lose another bird . . . bent a probe during refueling and must go into Wright Pat. He sounds disappointed. I wish for an auto-pilot as I fumble open my inflight lunch and eat a couple of bite sized sandwiches; more to kill time than for need of nourishment. By now, I've quit hunting for a comfortable position and hope for numbness to set in.

We fly formation off our tankers, going for drinks at the pre-planned time. The tanker crew takes care of navigation chores leaving us free to concentrate on flying formation. Time drags.

We drop our tankers and make another smooth rendezvous. SAC is living up to their claims tonight!

Six hours after lift off, the sun rises. Boy, that was a short night. By now, I've reached that stage where I'm numb and have become resigned to the cramped quarters in my 104's little office. At the rate we're traveling, the sun will soon be high enough to quit shining in our eyes, but the daylight is nice.

Moisture collects in my poopy suit and my face is raw from the fight between my mask and whiskers; more discomfort. I feel my performance dragging and take a go pill.

It works, but time still crawls and I'm suspended in the routine of flying formation and checking my watch against the log. I even look forward to my turn at refueling; anything to break the monotony. Still, it's better than staging out of Myrtle on one of these hauls. At least it will be over within one day. I wish I knew a few more songs . . . getting tired of Sammy Small.

Press on. They picked an excellent altitude for us. At point eight, the silver sliver staggers at the higher levels. Here at 29,000 she flys good and solid, yet doesn't burn too much fuel. I understand the SEG troops put a lot of effort into finding the optimum balance between our little birds and the slower tankers.

The blue haze on the horizon darkens and gradually begins to take shape ... Portugal! We skirt to the south, staying over water.

With 55 on the TACAN, I'm getting steady indications on Moron and soon have the field in sight. We tighten it up and enter traffic. Gotta make a good showing or you just ain't fit to fly fighters!

A single engine fighter over a multi-engine ocean.

Ten hours and twenty minutes after lift off from George, I'm on the runway at Moron, Spain, some 6150 miles away. As the others arrive, we check our aircraft and find all but one in commission.

Sure beats going by boat. Verdad?

Ol' Sarge

THE OLD SARGE sat on the edge of the porch, his back against a post, both feet on the steps, thoroughly at ease, puffing on his pipe and enjoying the evening. Frank Adams was relaxing in the swing. Both had been reminiscing between intervals of listening to the sounds of the early spring evening...kids playing tag, frogs croaking, the distant rumble of a jet engine being run up on the test stand, a barking dog and the squeak of the porch swing.

"I hear you've been playing Sherlock," Frank remarked. "How'd you make out?"

"You mean on our hot section problem?"

The orange glow from Frank's cigarette bobbed up and down. "George said you started burning up nozzle guide vanes like they were going out of style."

"That's right," the Old Sarge admitted. "First stage nozzle guide vanes to be exact. We hardly used any for almost two years, then we started finding a few with the chromalloy coating peeled. No one seemed to get excited about our UR until Capt Peterson had to eject from a 13th bird after the hot section burned out. From then on, seemed like every time we broke open an engine we'd find cracked, eroded or warped guide vanes. Sometimes we rejected over 90 percent of the guide vanes we checked." He puffed on his pipe.

Frank whistled, "I didn't realize it had gotten that serious."

"Neither did a lot of others." The Old Sarge chuckled, "However it didn't take long after we started rejecting blades. We used dash three criteria to inspect 'em by. We also kept the lines warmed with TWXs and phone calls. Meanwhile we tried to dope out the reason for these failures. We quit using the water injection system and stopped making pneumatic starts 'cause engine temperatures run a little higher during both. Still, they were in limits and no one had written up any of these engines for an overtemp."

Frank stubbed out his cigarette and field-stripped it. "What'd you find?"

"Well, someone got the idea that lag in the EGT system might be enough to cover up actual overtemps during starts. Sure enough, Whit and Pratney ran a test and found the gage was reading about 300° cooler than the actual hot section temperature. Couple this with our hotter-than normal pneumatic starts, and the fact that we used pneumatic starts for a short period four or five months ago, and the whole thing doesn't look so mysterious."

"The pneumatic starts were causing the trouble, then."

The Old Sarge nodded. "That's right. The three to four month lag between cause and effect is what had everyone fooled. Usually, everyone thinks a bad procedure causes trouble a little quicker than that. I should've known better. I remember a landing gear malfunction that was caused by lack of grease on a fitting. One mechanic in the outfit wasn't greasing one particular fitting and there's no telling how many times he skipped it before it finally gave trouble."

"I know what you mean. When things go wrong you want to look 'way back or you just might not correct the true cause at all."

The Old Sarge knocked out his pipe, checked it, and started to put it in his pocket. "Correct the symptom instead of the ailment . . . I'd say that's one of our most common problems."

"Hey, it's early, you leaving so soon?"

"Hadn't planned to."

"Aren't you going to smoke anymore?"

"Thought you couldn't stand the smell of real tobacco . . . you changing in your old age?"

"Nope," Frank replied, "but it sure keeps the skeeters away."

QUESTION OF THE MONTH

The TAC-K18 report is compiled monthly for:

a. Hq USAF
b. AFLC
c. Base Level Management
d. Hq TAC

Base Level Management

TAC TIPS

T-33 OFF THE WAGON

An ADC unit reported three cases of T-33 fuel filter icing even tho the aircraft were serviced with fuel containing the anti-ice additive. A shot of alcohol corrected the trouble each time and the unit recommended that T-bird anti-ice systems be left in, kept serviced, and then used when needed. They think the system will get enough use on test hops and while clearing actual ice to keep the plumbing from becoming gummed up.

It appears the trusty T-bird has either developed a taste for alcohol, or the anti-icing additive isn't hacking the program.

FOD

After flying in rain and icing conditions, an aircraft made an approach to an airfield that enjoyed clear weather. The pilot attempted to flare the aircraft for landing but couldn't pull the wheel back as far as normal. The aircraft hit, bounced and hit again hard enough to sheer the nose gear.

Four rags were in the nose curtain of the elevators. The rags had worked into a roll, got wet, froze and limited elevator movement.

F-4 RAT RACE

A navy F-4 type had an opposite generator trip-out at night and lost all electrical power for a time. He extended the RAT but got no joy. He cycled the RAT... still no joy.

After getting back on the ground, he found the RAT had jumped ship. According to the latest word, the RAT should not be brought in from the extended position when RAT pneumatic pressure is less than 2000 pounds since there is a definite possibility that the RAT doors will close on the propeller before the generator fully retracts. The flight manual will soon be changed to include this warning.

A HAZARD IS A HAZARD

The question of when to file an OHR and when to just put up with the hazard is always good for a short argument. Many times it seems foolish to fill out the paper work when you don't think anything will come of it. But to fall back on a well worn cliche, the wheel that squeaks the most gets the grease.

Pilots tend to weigh a hazard they have experienced against the conditions in which they experienced it. For example, when the pilot of a single place aircraft is required to change radio frequencies at low altitude in weather, he recognizes this as a hazardous situation. However, rather than automatically reporting the hazard, he will, more often than not, ask whether the approach facility had the ability to give him a single frequency approach. Then, if they had SFA capability and yet required a change, he will submit an OHR. But, if the pilot finds the facility does not have SFA capability, he will probably consider the frequency change as a necessary risk and not report the hazard. Although this seems like a reasonable approach to the problem, it just doesn't hold up in the cold light of logic. The hazard is the radio frequency change. No matter what reason there was for the change, the hazard remains a hazard, and should be so reported.

The answer is simple . . . let the Flight Safety Officer worry about the investigation and all that sort of stuff. Whenever you see a hazard, report it!

OOO HAW DEPT

Naval aviation Safety News carried this item about a Navy commander who groped for the proper words to describe a gun malfunction on his aircraft. The commander finally wrote: "Guns fire in spurts-lope, chug, chug."

Squadron ordnance men quickly found the trouble and cleared the gripe with: "Broken port feed mechanism switch was making guns go lope-chug, chug. Changed port mechanism and guns now go rat-a-tat-tat-tat!"

ROUGH RIDE

An overseas command F-100 nosed down during a low altitude bomb run then went into a severe porpoise as the pilot recovered. By using both hands on the stick and chopping throttle to idle the pilot was able to stop the porpoise. He landed from a straight-in approach. The stick grip and horizontal stabilizer artificial feel bungee had failed, causing the porpoise.

IF - IF - IF

"IF" the pilot had checked the aileron control system properly during preflight or prior to taxiing, in accordance with the check list, he would have refused to fly the aircraft . . . .

"IF" a proper supervisory inspection had been accomplished, the aircraft would not have been cleared for flight . . . .

"IF" the mechanics who replaced the cables had tested the movement of both ailerons in relation to movement of both cables, the error in crossing the cables would have been immediately apparent . . . and one more fatal accident could have been prevented!

The pilot of a T-33 ejected during a rapid left roll at 700 feet shortly after take off on a functional flight. The terrain elevation was 400 feet, which allowed the parachute only 260 feet to open. The attempt was unsuccessful.

The pilot's last radio transmission was that he had control difficulties and could not correct to the right.

Investigators found an improperly installed right aileron cable. It was installed so that the upper cable traveled directly to the aileron drum and the lower cable passed over the pulley antifriction control, causing the right aileron to move in the same direction as the left. This, of course, caused both ailerons to be DOWN when the control stick was held RIGHT, and vice versa. The aileron trim tab was found in the up position, indicating a futile attempt to raise the left wing with the help of the trim tab.

—ATC APPROACH TO SAFETY

FLIGHTLINE GRAN PRIX

The other day I was watching the girls walk over to the Flight Line Snack Bar. It was a little windy and the view was better than usual, not as good as the pool, but better than nothing.

My attention was diverted by a silver streak that whizzed past, then another and another. At first I thought it was the "Grand Prix" in progress, but then I realized it was just our boys in blue, returning from another mission. What a stirring sight, all those planes taxiing almost as fast as they fly. And the pilots, what daredevils! Masks hanging off, arms on the canopy rails, some filling out the forms, and others inserting their pins.

For lack of anything better to do, I drove out to the end of the runway to watch our fearless lads turn off the runway onto the taxi strip after landing. I really got excited them. Boy, this was better then watching them taxi by Base Ops! Our troops are really something--they make these birds corner just like a Porsche or Jaguar. They leave almost as much rubber too. Some of them never even clear behind them prior to turning off the runway. What guts!

Did you know that a bent landing gear could be a minor accident?

Flying and its responsibilities don't end on touchdown. It's your bird until the chocks are in and the aircraft's engines are shut down.

LAREDO FLYING SAFETY BRIEF

PHOTO STORY

After one of their F-4B canopys was inadvertently jettisoned the troops of the 4453CCTS, MacDill, decided to test the TAC approved ADC developed canopy breaking tool on it. All blows were directed at right angles to the plexiglass surface and the first blow penetrated the glass. Five or six blows and 10 seconds later the test was completed.

The 4453rd reports that first penetration seems to destroy the overall strength of the plexiglass making it break more easily. They advise to concentrate first blows in a small area until the canopy cracks then continue to direct blows around the cracks until the chunks start to fall out.

DECIDE EARLY

Ever since rocket ejection seats came into the inventory there has been a tremendous increase in low altitude ejections. During 1961-63, while only 10 percent of the ballistic seat ejections were tried below 500 feet, 25 percent of all rocket ejections were attempted below that altitude! Only one out of three rocket seat ejections below 500 feet is

successful. The chances of surviving a low altitude ejection using a rocket seat are only 5 percent better than they were in the ballistic seat. Let's get realistic about this ejection business. No matter what kind of propaganda movies you've seen or what your dash one says, ejection below 500 feet is a losing proposition and you shouldn't try it unless there is absolutely no other alternative. If you are at 2000 feet or less when something ejection-serious goes wrong with your bird, get out of it right now. You get paid to fly good aircraft, not to save bad ones!

GO NO-GO

Taking off to the east meant clearing telephone wires at the far end of the strip . . . a muddy strip that would slow his takeoff roll. He taxied into position and considered all the factors. The aircraft was overgross, a light tailwind, the engine was turning up 30 rpm low, wires off the end. He eased the throttle forward.

The aircraft gained speed slowly. A thousand feet went by and still the controls were limp and unresponsive . . . another 500 feet rolled by, the controls seemed to tighten, the tail finally lifted and at long last was off. It cleared the wires by 20 feet and the pilot throttled back for the climb.

Sounds like the events leading to an accident . . . particularly when you learn that the pilot had a very long flight ahead of him with no possibility for relief . . . . and that he slept poorly, if at all, during his crew rest period before the flight.

Still, 33 hours after that takeoff, Charles A. Lindberg landed the Spirit of St. Louis safely at Le Bourget Airport near Paris, France.

THE AMATEUR HOUR

It's no secret that radar controllers have trouble skin painting a T-bird in rain and even the latest radar sets won't skin paint one in heavy rain. The APGC Sentry reported on a transient T-bird that came into the Eglin complex with a sick parrot. The GCA people lost him in heavy rain shortly after turning him onto base leg and instructed the pilot to return to the VOR for an ILS approach.

The pilot said his VOR was inoperative! After several agonizing minutes, with five pairs of eyes straining to spot him on the rain cluttered scope, the pilot stated that he was down to 190 gallons. The controller broke out the DF set and had the pilot switch to 305.4 so he could work him on the DF net. The pilot reluctantly switched channels, but before the DF net could get a fix, another T-bird pilot in the area lost his receiver and blocked out all calls hollering for help. He finally stumbled across a field, shut up and the DF net was able to get their fix. They vectored the transient T-bird to Eglin and the story ended happily...

Well, almost. The next morning it was still raining like mad, but the transient T-bird filed out with his parrot still sick.

NEW HAT

Fly C-130s or T-39s? Here is the latest style for your headgear. It should be available pretty soon to help you comfortably comply with the requirement to have your oxygen mask attached when above 26M, and in place on your face at 35M and above.

GROUND EXPLOSIVE SAFETY

FIND THE CAUSE:

Sometimes it gets very difficult to determine what causes an accident. To explain, Dr. Alphonse Chapaines gives this example:

"A man has a heated argument with his wife and stomps out of the house to the nearest bar where he drinks four highballs. He then decides to go for a drive. It is nighttime and thin snow covers the streets. The tires on the man's car are worn smooth. He tries to round a poorly banked curve at excessive speed, the right tire blows out, he loses control, the car leaves the road and is demolished.

"What caused the accident? The argument? The drinking? Speed? The weather? The smooth tires? The blowout? The poorly designed highway? It is impossible to say, for if any of these factors had been changed perhaps the accident would not have happened. We have no way to assign a cause even though we may have a complete description of the circumstances that led up to the accident. In fact, a coroner, state policeman and highway engineer would each be inclined to find different causes."

TIRED TIRES

Not long ago my next door neighbor wrapped his trusty Ford around a stump while rounding a slush covered curve. He said he tried to turn, but the car just didn't react. It felt as if the steering mechanism had broken completely loose.

The week before he'd checked on new tires, but put it off 'cause he was a little short on cash. As a result, he paid off a hundred bucks to get his heap straightened up and still had to buy the tires.

I could sympathize with him. I bounced my car off a guard rail turning off a turnpike one morning because I'd let my tires get too slick. I had tried to make the turnoff at my usual dry-weather speed after a fine drizzle dampened the pavement.

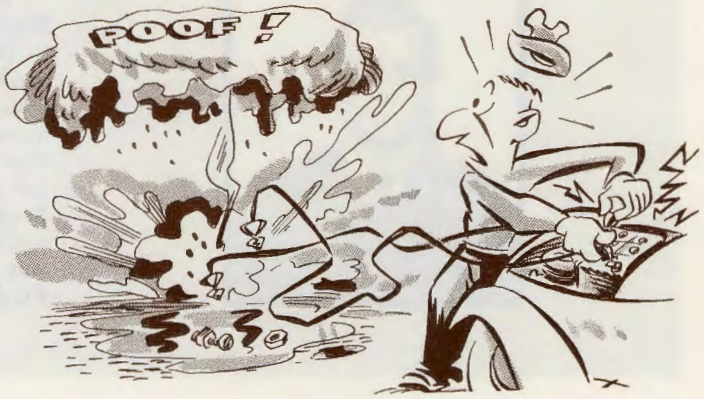
When I tapped the brake to slow for the turn it was too late... that road was slick as ice, at least to a set of bald tires. My repair bill cost almost twice as much as the new tires did. Since, I've paid more attention to tire condition. Far as I'm concerned, near slick tires are too expensive for my blood . . . I'll have them recapped by some dealer I trust or buy new ones. Let someone else risk their neck and cold cash trying to eke out the final few hundred miles from a set of tires.

Young airmen who are watching their nickels and dimes aren't the only offenders in this respect. I've seen quite a few old model cars parked around the O' club that have tires as bald as their owner's heads.

The common excuse is that they are the owner's second car and are never driven over 35. I've followed some of these men, and altho most stay below 35 going to work, few are seen going that slow headed the other way. 'Nuff said?

BATTERY BOMB

A car battery exploded when a TAC troop connected jumper cables to it. The jumper cables were hooked up correctly... positive to positive and negative to negative, both batteries were of the same voltage, but when he touched the negative pole of the sick battery, POW!



The people who sent this report recommended that us shade tree types use a face shield when replacing a car battery or when hooking up a jumper cable. We thought this over and agree that it's a good idea... if you happen to be one of those foresighted types who carries a face shield around with your jumper cables. If you are not, try hooking the leads to the faulty battery first... have all onlookers stand clear, and then hook them up to the good battery. This won't keep the bad battery from exploding if it takes the notion, but will insure everyone is well clear of flying pieces and splashing acid.

Taking the caps off the sick battery may keep it from exploding by releasing the hydrogen and checking the battery for a dead cell will keep you from hooking up to a battery which is a potential bomb... meaning don't run jumper cables to a battery that has a known shorted cell.

SEG NEWS

4450th Standardization Evaluation Gp.

Know your Stdn Evaluators

MSGT JOHN J. MIZELLE - C-119 FLIGHT MECHANIC EXAMINER

MSgt John J. Mizelle was born and raised in Windsor, North Carolina. He entered the service in 1946 and graduated from Aircraft and Engine Mechanics School in 1947. As an aircraft mechanic and aircraft instrument mechanic, he served in ATC and MATS until 1952. Since that time he has been assigned to TAC at such varied duties as C-119 Flight Mechanic, C-123 Flight Mechanic, Periodic Inspection Dock Chief and Maintenance Control Senior Controller. He was assigned to SEG in 1961 as a C-119 (C-123) Flight Mechanic Evaluator.

SCHOOL DAYS

Non-compliance with paragraph 3-4, AFM 60-2, attendance at SEFE Course, continues to be a recurring write-up on IG inspections. Part of this problem has been caused by cancellation of some of the SEG School classes during the latter part of 1963 and we will grant waivers to this paragraph if this was the cause; however, you must request them. Every unit should schedule their SEFEs to attend this course prior to their assignment as examiners. This will result in a better and stronger stdn/eval program through a full understanding of what the program is trying to achieve. The January 1964 issue of TAC ATTACK lists the Jet and Conventional course schedules for the first six months of 1964. However, Class 64-I, 5 to 8 May 1964, has been changed from Jet to Conventional. If there are additional requirements for one of these classes, the major command concerned. . . TAC, for active duty units or CONAC/NBG for Air Reserve Forces. . . . can request extra spaces from HQ, TAC, DPOP-A-5.

CHALLENGE OR CHECKMATE

Remember the good ol' days? Zapping down the pike! Roaring through the tree tops! Scaring the living daylights out of cattle, chickens, minks and the indigenous populace - the ducks from off the pond? Very hot Pops, and all that fun, thrill and glory jazz! Some of those jocks became aces, some were caught and got clothing sales or tool crib - still others bought Mom and Dad 10,000 bucks worth of sorrow and heartache. A man was a man! A fighter pilot was

free as the wind and twic't as fast; maybe good, maybe bad - but always free and mostly independent. Least ways until his flight commander nailed him. Those days his flight commander - Ol' Al Mighty, could levy taxes, perform weddings, hire and fire and schedule training. Who needs stdn/eval? If you were HQ you gleaned a motherly smile and got to lead once in awhile. Q and "You got no ambition, Hot Rock? I've seen you do better!" CQ - "Once more Jack, just mucky up one more time and you've had the bloody program, savvy? Now let's you and me get a cup and have a little palaver!" U - "Aw, don't take it so hard, ol' bud; we've had some interestin' rides and believe me I'll never forget none of 'em! Say - don't think they could a' picked a finer officer nor gentleman to send to Lower Slobbovia. Sure hate to see you leave the outfit but that's progress! See you at beer - uh, commander's call Friday night - Adios."

But that was late '48 when chork pops were a pickle a neice and iron men and wood ships and stuff like that. Today's complication, automation and centralization (I love 66 one) etc., have moved responsibility upwards and authority likewise. The commander, burdened with unimaginable responsibilities, myraid tabulations, graphs, charts, pressures and images, must know in mournful numbers of the combat ready, or unready, status of each and every fighter pilot in his whole blinkin' unit. How does he find out? Ask each stone how cool he is? Ask the flight commander? (Who hasn't scheduled a flight this fiscal year - nor led his own troops for a month or so?) (The manual prescribes the training; and he filled his squares the first of the quarter.) But, the old man must know. Not just a general "Yep, old Joe's doing OK!" But, how OK? In what methods and phases? What are his specific strengths and weaknesses? The commander is not being nosey; it's his business, his very career - same as skill, knowledge and professionalism is, nowadays, yours.

CORRECTION

In our article in the February 1964 issue of TAC ATTACK titled "Ten Percent (or more) Don't Get the Word," we goofed! When a wing activity has a requirement for a functional distribution publication, it submits an AF Form 764A, not an AF Form 124A! The AF Form 124A is used to order extra copies; i.e., "one-time" type requisitions.

So now stdn/eval! Perhaps not the best answer in your free, unfettered mind; but, a realistic interim solution. Administered at wing level by your SEF - a small, professional, experienced and humbly dedicated crew, duly appointed and specifically charged with the dual responsibility of standardization and evaluation. The first task being to ferret from you, the experts, the optimum methods to insure mission success and safety, and then to make this "best way" mandatory for all aircrews. The second task, evaluation, is merely to compare your manifest aviatorial talent, operational procedures and mission knowledge against the standard criteria, you have established, with fair, just and unbiased objectivity.

Whether you prefer the old system - tremendous in many respects, but oft fraught with subjectivity and personality conflict, or the new - less personal, more thorough and objective - is opinion, which also makes for horse races, hassels, dominoes and such. The fact remains - it is here; as much a fact and way of life for us fighter troops as aerodrome owner, mobile control, and bird watcher. So what can you do? Let it checkmate you? Reminisce about the good old days? Fight the program; then, moist of eye, assure the inn keeper that your S/E flight examiner was a prejudiced, no-talent clod, or accept the challenge?!! If you can really cut the mustard, if you really have the old fighter pilot spirit, you'll show that S/E weinie you can fly the crates they come in. You'll know what's expected, you'll study and prepare, and you'll brief and fly so sterling a mission he'll forever sing your praises, even unto his children and his children's children, and you'll be heartsick that you get such a coveted opportunity only twice a year. *Major E. W. Pitts, 479 TFW, George AFB, Calif*

A CHANGING CONCEPT FOR TAC AIR REFUELING

The concept of air refueling TAC's jets is rapidly changing from a rendezvous at various points along the route with the tankers, to a buddy formation system. As more of TAC's KB-50 s are retired, less are the times the TAC jet-type will need to sweat out the flight plan, heading and ETA to a set of coordinates along the route to a rendezvous, to reservice and then continue to the next refueling points - finally the destination. With the common cruise performance capability of the SAC KC-135 and TAC's receivers. . . . . a buddy takeoff and a buddy formation cruise along the entire route is possible. The buddy cruise offers the jet sport many of the advantages previously enjoyed by only the multi-place aircraft crew, i.e., a navigator to monitor the route of flight; improved communication facilities; a much less critical fuel supply, etc. More and more, TAC's jets are using KC-135 s to span oceans and continents thus reducing time enroute and carrying out TAC's mission more effectively.

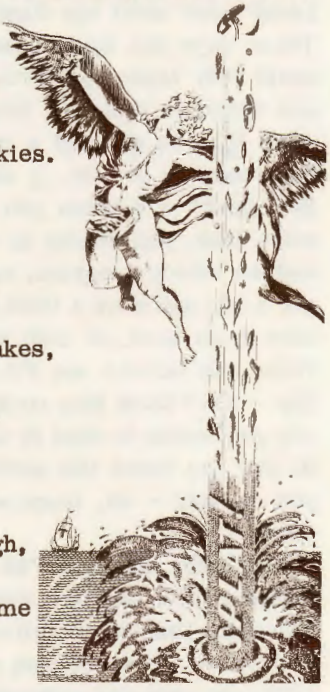
CARELESSNESS, INCOMPETENCE OR NEGLECT

Recently after observing a tragic accident, I found myself studying the words, "Flying in itself, is not inherently dangerous; but, like the sea, is terribly unforgiving of carelessness, incompetence, or neglect."

In the history of flight, one of the earliest mythical accidents was related by the Roman poet Ovid in "The Metamorphoses" in 8 A.D.* when Daedalus designed wings which were to carry him and his son Icarus from exile:

Fitting his pinions on,
a flight he tries,
And hung, self-balanced,
in the beaten skies.
Then thus instructs his child:
"My boy, take care
To wing your course
along the middle air:
If low, the surges
wet your flagging plumes;
If high, the sun
the melting wax consumes . . .
But follow me: let me
before you lay
Rules for the flight
and mark the pathless way.

Apparently Daedalus had developed some understanding of the fields of design, operations and training and command control; but the fate of Icarus was sealed when he ignored their Standardization/Evaluation Program and:



Grown wild and wanton,
more imbolden'd flies
Far from his guide,
and soars among the skies.
The softening wax,
that felt a nearer sun,
Dissolved apace,
and soon began to run;
The youth in vain
his melting pinions shakes,
His feathers gone,
no longer air he takes;
O! father, father!
as he strove to cry,
Down to the sea
he tumbled from on high,
And found his fate;
yet still subsists by fame
Among those waters
that retain his name.

When Ovid completed the "Metamorphoses," he failed to record whether an accident board determined if carelessness, incompetence, or neglect caused the event or if it should be attributed largely to deficiencies in design, operational procedures, training, command control; or, as everyone suspected, pilot error.

1900 years later, Lt Thomas Selfridge became the first man to lose his life in an airplane.

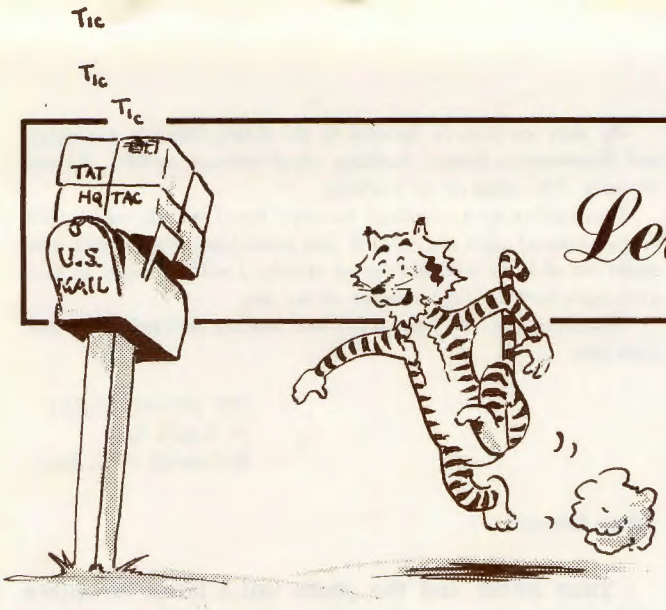
Those early tragedies, both real and mythical might be afforded some degree of excusal. They did not have our advantage of being able to look to history to avoid repeating the mistakes of the past — if it is possible to excuse carelessness, incompetence, or neglect.

Now, as throughout the past, before the shock of an accident begins to fade, the designers, the operations officers, the training officers, the flight surgeons, the commanders, and, of course, the fliers review their obligations and responsibilities and make changes which will insure that such an accident can never occur again — whether caused by carelessness, incompetence, or neglect.

But even today, somewhere, a widow will weep; because her mate, like Icarus, has fallen into the sea, a victim of someone's carelessness, incompetence, or neglect.

Capt William D. Hemmingsen

*English translation by Samuel Croxall in the 18th Century.



Letters to the Editor

Dear TAT

Not long ago you people waged war on the BOLD FACED items in the F-100 checklist. I think it is time we took a look at the list of BOLD FACED items outlined in the C-47 dash one. Some emergencies have up to 14 items! For an airplane that has been in the inventory as long as the Gooney, it seems the checklist has grown to the point of being ridiculous. Aircrews are concentrating on the BOLD FACED items and forgetting the most important part of handling an emergency... maintaining control and altitude. At present they do not have time to think or use plain good common sense. Aircrews who have flown the airplane for some time believe each sequence should be limited to no more than six BOLD FACED items.

The present checklist is not always consistent. It says to put the skis down before feathering an engine; however, an engine fire in flight says, feather the engine without regard for the skis. If the skis are properly installed the prop blades will not strike the skis during feathering; if not properly installed, they will.

In conclusion, I recommend the checklist be revised to read such BOLD FACED items as mixture, prop, throttle, feather, hydraulic pump and checklist.

MAJ RAYMOND G. SUMMY
FSO, 1st Air Commando Wing
Hurlburt Field, Fla.

Dear Ray

I agree with you and so do the SEG troops who have really been carrying the ball on this project. They tell me they'll eventually get the gooney checklists cleaned up, but right now they are mumbling something about money keeping them from having a handbook conference.

Incidentally, the SEG troops tell me they have received very few Form 847s on this item...which gives them very little ammo to work with.

TAT

Dear TAT:

We are gratified and pleased to note that our SSgt Marvin Watkins won recognition as Crew Chief of the Month in February's "TAC Attack."

Our faces are really red now, as we find the picture to be one of our SSgt John J. Nelson, who was in close contention as our Crew Chief of the Month along with SSgt Watkins.

Enclosed is a photo of the real, and still deserving of recognition, SSgt Marvin Watkins, whose photo was somehow switched with Sgt Nelsons during the last minute rush to meet the submission deadline.

MAJ EDWARD I SMITH
Flying Safety Officer
4510 CCTW, Luke AFB

Dear Smitty

We echo your apologies to Sgt Watkins and thank you for advising us of the mix-up.

TAT

Dear TAT

Normally I enjoy reading the TAC ATTACK and your column each month. However in the February issue (page 7) while reviewing a Navy F-4 accident you pulled a boner which will not endear you with the old line NAVY. A carrier is a ship . . . not a "boat." Any vessel which can be carried on a ship is referred to as a boat – need I say more?

LCDR Young

Dear Commander

After you troops get thru loading the Nautilus onto the Enterprise, I'll take a running leap and jump out one of those round windows in the pointy end of the top floor of said bo...ah . . . ship. Seriously, I have nothing but respect for you lads who fling flying machinery at those things. No hard feelings?

TAT

LETTERS TO TAT

Dear TAT

I just finished reading the February issue of TAC ATTACK and found it to be very interesting.

I am assigned to the 23d Supply Squadron of the 23d Tactical Fighter Wing, here at McConnell AFB, Kansas and work in a section which is the only one of its kind in TAC. I thought you might find it interesting, and possibly find a place in one of your future issues for an article on it.

I am assigned to the SCAPE (Self Contained Atmospheric Protective Ensemble) Maintenance Section. My AFSC is 92250A which is Personal Equipment Specialist. My job is to maintain and inspect suits which are worn during the fueling of the Titan II missiles which are assigned to this base and the 381st Strategic Missile Wing (SAC). We must also travel to the missile complexes which are located within a 75 mile radius of the base to provide support to the PTS (Propellant Transfer Systems) crews when they refuel and re-cycle the Titan II missiles.

SSGT CLARKE and A2C SWETT help suit up A1C Spencer while Lt Col Anderson, maint superintendent, looks on.

The SCAPE Suit is made of a butyl coated fabric, and is used with an environmental control unit which contains a dewar that is filled with 3.5 liters of liquid air. This is a mixture of 79% Liquid Nitrogen, and 21% Liquid Oxygen. It is also part of my job to mix the liquid nitrogen and liquid oxygen to obtain the liquid air used in this unit.

When the unit is placed within the suit, the wearer is completely protected from the fuels of the Titan II for approximately 50 minutes. When the first supply is depleted, the worker simply obtains a new back pack and returns to his work area ready for another 50 minutes of work.

My duty section is located in the MAMS (Missile Assembly and Maintenance Shops) building which belongs to SAC. We are the only TAC shop in the building.

I am enclosing a couple of pictures that I thought might give you an idea of what the SCAPE Suit looks like. If you think you might be able to use this for an article, I will be happy to provide more technical information on my job.

Thanking you for your time, and looking forward to hearing from you.

A2C DENNIS J. ELY
23 Supply Sqdn
McConnell AFB, Kan.

Dear Dennis

Your letter and the photo tell a fairly complete and most interesting story - many thanks. I'd bet the price of a SCAPE suit that few ATTACK readers knew that any TAC troops were doing this sort of work. I know I didn't.

It seems to be a demanding job, well worth the interest and pride you are taking in it...I wish all ATTACK readers felt the same toward their own jobs.

TAT

Letters to Tat Don't Duck... protect your health, stop smoking

Recognition

MAINTENANCE MAN OF THE MONTH

Airman First Class Joe Mozisek of the 474th Tactical Fighter Wing, Cannon Air Force Base, New Mexico, has been selected as the Tactical Air Command Maintenance Man of the Month.

Airman Mozisek has worked in all sections of the wing's propulsion branch and has demonstrated exceptional devotion to assigned duties. While on NATO rotation, conditions necessitated that he be placed in charge of five crews of four men each. Airman Mozisek filled this seven level position in an outstanding manner although he had been in the career field less than eighteen months. During this period he supervised the accomplishment of thirteen periodic inspections, nine minor repairs and seven build-ups on J-57 engines.

Airman Mozisek's exceptional job knowledge and his ability to supervise other airmen have proven to be valuable assets to the wing's maintenance complex.

CREW CHIEF OF THE MONTH

Staff Sergeant Leon R. Henderson, 355th Tactical Fighter Wing, George Air Force Base, California, has been selected as the Tactical Air Command Crew Chief of the Month.

During the past nine months Sergeant Henderson's F-105D was chosen for static display on four different occasions. At each location, Sergeant Henderson received compliments from high ranking officers and civilian dignitaries concerning the excellent appearance and condition of his machine. He has not stopped with keeping his aircraft neat appearing, but has set a standard for maintenance which few crew chiefs have been able to equal. Quality control spot checks on his aircraft revealed only minor discrepancies, none of which would affect safety of flight.

Sergeant Henderson's devotion to safe, swift mission accomplishment has served as an excellent example for others and helped improve the quality of maintenance his section produces.

Men who undertake considerable things, even in a regular way, ought to give us ground to presume ability.

— *Burke*

BEST MAINTENANCE RECORDS

JANUARY

MSGT EARL J. CLOPTON
366TFW, Holloman AFB, New Mexico

SSGT WILLIAM W. LEE
464TCW, Pope AFB, North Carolina

A1C TROY O. BRADY
4TFW, Seymour Johnson AFB, North Carolina

FEBRUARY

SSGT DANIEL J. KING
464TCW, Bakalar ANG Base, Indiana

SSGT JAMES R. BROWN
4433ATS, Dobbins AFB, Georgia

A3C CARL D. GARDNER
401TFW, England AFB, Louisiana

Well Done

Unit Achievement Award

192TRS, Reno MAP, Nevada, 11 Dec 62 - 10 Dec 63
149TFS, Byrd Fld, Virginia, 17 Dec 62 - 16 Dec 63
481TFS, Cannon AFB, New Mexico, 31 Dec 62 - 30 Dec 63
522TFS, Cannon AFB, New Mexico, 1 Dec 62 - 30 Nov 63
478TFS, Cannon AFB, New Mexico, 1 Jan 63 - 31 Dec 63
700TCS, Dobbins AFB, Georgia, 2 Nov 62 - 1 Nov 63
831CSG, George AFB, California, 24 Mar 62 - 23 Mar 63
354TFS, George AFB, California, 21 Jul 62 - 20 Jul 63
357TFS, George AFB, California, 21 Jul 62 - 20 Jul 63
16TRS, Shaw AFB, South Carolina, 16 Jan 63 - 15 Jan 64
162TFS, Springfield, Ohio, 6 Jan 63 - 5 Jan 64
166TFS, Lockborne AFB, Ohio, 31 Jan 63 - 30 Jan 64
309TCS, Pope AFB, North Carolina, 31 Jan 63 - 30 Jan 64
777TCS, Pope AFB, North Carolina, 20 Jan 63 - 19 Jan 64
4453CCTG, MacDill AFB, Florida, 1 Jan 63 - 31 Dec 63

pilot of distinction

Pilot of Distinction

Captain Joseph E. Haines of the 4510th Combat Crew Training Wing, Luke Air Force Base, Arizona has been selected as the Tactical Air Command Pilot of Distinction.

As Captain Haines and a student returned from local training in an F-100F the AC generator failed. After an unsuccessful reset attempt, Captain Haines noted marked fuel flow fluctuations. He suspected fuel control trouble and took proper corrective action. However, at 14,000 feet, 20 miles from the closest suitable airfield, the engine flamed out.

Captain Haines set up a maximum glide toward this airfield and tried four airstarts. He radioed his emergency and intended actions as he glided toward low key. A decision to eject could be made at that point without endangering inhabited areas. At low key, conditions looked ideal and windmilling RPM gave good control response, so Captain Haines proceeded to make an excellent landing from the rear cockpit. Investigators found a failed fuel pump circuit breaker in the battery compartment and indications that a butterfly valve malfunctioned in the inverted flight tank and allowed the engine to pull air and flame out.

Through outstanding skill and excellent judgment Captain Haines was able to bring his aircraft to a safe landing so investigators were more readily able to find the cause of the malfunction.

TAC TALLY

A COMPARISON OF TACTICAL AIR COMMAND ORGANIZATIONS

MAJOR ACDNT RATE
1 JAN - 29 FEB

TYPE	1964	1963
ALL	12.9	12.3
F-4	0	0
F-105	56.3	88.2
F-104	0	37.0
F-101	0	44.2
F-100	13.9	3.7
F-86	0	0
F-84	34.1	50.6
B-66	0	0
B-26	135.5	0
T-39	0	0
T-33	0	0
T-29	0	0
KB-50	0	0
C-130	0	0
C-123	0	0
C-47	0	0
U-10	0	0
T-28	0	0

FEB TALLY
GUARD AND RESERVE

UNIT	MAJOR	MINOR
108 TFW	1	

ACCIDENT FREE
MAJOR & MINOR

JET

ACTIVE	MONTHS		ANG
23 TFW	17	13	121 TFW
4453 CCTG	13	10	140 TFW

CONVENTIONAL

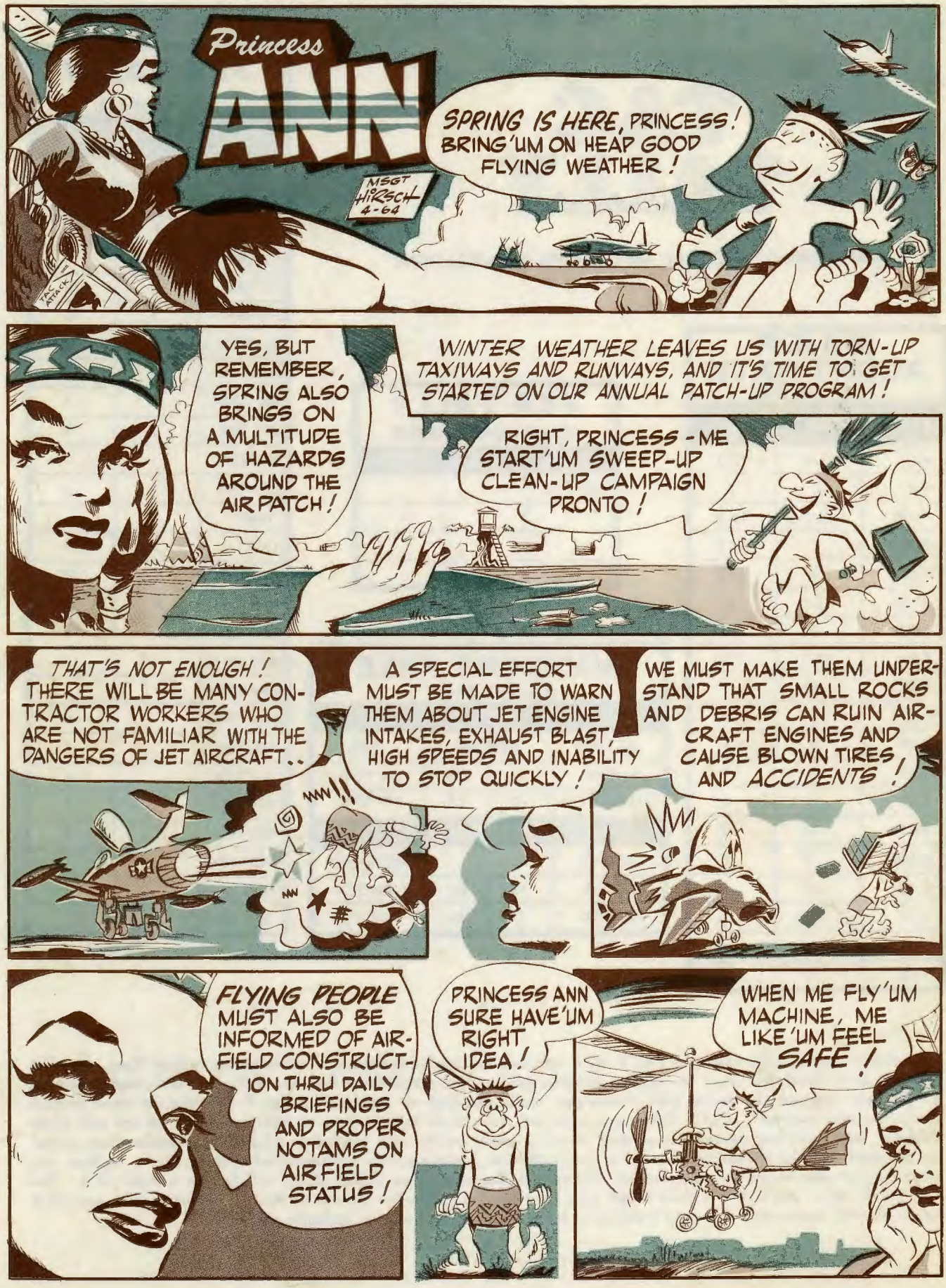
ACTIVE			RESERVE
314 TCW	55	67	434 TCW
463 TCW	32	43	349 TCW

FEB TALLY
ACTIVE UNITS

UNIT	ACDNTS*	INCDTS
4 TFW		11
12 TFW		3
15 TFW	1	3
23 TFW		1
27 TFW		16
31 TFW	2	12
354 TFW		13
355 TFW	3	5
366 TFW	1	3
401 TFW	2	9
474 TFW		9
479 TFW		5
TARC		
SAWC		3
4510 CCTW		22
4520 CCTW	3	12
4411 CCTG		4
4442 CCTG		1
4443 CCTS		1
4453 CCTS		5
516 TCW		2
464 TCW		4
314 TCW		1
463 TCW		2
4440 ADG		
4500 ABW		1
363 TRW		

* MAJOR & MINOR

February was a bleak month for TAC F-105s with four successful ejections... all following inflight fires. One fire occurred on a simulated close air support mission, another was preceded by flameout while the third caught fire after oil pressure dropped; the fourth after compressor stalls and high oil pressure. A fifth F-105 received minor damage from aft section overheat. Our F-100s came next with two pilots killed, three aircraft destroyed and one with minor damage. One pilot lost control and crashed after his leader led him into weather on a LADD run, another lost control and crashed after he became disoriented when his attitude gyro apparently malfunctioned at night, above weather. Another ejected after he couldn't get a restart following a flameout. Two F-84F pilots collided on a night GCA. One ejected; the other was killed. A third F-84F pilot got too close to another aircraft on final and wiped out the gear when he hit jet wash and landed short. An F-86H pilot crashed possibly due to an epileptic seizure.


Princess ANN
MSGT HIRSCH 4-64
SPRING IS HERE, PRINCESS! BRING'UM ON HEAP GOOD FLYING WEATHER!
YES, BUT REMEMBER, SPRING ALSO BRINGS ON A MULTITUDE OF HAZARDS AROUND THE AIR PATCH!
WINTER WEATHER LEAVES US WITH TORN-UP TAXIWAYS AND RUNWAYS, AND IT'S TIME TO GET STARTED ON OUR ANNUAL PATCH-UP PROGRAM!
RIGHT, PRINCESS - ME START'UM SWEEP-UP CLEAN-UP CAMPAIGN PRONTO!
THAT'S NOT ENOUGH! THERE WILL BE MANY CONTRACTOR WORKERS WHO ARE NOT FAMILIAR WITH THE DANGERS OF JET AIRCRAFT..
A SPECIAL EFFORT MUST BE MADE TO WARN THEM ABOUT JET ENGINE INTAKES, EXHAUST BLAST, HIGH SPEEDS AND INABILITY TO STOP QUICKLY!
WE MUST MAKE THEM UNDERSTAND THAT SMALL ROCKS AND DEBRIS CAN RUIN AIRCRAFT ENGINES AND CAUSE BLOWN TIRES AND ACCIDENTS!
FLYING PEOPLE MUST ALSO BE INFORMED OF AIRFIELD CONSTRUCTION THRU DAILY BRIEFINGS AND PROPER NOTAMS ON AIR FIELD STATUS!
PRINCESS ANN SURE HAVE'UM RIGHT IDEA!
WHEN ME FLY'UM MACHINE, ME LIKE'UM FEEL SAFE!