DECEMBER 1961

TAC ATTACK

TACTICAL AIR COMMAND

TIRE TACTICS

ATTACK

GENERAL WALTER C. SWEENEY JR. COMMANDER TACTICAL AIR COMMAND
LT GEN G.P. DISOSWAY VICE COMMANDER
COL J. K. JOHNSON CHIEF OFFICE OF SAFETY

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Replace the aft section on an F-100

Editor - Major Karl K. Dittmer Assistant Editor - Major James G. Swensen
Art and Production - T/Sgt Heinz E. Hirsch

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"Experience join'd with common sense,
to mortals is a providence."
--Green

angle of attack

Mr. Clarence L. Barnhart once edited a pocket dictionary which is invaluable to those who write. This book can be used as an excellent rule of thumb. If Mr. Barnhart did not deign to include a word, a more common one should be used, otherwise someone, somewhere, will not understand what is being said. Another good feature of this book is the way Mr. Barnhart has of coming to the point with his explanations. For example he defines "common sense" as "practical intelligence." He gives no other meaning and his definition is most apt.

This definition tells us that a man with common sense is both practical and intelligent. It also suggests that he has the willingness to apply his intelligence to the job at hand. Such a man would soon garner experience.

Ideally, all flying safety officers should have the virtue of common sense, because they are expected to do a wide variety of things, and cannot hope to become expert in all of them. A man with common sense doesn't necessarily need to be an expert. He applies his experience in one area to the unfamiliar . . . and often times is able to improve over the expert.

The average Flight Safety Officer is well-trained in flight operations. He is usually a well-experienced pilot. When he becomes a flight safety officer he suddenly needs to become very familiar with many other areas... particularly with maintenance. If he has good common sense, he will have little trouble learning many things about this all-important field. He will find that his operational experience has furnished him with a pretty good background. He will have little trouble screening aircraft forms for various problem areas . . . particularly, if he will visit with the experts in Quality Control to find out what to look for.

By reviewing OHR's, Emergency UR's, TCTO's, and by making it a practice to work closely with the Chief of Maintenance, he will soon know what engineering changes (ECP's, TOC's, etc.) are being considered for his unit's aircraft. He will learn which ones affect the operation of the aircraft, and more importantly, which affect safety of flight. In this way he can help monitor the progress of these changes and keep the aircrews informed of the things they need to know. Although he may never become an expert in this area, or in any other area, common sense and a little hard work will make him more valuable than many who are.

Colonel James K. Johnson
Chief
Office of Safety

LT Green glanced at the Old Sarge and chuckled. One of the things that always amused him was the Old Sarge's eyebrows. They were an infallible barometer of his mood. Right now they were deeply furrowed, indicating heavy concentration and considerable anger.

The anger was verified by the set of the Old Sarge's corn cob pipe and by the rapidly increasing cloud of acrid blue smoke forming over his desk.

He could see that the Old Sarge was reading, or trying to read, an almost blank sheet of tissue paper. Obviously it was the last copy of a message that had been typed by a timid typist. When the Old Sarge's finger reached the end of the first page, Lt Green said, "I see they sent you the working copy of another message. What do they want that's so disagreeable?"

The eyebrows shot up in mild surprise and settled back to a slightly less stern position. "Ah, it's on that bracket we UR'd. You know, the one we've had so much trouble with, sir."

"Yeah?" Lt Green was no longer amused. "That emergency UR?

The Old Sarge nodded an affirmative.

"You mean they still don't buy our fix?" His voice echoed his disbelief. "For Pete's sake what do they want now?" He could see now why the Old Sarge was angry. The outfit had lost a bird when this bracket failed and caused a fuel line to break. As soon as they had found the cause, they had shaken down the rest of the fleet and had found more birds with the same bracket cracked. That's when they sent the first Emergency UR, and requested authority to locally fabricate a heavier bracket out of a better grade of material. It was a simple part that any sheet metal shop could build in short order. He remembered, the Old Sarge hadn't been too cheerful when he had read the reply to that first message, mostly because the AMA had downgraded their UR to routine. They had also stated that failure data did not indicate that a problem existed.

Immediately, they had fired back a reply pointing out to the AMA that the bracket was a non listed item which would not generate data. They had also repeated their request for authority to build a heavier bracket. A sudden thought struck the Lt. He asked, "They didn't make that routine again did they?'

The Old Sarge nodded his head again and tightened his jaw. His pipe stem snapped. He spit out the bit, glared at it and threw both bit and pipe into the waste basket. Then he said, "You'd think those people would give us credit for knowing when we have a problem. After all, we hate to write messages and letters just as much as they do and wouldn't write 'em unless we were satisfied that we had trouble. Routine, hunh! OK, we'll see!' He picked up the phone and dialed, as he dialed, his mood seemed to change. He grinned maliciously and said, "It's time we got someone to help build a fire under that bunch. A coke that we're installing our brackets day after tomorrow . . . Good morning Colonel! This is . . . No, just fine sir. Say, we have a little problem I'm sure you'll be interested in sir . . . One that could stand a little command support . . . "

Two days later, Lt Green walked over to the Old Sarge's desk, shoved the yellow copy of a message on his desk and placed a frosty bottle of coke squarely in the center of it. Once more the eyebrows lifted, then settled to indicate good humor. He grinned and said, "Sir, I take it you lifted this message from headquarters. We get our fix?"

Green nodded and said, "You know darn well we did!"

ON TARGET

THE CAPTAIN LOOKED at the score sheet and shook his head in disbelief. Handing the clip board to another pilot in the small group around the dispatch counter he said, "Unscorable! What's the matter with those characters? I know darn well that those rockets were on target!"

"They must have been looking somewhere else, Cliff. I'd swear you had 'em inside 50 feet." This remark was made by a tall soft spoken 1st Lieutenant. He had flown the number two aircraft and had been turning on target when the Captain had fired. "Chalk it up to that lousy range. You know how hard it is to score from that tower."

The Captain grunted, then looked at his watch. It read 04:58 and he had to give the 05:00 briefing. Without saying another word, he turned and strode toward the briefing room.

Two briefings and several hours later the Captain, the tall Lieutenant and two other pilots were suited up and making their way out of the briefing room. Bad weather had forced them to delay their mission, and had

done little to improve the Captain's mood. He had stayed tight lipped and unsmiling all morning. As they reached the door he turned, tapped one finger against the Lieutenant's chest and said, "Watch my hits this time. I'm going right down to the foul line and put them in so close that those blind beggers can see nothing but flying white wash. "

"I'm with you," the Lieutenant replied, "We can't afford to be cheated out of any more hits or we're gonna bust this ORI for sure. '

About thirty minutes later, the Captain yawed his aircraft and glanced back at the others to make sure they were taking spacing. He called the range and asked for clearance. It was given. He turned base, checked speed and altitude and waited for the target to slide into position. When it looked right, he smoothly rolled the machine over and down, calling on the radio, "Red Lead in, hot."

An impersonal voice answered in his headset, "Cleared, Red Lead."

The pass looked good. It should, because just a few weeks before the Captain had qualified as expert with rockets on this same range. Still, this time he wanted to make doubly sure. The altimeter unwound, he checked it . . . close to normal firing altitude . . . he waited, deliberately pressing closer than normal ignoring the urge to pull out. He pressed the trigger and saw the rockets accelerate away from his aircraft, headed toward the target. He hauled back on the stick suddenly realizing that he was much closer to the ground than he had intended to get. "Too close!' he thought, as the nose of the aircraft made its way across the brown earth toward the horizon.

The aircraft was level but still sinking when it struck the ground and exploded some 300 yards beyond the target. No one noticed the white smoke from the spotting charges that lingered briefly over the center of the target.

This was the fourth TAC aircraft damaged or destroyed during 1961 because of "target fixation" or pressing in too close. In addition, during the readiness test being conducted at the time of the accident, pilots from this unit chalked up 17 fouls in 240 passes. This is a completely unacceptable average and indicates that these pilots were substituting daring for skill . . . pressing in close and using Kentucky windage in order to minimize errors in sighting and holding. Besides being dangerous, this method of delivering ordinance is completely unrealistic. Better accuracy can be obtained by adhering to the slant range that has been set into the sight, then relying on smooth flying and precise sighting.

Foul lines and minimum delivery altitudes have a very practical purpose. They provide a reasonable margin for error during practice and prevent blast damage when actual weapons are used. They were established and proven practical under conditions where a foul could very well mean not coming home instead of being sent home.

IT WAS A FINE DAY - until shortly after a young first louie came booming into the traffic pattern with a flight of three F-100's. Apparently he was feeling his oats, because he was about 2000 feet to the right of the runway when he made his left break.

He was too close to the runway when he rolled out on downwind and both wingmen automatically adjusted their pattern to a more comfortable size. As could be expected, his turn to final was steep.

The mobile controller saw him in the turn, picked up his mike and ordered him to take it around. The Lt either ignored the order, or was concentrating so hard it didn't register. Anyway, he pressed on. The mobile controller repeated his order... and seconds later the machine started to fall. Now it was too late. The pilot knew it too, because he keyed the mike button and said, "Oh hell!", just before his aircraft smashed into the ground a quarter of a mile to the right of the runway and two miles short. A lot of people must have echoed his words when they looked up at the sound of the crash and saw the column of dirty black smoke and billowing flame.

Pointless and discouraging... particularly to your old TAT. The obvious waste of talent and hardware is bad enough. Worse, this accident indicates that some people are still clinging to the belief that a hot pattern is synonymous with sharp flying.

Take it from this old tiger, it ain't! As we've said before, the sharper pilots know they are good and don't have to go around proving it, either to themselves or to anyone else. True, they can get more out of an aircraft than the rest of us plumbers... but they see no reason to strain their skill and cunning in the traffic pattern with an aircraft that will never recover should some slight miscalculation or change in conditions cause it to transition from a flying machine to a falling chunk of metal. In other words, sharp troops make comfortable patterns just like the rest of us.

Don't go away, we're just getting warmed up. If you are like TAT - and that would truly be a pity—you can find an outlet for what the head shrinkers would probably call your alter ego without risking your neck or any gold plated hardware. Do it by showing others how closely you can hold headings, speeds and altitudes during all phases of flight. Do it by showing them how smoothly you can do everything, by how accurately you can deliver ordinance and by how well you know your aircraft. Do this, and do it well, and your ego will take care of itself. So will everything else.

THE BIG THUNDERCHIEF touched down on the concrete overrun some 90 feet short of the primary barrier, bounced easily onto the runway, skipped lightly and whistled by mobile control. The mobile controller had watched several similar landings and figured that it was about par for the day, so was ready to forget the machine . . . that is until he heard the power headed toward military. Watching it again, he saw the pilot rotate it into the air and yank up the gear. It flew level for a moment or so, then the nose started to come up in increments as the aircraft gradually settled lower and lower and lower . . . Sigh! The ventral fin started to scrape, then the right drop tank, left drop tank, etc., etc.

After the machine was committed to slide, the pilot chopped power and held on while it traveled a mile down the runway and thru the barrier, coming to a halt on the overrun. The pilot decided not to open the canopy until things stopped happening. This was a fortunate decision since the machine ducked under the top web of the barrier and it would have raked thru the cockpit.

Some long hard lean years back, this old tiger hiked a napalm and rocket laden Mustang off a bumpy runway and yanked up the gear . . . then spent an anxious little eternity trading inches of altitude for precious scraps of airspeed. We won, through no fault of our own, by about one inch. From that day onward our take-offs were easily spotted. We were the guy who left his gear down until well off and flying! We see little reason to change either. Of course, flying is a bit more complex today. This troop had more to contend with. He got mad at himself when he botched his landing, and then made the mistake of taking his ill temper out on the aircraft by kicking it in the aft section, yanking it into the air (without checking for proper takeoff airspeed) and yanking up the rollers. When he shoved the go handle forward he put the speed brake switch in neutral instead of up. When the gear came up, out came the boards . . . and nature took care of the rest. This was a rather expensive way to prove that you can't afford to lose your temper and go yanking an aircraft around. 'Tis better to just cuss a little to yourself.

A NAVY PILOT inadvertently stopcocked on the break tried an airstart and got the mill running just as his bird hit the trees, ballooned over a twenty foot railroad embankment and slid to a halt in a level field. The pilot cut his way through the canopy using his survival knife. Hmmmm. This character started out right hot but at least he got cool enough to hack his way out of the shambles.

These knives are handy pieces of equipment. Ask another pilot who had to eject over the brine. This troop soon found himself tangled in his chute scooting thru the water scooping up huge mouthfuls. He managed to get his head out just long enough to take a breath of air, then worked his knife out and slashed shroud lines until the chute collapsed. By the way . . . you do carry a knife don't you? One you can get to in a hurry without having to push any little old button or unzip a pocket.

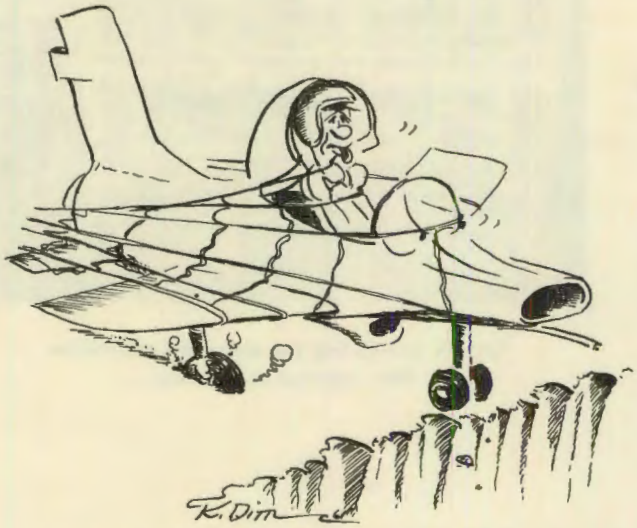
EVERYTHING SEEMED NORMAL during the start, other than a couple of mild thumps, but when the pilot started taxiing he soon found himself with a problem. An unusual noise from the engine caused him to look into the office where he found both fire warning lights glaring back. Then he noticed flame coming up alongside the right side of the canopy. About then, he decided he wanted to be somewhere else, braked to a halt, stopcocked and made two aborted attempts to disconnect his dinghy survival kit. Too hard, so he clambered over the left side, jumped to the drop tank and onto the ground still attached to chute and survival kit. The survival kit threw him off balance and he fell just clear of the bird.

He hit his head during the fall, but his helmet kept him from getting hurt. Needless to say, he had a few unkind words for dinghy survival kits and more specifically, for the attaching snaps.

For the record, the fire was caused by a failed starter. Your Old TAT won't quarrel with this lad's comments regarding the kit snaps . . . but as usual, we would like to make a point. Seems that a few people practiced deplaning, chop chop like, and found that they saved time by getting out of the harness and stuff

FIRST. Less chance of triggering off a hot seat, too.

If the canopy is closed, leave it that way until you are all clear of your PE and set to make your uninhibited dash.



THE F-100 DRIVER got his big machine stopped alright--no sweat, other than two blown tires, a couple of ruined brakes and a few repairs to the barrier.

It all started with a GCA that was a wee mite warm, a ceiling that was slightly uncomfortable, a dash of rain, a slick runway and a drag chute that didn't work. Eliminate any one factor and you'd eliminate the sweat, blown tires and such. "Ah," you say, "not my problem . . . my base doesn't have F-100's."

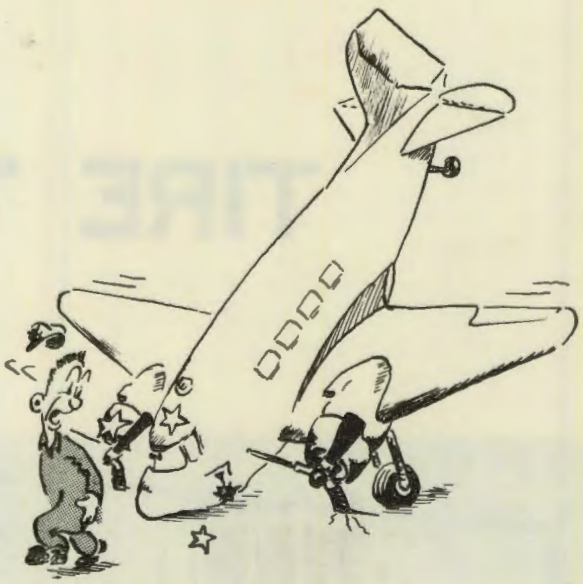
Old TAT will agree with you, provided you have nothing to do with transient alert. If you do have anything to do with transient alert it most certainly IS your problem . . . because, friend, some day you or one of your men will have to install a drag chute in an F-100.

The cold hard facts indicate that the drag chute failure rate makes like an astronaut when chutes are packed and installed at non F-100 bases - only you people can stop it.

By the way, you F-100 chauffeurs . . . when you're off on one of those boondoggles 'tis best to supervise the drag chute installation even tho it slows down your turn around. It won't slow it down nearly as much as a wheel and tire change, or having to wait for someone to untangle you and your bird from the net.

FROM AN EMERGENCY UR . . . one automatic lap belt failed to open during an actual ejection, four others failed to separate when a blow check was performed as a onetime check of all MA-5 and MA-6 lap belts in the organization. TAT isn't trying to scare you . . . he's just trying to impress you with the need for following thru behind the automatic equipment should you ever have to take a seat ride. After all you just might have one of the five!!

ON THE GO from a GCA approach, the pilot of a T-33 called, "Mayday! Mayday! Mayday! Flameout!' Then tried to eject at between one and two hundred feet. The ejection was unsuccessful. TAT can't help but wonder if this lad couldn't have found a little better use for his time, like trying an air start, instead of pressing the mike key. If his RPM had decayed too much, he would have been better off to have ejected immediately and hollared "Mayday" while swinging under his 'chute. The report we read was sketchy, and did not give the cause of flameout.



A CAPTAIN WAS TRANSITIONING into one of the Air Force's finer type birds. Having previously chalked up about four and a half hours in its right seat he was taxiing to the active for his first left seat try. While thus occupied, the IP unlocked the tail wheel so his student could get used to the feel of taxiing with it unlocked. You're right--it was a gooney bird and it reacted by going to the right, to the left, then abruptly to the right. Throttles were retarded and both the IP and his student applied brakes. The gooney stopped like a bird dog on point. Nose to the ground, tail in the air. Proving once again that the old familiar "forgiving" gooney has to be treated with a certain amount of finesse or it'll bite . . . . So will every other flying machine.

—TAT

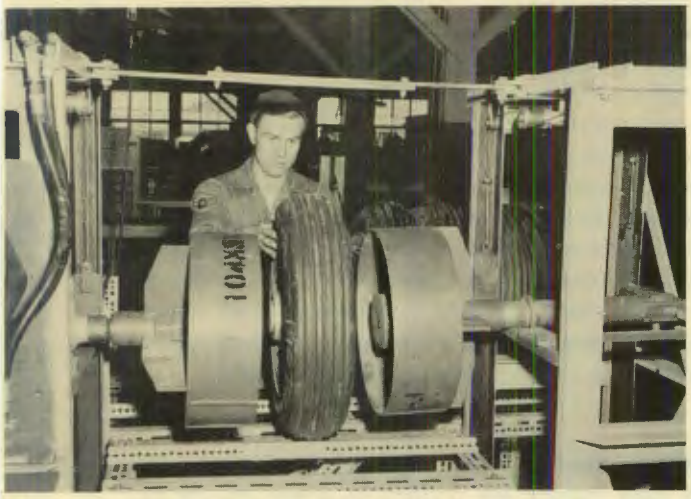
Cart is truck-bed high, for easy loading and unloading.

Cart for transporting tire and wheel assemblies from operation to operation.

TIRE TACTICS

Built-up assemblies shown in storage area.

Build-up holding fixture. Again, the fixture is the same height as the cart.



Breakdown press. The press is the same height as the cart so that no lifting is required.

Bearing repacking is done on the cart. De-greaser is directly behind the mechanic.

THE MAINTENANCE PEOPLE in the 479th Tactical Fighter Wing at George Air Force Base are unusually proud of their tire shop and have furnished us with the photographs you see on these pages. Look them over and you'll agree that this is one of the best organized and cleanest tire shops in TAC, or in the USAF for that matter. Compare their efficient set up with the usual wrestle-with-em-on-the floor type of tire shop. These photos show the essential equipment used in handling tires. Other units can easily use them as a guide to set up their own shops. All racks and carts are built up from Dexion, which is available thru supply.

All safety precautions are followed, such as removing valve cores prior to taking the wheels off the aircraft, rechecking to see that the valve is out prior to disassembly and using a cage during inflation.

Inflation Cage. Once again, the cage is at the same height as the cart and no lifting is required.

Storage area. Only empty tires are stored below or above normal working height.

TAC TIPS

ALTERNATES

Use care and good judgment when selecting alternates in marginal weather, especially this time of year. An alternate is not suitable if it is being affected by the same weather as your destination. Too often pilots select an alternate just a few miles (5 to 25) from destination and on arrival find that neither station is acceptable for landing. And then the fun begins.

LOW GO

Although the cause could not be definitely determined, an aircraft commander with an excellent reputation as a navigator, flew into a mountain because he accepted a clearance to let down below the minimum enroute altitude before he reported over a positive fix. When flying over mountainous terrain at night or on instruments, ALWAYS report over the radio facility serving the airport of intended landing before descending below minimum enroute altitude.

TIRED TIRES

At Cannon AFB, the transient maintenance section has adopted the practice of checking the tire pressure on all transient T-birds that stay on base over three hours. Unfortunately, most maintenance sections in the Air Force are not giving this kind of attention to T-33 tires. During a ten-day period, the people at Cannon found all transient T-bird tires to be under-inflated, with pressures ranging from 105 to 125 psi. According to the men at Cannon, worn tires generally had lower pressures than newer ones. Maintenance supervisors, draw your own conclusions--then check your outfit.

YOU ARE THE INVESTIGATOR.

The 122nd Tactical Fighter Wing (ANG) has developed an interesting program to help pilots sharpen their normal and emergency procedures. Each week a description of the events that led up to an aircraft accident or incident is given to all tactical pilots assigned to the unit. From the information presented, each pilot is required to determine the errors leading up to the mishap and to make recommendations to prevent a recurrence. These findings and recommendations are then discussed at the next flight safety meeting. Whenever possible actual accident and incident reports are used. This program has been received with considerable enthusiasm and has generated some interesting and informative discussions. Audience participation, such as this, does much to stimulate interest and familiarity with the aircraft. It also gives pilots a better understanding of some of the problems faced by accident investigators, safety officers and commanders.

HIDDEN HANDLE

A pilot landed his T-bird on a wet runway and soon saw that he would be going off the end. He decided to get rid of the canopy, but in his haste, couldn't find the T-handle. He jettisoned the lid by raising the right armrest. The hazard is obvious-he was just one movement from ejection. Do you know where the T-handle is? Could you get to it in a hurry during emergency conditions?

A COOL FACT

Lower temperatures, like lower pressures, mean the aircraft is lower than indicated. For every 5-degree difference in temperature from the 59 degree F (15 degrees C) standard, a one percent error in indicated altitude occurs.

HELICOPTER HAZARD

Carrying low density cargo externally on a helicopter can be a risky business. Items such as dart targets, light aircraft wing and tail sections, etc., can get to swinging back and forth until they get into the rotor blade arc. When this happens . . . results are quite predictable. When hauling such items, chopper pilots should make certain that they are slung correctly and riding in a stable manner.

FOR A SAFER HOLIDAY

Give your family some security this Christmas. Buy a set of approved seat belts for your car. Your ground safety section is making it possible for you to buy these "life belts" at near cost through the TAC SEAT BELTS FOR SAFETY PROGRAM. Now, you can give your family the benefit of this proven protection without wrecking the family budget. Should you happen to get involved in a smash-up, your family will stand a good chance of surviving . . . and you can salvage the belts to put in your next heap.

MISSILES

missiles and munitions

and Munitions

RAPID RESULTS

Have you ever noticed a situation that needed to be corrected but put off sounding off because you didn't think it'd do any good? Be honest. Did you think you couldn't do any good or were you just reluctant (too lazy) to write-up the report?

You can get things changed, you know, and it is surprising how easy it is. For example, members of the A and E squadron at Myrtle Beach AFB were having problems with the centerline pylon on their F-100's. They submitted a Nuclear Hazard Report on TAC Form 122. In short order, Twelfth Air Force and TAC had formed a team which included experts from SMAMA and SAAMA. The team visited Myrtle Beach, studied the problem first hand and made recommendations which resulted in modifications to both the pylon and the aircraft. When the mod program is completed, all F-100 users in the Air Force will have a safer more secure pylon. All of this from a single Nuclear Hazard Report. So, if you observe a nuclear hazard, don't wait, write . . . on a Form 122 and expect to get results.

F-100 DROPPED TANK

While on a cross country, an F-100 from this command stopped at a TAC base. During refueling, a leak was discovered in the interconnect between the forward fuselage and right intermediate tanks. To gain access to the interconnect, wires from number one and number two booster pumps and from terminal block 697 were disconnected. After the interconnect was tightened, the wires were reconnected. The next day the battery was hooked up and the aircraft was towed to the parking area for a power-on and power-off stray voltage check using an MD-3 power cart and a Rocket Continuity and Tester, A-1. After the check was completed, the pylon and stores ejector cartridges were reinstalled in both type VIII pylons. About ten seconds after an APU was plugged in, the left pylon jettisoned, causing the 450-gallon tank to break open. No one was hurt, but a lot of fuel was spilled which could easily have ignited with expensive results.

Terminal block 697 had not been reconnected properly, and no continuity check had been performed. Also, the no-voltage check was not made correctly; otherwise the improper wiring would have been discovered. This is positive proof that short cuts lead to trouble. Be safe, follow establish procedures.

F-100 JETTISON SYSTEM

According to SMAMA, stray voltage in F-100 pylon circuits can be caused by salt film on the wiring bundles in the aircraft wheel wells. Aircraft based near one of the big briny ponds—particularly in a warm climate—are affected the most. Only very small amounts of voltage will be carried by this film; normally not enough to cause trouble. You'd have to use a 20,000 ohm per volt scale setting instead of the usual 1,000 ohm per volt setting in order to spot this condition.

Salt film can be eliminated by washing exposed bundles with clear water and a soft brush. Periodic washing is sufficient; however the bundles can be wrapped with tape or sleeving after they've been cleaned and allowed to dry.

NUCLEAR SAFETY SURVEYS

Is your survey program active, aggressive and effective? The NSO and the Nuclear Safety Council can observe a professional survey team in action and get some ideas to use when making their own surveys by watching a new Air Force training film. This film is TF 1-5429, Eternal Vigilance, Conduct of Nuclear Safety Survey and should already be in your base film library. OS-MS requests your comments on this film.

GAR-8 MISSILE HAZARD

A short while ago, three airmen in TAC were exposed to a mercury-thallium mixture when the infrared window on the Guidance and Control unit broke while they were handling a GAR-8. Although mercury-thallium is highly toxic, none of the three was examined by a doctor. In fact, no one even told the medics about the mishap. Apparently no one realized how dangerous mercury-thallium is.

Everyone who handles the GAR-8 should be taking special precautions with the guidance and control system. In addition to containing highly toxic mercury-thallium, this section contains the electric squib and servo grains. Should you accidently damage the dome or gyro assembly, the mercury-thallium may escape. If it does, do not breathe the dust or fumes. Try not to touch the stuff and report to the medics as soon as possible for an examination.

IT COULDN'T HAPPEN

. . . but it did!

THE BIG JET FIGHTER smashed into the desert making a sudden splash of orange against the black sky north northeast of the airfield. A fierce fire followed which soon subsided to a few scattered fires as clumps of sage brush, a tire, and other parts of the aircraft continued to burn.

When the machine hit it was descending directly toward the TACAN station with wings level, speed boards out and the engine operating at 85% power. In short, configuration, attitude and airspeed were all proper for a normal penetration. However, the aircraft was on an inbound bearing some 25 to 30 degrees to the left of the correct inbound bearing for the published TACAN approach . . . and it hit some 13 miles short of the field.

Investigators sifted the wreckage for parts of the control system and other evidence that would indicate a malfunction. They could find nothing. They screened the pilot's records. He was well experienced with almost 3000 hours, over 2000 in jets. As could be expected, other pilots and his supervisors all considered him to be an excellent pilot.

"Surely" the investigators thought, "this accident couldn't have been caused because he misread this altimeter. He was too experienced for that."

They played back the tape from the approach control facility, thinking that the pilot may have been hypoxic and that they might find some clue from the conversation that preceded the accident.

Everything appeared normal. Approach control had given him clearance to descend to 20,000 feet for a range approach. He had radioed back loud and clear, "Roger, now leaving two three thousand. I'll report reaching two zero thousand . . . understand cleared for a TACAN approach."

The approach controller had rogered the implied request for a TACAN approach and shortly afterwards the pilot had reported at 20,000.

So far, his procedures and voice communication were all normal. Next he had reported commencing approach, but apparently the approach controller had failed to note this call because about two minutes later he had asked the pilot if he had left 20,000.

The pilot had replied, "Ah... Roger, now passing thru one five thousand about half way thru penetration turn.'

This was his last transmission . . . and it gives a positive clue as to what happened. On a normal letdown at this particular base, a pilot would depart 20,000 feet after flying outbound 10 miles from the TACAN station and

would initiate his penetration turn at 20 miles. Normal penetration speeds and rates of descent *would* place him at 10,000 feet starting penetration turn and at 5000 feet halfway thru the turn! Obviously he was misreading the altimeter when he reported halfway thru *the* turn *at* 15,000 feet.

It would be difficult to understand why such an experienced pilot made such a basic blunder, except that other accidents and near accidents show *that* this is not an isolated case. In each case, the altimeter was listed as a contributing cause with pilot factor being considered the primary cause. But this may be an over *simplification*.

Certainly, the altimeter could stand improvement. It could be made easier to read and less ambigious. On the other hand, the shortcomings *of this* instrument have long been recognized and all pilots should have developed proper habits to permit them to use it safely. Apparently this pilot had not--despite his wealth *of* experience. Perhaps no one had made him understand the need for including the striped warning indicator in his cross-check of this instrument. This would suggest a *deficiency* in the instrument training he had received. Possibly this helps explain why he was headed toward the station on the wrong inbound bearing and *was* neglecting to watch outside his aircraft during a VFR approach . . . Or did he just suddenly become complacent?

TAC *eval*

HAVE YOU *BECOME* A PROFESSIONAL?

One hundred-twenty days have gone by since TACM 60-1 and associated grading volumes were implemented into the Tactical Air Command Standardization/Tactical Evaluation program. Many organizations have PRESSED ON *and* now have full-fledged *programs* in operation; however, a considerable number of units have not gotten their programs established within the guide lines. A few examples of noncompliance or deviation are:

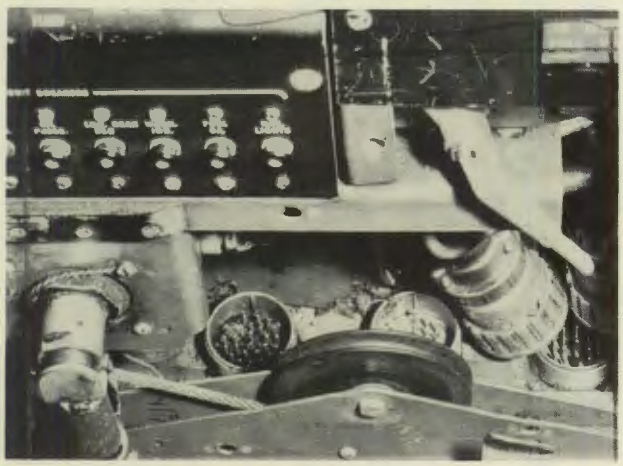
- Tactical Evaluation team members have not been placed on special orders.
- Tactical Evaluation team members are still pulling additional duties such as A.O., O.D.
- Pilots other than designated Standardization/
- Tactical Evaluation team members are still giving Tactical Evaluation checks.
- Individuals are overdue Standardization/ Tactical Evaluation checks without any action being taken to downgrade them from operational ready status and without aggressive action to schedule them for their check ASAP.

Although the Standardization/Tactical Evaluation program still has growing pains, several weak areas in training programs and supervision are apparent. Some that appear generally across the board for fighter and reconnaissance units are:

- Pilots are not using aircraft checklists properly.
- Briefings are incomplete.
- Pilots are below desired proficiency in the planning and flying of maximum range high low high and low level profiles.

TACAN ANTENNA F-100 AIRCRAFT

Because of a high consumption rate, supply is just about out of AT-741/A TACAN antennas, FSN 5985-538-7464. AFM 66-1 data compiled by SMAMA revealed that from the first of October through December 1960, 169 were installed on F-100 aircraft to replace antennas that were bent, broken or damaged. "How Malfunctioned" and "When Discovered" codes show that improper maintenance practices are the cause. It looks like this antenna gets damaged when the access panel, P/N 217-31036 on the F-100D (and similar panels on F-100C/F aircraft) is taken off or replaced. A drawing of a device to protect the antenna was sent to all F-100 activities by SMAMA. This, or a similar device, should be locally manufactured and installed as soon as practical, even though TAC has requested SMAMA to develop a permanent protective guard.



T-BIRD TIP TANKS

Take one T-Bird, mix with a little water and metal filings, and you'll get trouble. At least this happened twice at one TAC base. In both cases water and metal filings (the filings should have been cleaned out right after they were made) got into the F-32 cannon plug in the lower right side of the front cockpit and shorted out the tip tank jettison system. That's right, no tanks. Thanks to sloppy maintenance and failure to inspect this cannon plug during every third Periodic as per work card #136, PE work cards dated 1 May 1961.

Maintenance supervisors should continually stress the importance of cleaning up drill shavings, wire clippings and other debris resulting from maintenance . . . . and don't forget tools, either.

F-100 HEAT AND VENT CLAMPS

Heat and vent leaks have also caused a lot of F-100's to crash during the last five years or so. These leaks are caused by poorly installed Marmon clamps or by failure of the clamps themselves.

When a leak develops, very hot air is squirted into the airframe, melting the insulation on wiring bundles, shorting wires, and making a lot of equipment go berserk. Leaks can also cause the fluid in hydraulic lines or accumulators to boil until excess pressure causes an explosion or other failure. Regardless of what happens, the pilot will have to be quick and fortunate if he is to save the machine.

As could be expected, maintenance supervisors gave this system a lot of attention when the problem first developed, and are still giving it attention for that matter. Yet, in 1958 someone failed to install a clamp and a major accident resulted. In 1959 someone didn't secure a clamp properly causing another major accident, while an improperly installed gasket ended up as the cause of an incident.

In 1960 there were four incidents. Two due to overtorque, one due to a clamp failure and one that was never fully determined.

In 1961, improper installation cost us one aircraft, while a possible failed clamp cost another and resulted in slight damage to another.

A dye penetrate inspection is the only way some cracks can be found on defective clamps. This must be fully understood by everyone concerned, because clamps that have to be frequently removed to get at work areas are to be closely inspected each time they are replaced. Only CF-15 clamp assemblies should be used, with C-15 clamps being replaced as soon as possible. The CF-15 can be installed three times before it should be replaced with a new clamp. If supply is out of CF-15 clamps, SMAMA has authorized units to use brand new C-15 clamps. These can be used one

time, then they must be replaced.

A new C series coupling assembly, which has a stainless steel clamp, will be coming out with T.O. 1F-100-844. This will be for all F-100's.

LOX TIPS

Wear goggles or safety glasses with side shields or a safe shield when you handle LOX. Do not touch anything with your bare hands if LOX is flowing thru it. Wear clean dry gloves. Leather gloves are best, but asbestos gloves can be used if they have been treated or lined to keep splashed liquid from penetrating them. Gloves should be loose-fitting so they can be thrown off quickly if any LOX spills into them. Should you spill LOX on your clothing, remove the clothing immediately and air it promptly. Generally speaking, you should wear all of your clothing so that any spilled liquid will roll off and not flow into a pocket or rolled up sleeve or cuff. In other words, such clothing should not have pockets, sleeves should be left unrolled and pants should be without cuffs and worn outside of high top shoes.

C-124A ENGINE CONVERSION PROGRAM

The AFLC Modification Review Board has approved WRAMA's proposal to convert 166 C-124's from the R-4360-20WA to -63A engines equipped with the new C-7355 propellers. Conversion is needed, because propeller shafts have been cracking on R-4360-20WA engines. This program will be completed in about two years. In the interim, C-124 maintenance teams will have to follow the strict inspection requirements that have already been issued. This is the only way impending shaft failures can be found.

F-100 AB REWORK

Over five years ago, when the F-100 was still new to TAC, a pilot was taking off from an air base in Texas when he heard and felt an explosion. Almost immediately, his aircraft nosed over and headed for the ground. Unable to control it, the pilot ejected. Before the fire had cooled enough to let investigators shuffle through the wreckage, another F-100 pilot from another unit felt and heard an explosion immediately after take-off. Unlike the first mishap, control was not lost, and the pilot was able to make a successful landing. Both mishaps had much in common. Loss of the large T-shaped panel just forward of the drag chute, loss of the drag chute and damage to control linkage in the sewer pipe area.

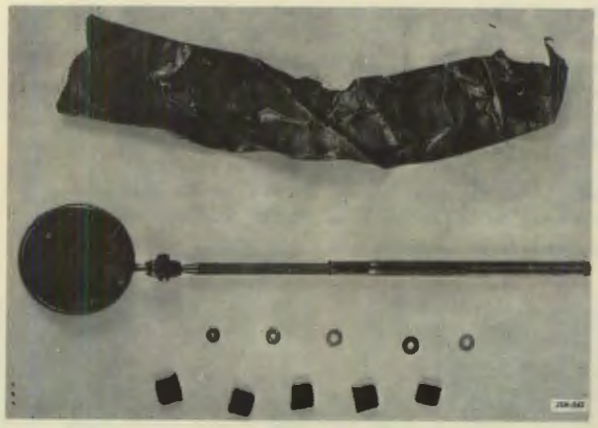
With a relatively undamaged aircraft to work with it didn't take long to find out what caused the second mishap or piece together what happened to the first. Both were traced to fuel leaks in the AB plumbing. They were the first of a tedious list of similar accidents, and started several attempts to correct the deficiencies which caused leaks in this system.

A short while ago, another F-100 joined its sisters in the salvage yard. Once again, everything indicates an aft section fuel leak. As a result of this last accident, all F-100's that have -21 or -21A engines will be retrofitted in TAC project "High Fly."

Aircraft sent through High Fly retrofit will have a modified cone assembly installed and be equipped with an inner-support for the AB fuel spray bars.

To make these changes, T.O. 2J-J57-746 is being published. This T.O. will tell how to install the inner-supports and will require the removal of cone P/N 316757, so it can be sent to a designated SRA for rework and exchange with a modified cone assembly. Exchange will be on a one for one basis. T.O. 2J-J57-747 is being published to spell out the rework procedures.

Project High Fly will also require that T.O. 2J-J57-626 and -640 be complied with, if they haven't already been accomplished. May Day, 1962 is target date for the completion of this project. This project could very well cure the aft section explosion problem provided engine specialists and mechanics continue to give this critical area special attention.



FOOD FOR THOUGHT

Cleaning engine oil tanks is a dirty time consuming job. If you have ever wondered if it's really worthwhile, look at the photograph which shows the items taken from a B-47 lube oil tank. Although these couldn't get too far into the lube system, other items such as sludge, metallic particles and similar system clogging materials will undoubtedly be found and removed at the same time. It appears that the time spent cleaning the tanks would be repaid many times in reduced lube system problems.

RECOGNITION

PILOT OF DISTINCTION

LT JAMES A. MADISON, an F-100 pilot from the 524 Tactical Fighter Squadron, Cannon AFB, New Mexico was selected as the Tactical Air Command Pilot of Distinction for the quarter ending 31 October 1961. The nose gear door on Lt Madison's aircraft would not close after takeoff even after the gear had been recycled. After fuel had been burned down, Lt Madison entered the landing pattern and lowered the landing gear but the nose gear would not extend. He tried without success to extend it by using the emergency gear lowering system, high "G" forces, yawing and a touch-and-go-landing. When minimum fuel remained, Lt Madison made a smooth landing deployed the drag chute, stopcocked the throttle and gently "flew" the nose of the aircraft down to the runway. The aircraft slid to a stop with only minor damage to the pitot boom. Thanks to the skill displayed by Lt Madison, the aircraft was repaired and ready to fly 6½ hours after the incident.

MAINTENANCE MAN OF THE MONTH

THE QUICK THINKING and timely action taken by SSGT FRANK M. BUSSEY of the 304th Troop Carrier Squadron, Richards-Gebaur Air Force Base, Mo., prevented serious damage to at least two C-124 aircraft. Sgt Bussey was performing maintenance on a C-124 when a severe weather warning was received. With his crew, he immediately began to recheck tie down and insure that props were feathered on all aircraft in the unit. While accomplishing this, Sgt Bussey found that one C-124 had broken loose and was moving. He instructed his crew to throw chocks behind the wheels, but the wind was blowing so hard and the rain was so heavy the men were frequently blown from their feet. In the meantime, Sgt Bussey climbed into the aircraft, connected the battery, started the auxiliary hydraulic pump, and applied brakes to stop the aircraft. For his commendable action during this emergency, Sgt Bussey has been selected as the Tactical Air Command Maintenance Man of the Month.

CREW CHIEF OF THE MONTH

AIRMAN SECOND CLASS ROBERT E. RICE of the 347th Troop Carrier Squadron, Pope Air Force Base, North Carolina, has been selected as the Tactical Air Command Crew Chief of the month for the exceptional manner in which he has accomplished his duties as a C-123 crew chief. He has exhibited a great deal of personal pride while crewing and maintaining this aircraft and has spent many off-duty hours to insure that flight crews were pleased with its appearance and performance. His aircraft has been repeatedly selected as the cleanest in the squadron and has always been ready on time and in excellent condition for scheduled missions.

TAC TALLY

MAJOR RATE ALL AIRCRAFT 1 JAN - 31 OCT	
1961	1960
16.1	14.9

ACCIDENT FREE
(MAJOR & MINOR)

JET

ACTIVE	MONTHS		ANG
474 TFW	7	35	123 TRW

CONVENTIONAL

ACTIVE	MONTHS		RESERVE
4430 ATG	35	72	442 TCW
314 TCW	27	59	434 TCW
464 TCW	8	50	302 TCW
4505 ARW	7	48	94 TCW

OCTOBER MAJ ACCIDENTS

ACFT TYPE	4510 CCTW	401 TFW	479 TFW	459 TCW	31 TFW	4 TFW		
F-105						1		
F-104			1					
F-101								
F-100		1			1			
F-86								
F-84	2							
B-66								
CONV.				1				

MAJOR ACCIDENT RATE 1 JAN-31 OCT

TYPE	1961	1960
F-105	24.1	80.3
F-104	75.5	41.7
F-101	6.6	27.8
F-100	22.2	26.1
F-86	46.4	0
F-84	53.8	44.6
B-66	26.9	0
T-33	4.7	4.3
KB-50	6.6	10.4
C-130	7.7	0
C-123	6.2	2.0

...There is no substitute for
POSITIVE CONTROL of AIR TRAFFIC
in HIGH DENSITY TERMINAL AREAS