JULY 1961

ATTACK

TACTICAL AIR COMMAND

TAC EVAL POW-WOW

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GENERAL F. F. EVEREST COMMANDER TACTICAL AIR COMMAND

LT GEN J. E. SMART VICE COMMANDER

EDITORIAL

In the May issue of this magazine, we wrote a short story entitled, "The Voice of Experience," which unintentionally offended some people. As you recall, the story was about an unnamed supervisor who had been transferred to a remote area as a result of a series of mishaps and accidents. The accidents were lifted from the TAC accident files and for the most part occurred within one wing. The story gave the impression that all of them occurred within one squadron. This was done to keep from reflecting on the ability of any of the unit commanders involved. However, we failed to fully consider how it would appear to the wing commander and the members of his staff. We apologize. By offending someone, much value of the story was lost.

The task of a supervisor is a difficult one at best and we have no desire to make it worse by taking pot shots from the side lines. Had one unit experienced all of these accidents and had the commander of this unit been transferred, as we implied, the failure would not have been his entirely. Whenever a supervisor fails, invariably his subordinates have failed as well . . . . this fact should also have been included in the story, because without it and without this brief description of how it was assembled, the story was incomplete.

THIS ISSUE

Editor - Major Karl K. Dittmer

Assistant Editor - Major James G. Swensen

Art and Production - T/Sgt Heinz E. Hirsch

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COVER PHOTO

Maj Petterson waits, hands well clear of switches, while armorers charge his gun prior to an air-to-ground TAC Evaluation check.

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TEN MINUTES TO ETERNITY

THIS IS THE TRUE STORY of a short flight, a short flight with a violent, unhappy ending. There were opportunities to prevent the unhappy ending. In fact, the alertness of one of the participants gave the central figure an excellent chance to survive, but he unwittingly wasted it, and died. Because the unhappy ending could have been prevented, this then becomes a tale of tragedy.

A flight of four F-100's waddled along the taxiway, screaming away the grey calm of midmorning, fouling the air with the dank smell of burnt kerosene. Each had two 275-gallon drop tanks and an MN-1 bomb dispenser slung beneath broad sturdy wings, giving the impression of four ducks lugging suitcases on some fantastic journey. On the runway, the whining scream turned to a deafening throaty roar, punctuated by the blast of the afterburners being lighted as each in turn made its way clumsily down the runway and wearily lifted into the air. Quickly, almost apologetically, the morning calm returned, marred only by the receding sound and by four smudges of smoke trailing through the haze to mark the passing aircraft. To a close observer, one smoke trail looked a little different than the others.

Three or four minutes passed. In a nearby farm house a clock struck a single note to designate the half hour. It was nine-thirty. In the aircraft, the element leader glanced at his wingman, watching him move into position. He looked closer. The smoke from his wingman's aircraft seemed peculiar . . . discolored. He pressed the mike button with a gloved finger and called a warning.

The pilot of the number four aircraft, a young lieutenant, heard the call and scanned engine instruments. His heart seemed to skip a beat and he felt a quick, small fear. Oil pressure was 5 psi. Trouble. With an effort he controlled his voice and reported the discrepancy. Instantly, his element leader radioed to turn back to the field. He reefed the aircraft around in a smooth, hard turn. The element leader followed to give as much support as he could.

The lieutenant hurriedly reviewed his plight. The home runway was short; his aircraft was still quite heavy; and he'd have to jettison the external load. Beyond that his mind refused to function; he couldn't remember just exactly what he should do.

His element leader sensed his indecision and transmitted, "O.K., four, let's go guard and declare an emergency."

The lieutenant nodded agreement, and thought, "That's right. I should have done that without being told." He fumbled for the radio channel selector, finally getting angry at his clumsiness, he forced himself to use slow deliberate movements. On guard

channel he transmitted, "Four on guard," and was surprised that his voice still sounded steady.

The element leader had been weighing the potential of the situation. He didn't like it. Visibility was poor, their altitude was only 6,000 feet, his wingman's engine could quit at any second, and to make matters worse, his wingman seemed to be responding too slowly . . . Knowing GCA was monitoring their climbout, he decided to get their assistance first. When the lieutenant checked in on guard, he answered by calling GCA, transmitting, "GCA, Blue three, I'd like to declare an emergency on Blue four. He has low oil pressure, must jettison tanks and land."

The T/Sgt in GCA expected the call; the blips on his scope had warned him of the returning aircraft and he had already selected guard channel. He advised the pair of their position and asked if they wanted to jettison tanks out over the bay.

Through the haze and scattered clouds, the element leader could see that they were over land, so he called, "Negative, impossible to drop over the water. He must land as soon as possible."

The T/Sgt rogered this transmission and flipped the lever on the intercom to the tower, giving them a brief description of the situation. Turning back to his scope, he instructed the flight to squawk emergency to make certain he was working the correct blips. He then advised that they would have to fly a 12-mile base leg onto an 8-mile final.

In the stricken aircraft, the lieutenant was feeling more confident. He was having less trouble reading gages. At first he had looked at the instruments without seeing anything but a blur, with an effort he had forced his eyes to focus, but had been unable to make his brain grasp anything of significance from what he saw. Now, in better control, he was able to operate more normally. Rechecking the oil pressure gage he noted, without surprise, that it was down to 2 psi. Almost casually he relayed this information to his element leader. The element leader asked him to recheck the fire warning lights. They were out. Rechecking to see that he had selected the right channel, he used the omni, and proceeded directly towards the field ignoring the heading given by GCA.

During the return flight, the lieutenant allowed his aircraft to gradually lose altitude. He searched for the field, peering into the haze, and as he reached 2000 feet about six miles out, he finally spotted the runway. He decided to line up on the drop tank area alongside the runway and made a right 270° turn, rolling out on 230°, 1400 feet. He actuated the auxiliary jettison release and felt the left 275 leave. The right failed to go. Acting quickly, he stabbed the emergency jettison button, but the right tank still stayed on. He pulled the big machine up and to the right, reluctantly adding some power. He asked the tower for clearance to re-enter the drop area, only to hear the urgent voice of his element leader say, "You can't go back! Get that aircraft on the ground immediately!"

Startled, he rogered the transmission and again pressed the jettison button. This time the tank fell off. He banked into a left 270° turn, attempting to roll out on final, dropping gear and flaps in the turn. During the last part of the 270, he realized that he wasn't going to be lined up with the runway. The engine was still running, so he decided to gamble on another try, and advanced the throttle.

The engine accelerated once more and he pulled up onto a right downwind, hesitated and then turned onto base. The engine was getting rough and compressor stalls were shaking the aircraft. The element leader saw fire stream from the tail pipe. He transmitted a warning.

The fire died briefly, then returned with increased intensity. He repeated his warning. The lieutenant realized he'd never make it. The rapidly failing engine would never produce enough thrust to get him to the runway and he was rapidly running out of altitude. He had one last chance. To eject at 300 feet with the aircraft descending. He pulled up the arm rest, barely noticing the rush of wind in his efforts to hurry. Fumbling, he found the trigger and gripped it firmly. The seat was thrust violently from the aircraft and he felt himself tumbling. He clutched the handles tightly . . . and hit the ground still in the seat, holding on to the handles, even though his lap belt had opened automatically. Pilotless, the aircraft nosed into the ground some distance short of the runway and exploded in a billow of black smoke and flame. The tower operator checked the time. It was 9:45. He punched the crash alarm.

It is neither practical or desirable to establish procedures to cover every conceivable emergency or to anticipate every emergency situation, but it is possible to outline some general rules for handling emergency situations. Most of these rules, particularly those peculiar to a specific aircraft, can be found in the handbook for the aircraft being operated. Some others fall more into the category of common sense. Flameout landings are practiced and simulator drills are conducted to develop and strengthen a pilot's ability to use good sense in handling emergencies. This is the reason such practice is so vitally important. The lieutenant violated one of the cardinal

rules for handling an emergency involving potential engine failure. After getting the field in sight, he committed himself to a position where he would have to rely on power in order to make the runway. He did this when he decided to drop tanks in the jettison area; he did it when he positioned himself for his first hurried pattern; and again on his second pattern. He tempted fate and fate slapped back. She has a habit of doing that. This, incidentally was the lieutenant's second ejection. The first was also from low altitude only four months before.

Sometimes it is necessary to break one of the rules for handling emergencies . . . but it is seldom necessary to do it repeatedly during a single emergency.

Haze and cloud conditions made a classic SFO, starting from high key, impractical; however, contact had been made with GCA, and the GCA operator was standing by ready and able to vector the aircraft to a straight-in approach. Had the lieutenant used GCA's range and vectoring information, he could have made a minimum power approach.

Reading through the account of this accident, one can readily see that the lieutenant dawdled away precious time getting rid of his tanks in just the right area. Tanks can be dropped in any open area, even if runways cross it! In this case, they could have been dropped on the overrun prior to touchdown. Later, when he realized that time was running short, the lieutenant tried to hurry up his pattern and botched it. Worse, he made no effort to salvage the bad approach even though qualified witnesses said he had sufficient room and airspeed to maneuver into position for a landing from his first approach. Instead he elected to gamble on an engine whose eventual failure was long overdue. The best insurance against this sort of mistake is continued practice in making closed patterns and simulated flameout approaches – from positions where it is impractical or impossible to reach a normal high key. Most instructors who give simulated flameouts from difficult locations, find that many pilots blindly try to reach high key even though they have no chance to do so. They also find that many pilots try to hurry closed patterns to the extent that a safe landing isn't possible.

Low altitude ejections will continue to be hazardous with existing seats, particularly if made when the aircraft is in a descent. Everything must work perfectly, including the individual. This demands a great deal from a human being at a time when excitement is apt to impair his ability to perform. Ideally, this condition must be corrected by modifying the equipment. Until that time, the best corrective action is constant drill on ejection procedures. It is imperative that this drill include the post ejection sequence, such as, unfastening the seat belt using both hands (this will insure that the grip on the seat is released) and if low, pulling the manual chute release. Remember, if the auto equipment works, you can't beat it . . . but if it doesn't work, you had better beat it!

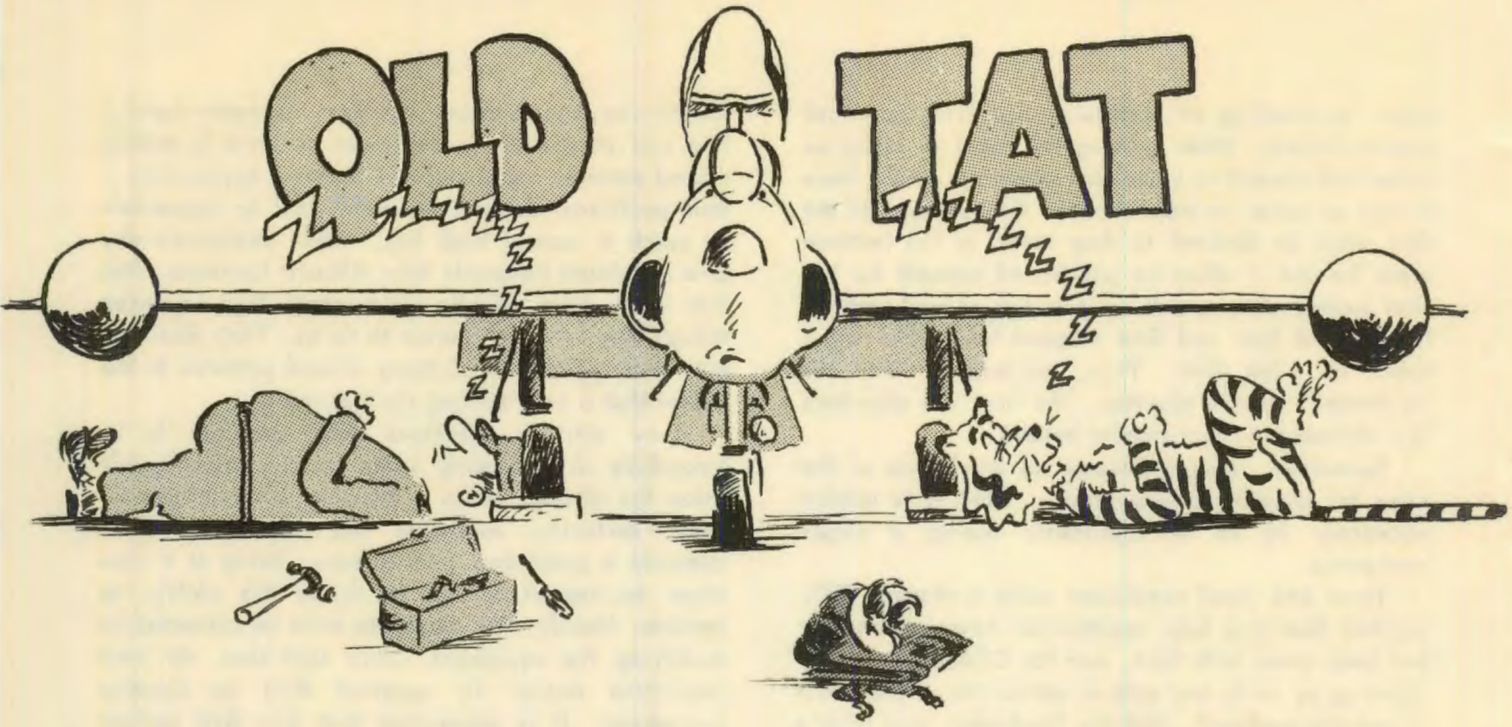
T O F-100-720 had not been complied with on this aircraft. This T O modifies the seat handle to decrease the chance of a pilot getting his hands caught between the hand grips and ejection triggers. In fairness to the lieutenant, there was some evidence to indicate that he may have caught his left hand in the unmodified seat. If so, getting free of the seat would have been beyond his control in the limited time he had available. ●

ENGINE OIL SYSTEM FAILURE.

OIL PRESSURE (BELOW 35 PSI).

If oil pressure drops to, or fluctuates below, 35 psi, proceed as follows:

1. Throttle—Reduce.
2. Altitude—Reduce.
   Reducing altitude increases the fuel flow through the oil cooler and aids in increasing oil pressure. Reduce altitude as necessary, maintaining safe ejection altitude.
3. Land as soon as possible.
   Land as soon as possible using a flame-out pattern.



THE CREW OF a small twin engine aircraft stopped at a TAC base to take on a load of hamburgers and fuel. But that wasn't all they got. This they learned during engine run-up when both fans suddenly quit. It seems they were using fuel from a tank that had been serviced with between five and ten gallons of water. The water came from a fuel truck which had just been returned to service after the maintenance shop corrected a water lock valve discrepancy. The water was used in testing the valve and was still in the lines when the truck was loaded with fuel.

This was a simple goof which should never have happened. Under slightly different circumstances it could have been fatal.... Such incidents should serve to remind each one of you who work on aircraft or aircraft support equipment that people are continually trusting you with their lives. Old TAT knows most of you are well-aware of this trust. He also knows how hard it is for you to remember this trust after you've had to put in hour after hour of overtime, day after day.

We are not insinuating that long work hours caused this particular goof--mainly because we don't have the complete story behind the story. But, we do know that long hours induce fatigue and that errors such as this result when someone is too tired to think straight. There have been many words of caution written on the effect of fatigue on aircrews... but seldom does anyone mention its effect on the maintenance man. Yet, the hazards induced by maintenance fatigue are just as real, as important, and just as deadly as those induced by pilot fatigue . . . perhaps even more so when one considers the environment maintenance men must work in. Cold, rain, dust, heat, noise, and other factors all tend to decrease performance and induce error. This is one reason we've had to establish the present system of check, check, and double-check. More important, this is the reason all supervisors at all levels should be very hesitant about committing their maintenance sections to above normal work loads.

ONE OF THE YOUNG bucks in the office was telling about a friend of his who got high, high in the sky because something got into the connection between his oxygen mask and the T-block assembly. He had been in the habit of leaving the T-block attached to the chute and making and breaking the connection between the mask hose and the block. On this particular occasion he remembered shoving the things together and giving 'em a twist...or at least he thought he remembered doing this. If you are doing likewise, TAT has a few cautious words for you. The first is, "Don't." Making and breaking your oxygen connection at this point deprives you of the safety valve feature. You know, the gimmick that makes it so hard to breathe when the connection isn't made up tight. In addition, the T-block assembly will not get inspected as well or as often as it will if you keep it attached to the oxygen mask. Also, when left with the chute it's more apt to be damaged and get dirty.

While we were writing this, a message came in with another example . . . so we'll use it to reemphasize our point. F-100 flight leader on VFR on top flight climbed from FL245 to 400 trying to

stay on top. Got hypoxic, made emergency descent to 20,000. After leveling at 20,000, he noticed that the oxygen blinker wasn't blinking. Quick check. Mask hose not connected to the CRU-8/P. Connector (T-block, that is). Hooked up, went to 100 per cent and things got back to normal. The first oxygen check this character made was the one at 20,000 where he found the loose connection! How loose can you get? After he declared an emergency due to hypoxia, his wingman just flew along with him and said nuthin. This ain't being a good wingman – and is on a parallel with watching an enemy aircraft close at six o'clock without giving warning. Even a thoroughly brilliant pilot will be foggy and will need someone to call out things to check should he suffer from hypoxia . . . the flight leader's casual attitude towards oxygen obviously eliminates him from the "brilliant" category, so there you are.

THE OVERHEAT WARNING LIGHT came on just after takeoff as an F-100 driver came out of AB. Before the pilot could react, the light went out. Playing the situation professionally, he aborted the mission and made an uneventful landing.

The wrench and plyers set took over and found that the afterburner fuel spray nozzle had cracked near the mount flange. The engineers have a fix coming out . . . but old TAT thought you'd like to read about a--yawn--routine occurrence that stayed routine because the pilot didn't take any unnecessary chances. It doesn't make interesting reading . . . but we like it that way.

A TAC DRIVER reported over Smokey radio at 2321, 8000 feet in the soup – solid soup – headed for Flintstone. Another TAC driver flying the same route reported over Smokey at 2323 at 7000 feet. About four minutes from Flintstone both of these troops heard a pilot report over Flintstone at 8000 estimating Smokey . . . . Sufferin' tiger cats! 8000 feet headed their way! Before they could take action, the center called the intruder and cleared him to descend to 7000 feet. Immediately, the TAC troop at 8000 feet called the center and advised them of the conflict. The intruder immediately called back and informed the TAC pilot that he was at 7300 feet. The troop at 7000 descended to 6500. The center called and cleared the intruder back to 8000 so the TAC driver at that altitude proceeded off to the right of the airway. The center then cleared the intruder to 9000 and everyone breathed easier.

If this sounds confusing when you read it... think how it must have sounded to the people involved!

Moral . . . . controllers are human and can make mistakes, too. So do like these TAC troops did and listen to the yak yak on that blamed radio – you just might keep yourself out of some stranger's cockpit!

WE WERE READING where an F-100F pilot encountered unexpected difficulties while flying wing on one of those long hauls. About 450 miles from destination he moved the throttle to full military . . . only to feel a partial loss of thrust. Checking the gauges he noticed that fuel flow was higher than it should be. His flight leader couldn't find anything wrong, since they were conning pretty heavy at the time.

Recalculating fuel consumption, he jettisoned the empty tips and changed course to the nearest suitable air patch . . . and about that time the flight moved out of the cons. His leader told him he could see raw fuel streaming from the tail pipe, that's when the pilot remembered that his passenger wasn't F-100 qualified and asked him to pull the rear throttle inboard. This cured the trouble. Apparently the passenger's knee bone wasn't very well attached to his head bone and he let it (the knee bone) bump the throttle into AB. The AB didn't light and you know the rest.

THE OLD SARGE came into TAT's Office this morning shaking his head and waving a message. "Sir," he said, "You're always looking for something to write about read this info message we got from one of our units . . . and if this don't beat all you've ever seen . . . " Well, we read the message and blessed if we didn't agree, though we did our best to hide it. Seems this unit received a reconditioned engine and gave it the usual shake down prior to installing it. During the shake down – among other things – they found that someone had stripped the threads to the supercharger drain valve and had wrapped cord around the critter to make it stay in.

Real serious we asked, "Why Sarge, what's wrong with that? We used to fix our old T-model that way . . . "

He sputtered and said something about self-respecting mechanics not stripping threads in the first place and that such monkey shines wouldn't pass for a temporary repair on a washing machine . . . and we agree with him again. How, we wonder, did such a blooper get that far through the system before someone caught it? The point is, it did . . . and bless this unit for finding it before it ever got installed on an aircraft.

A T-BIRDER REPORTED over a fix at flight level 350 and was cleared to approach control...before switching frequencies he eavesdropped on an answer to another pilot's request for the weather at his destination. Weather was deteriorating due to thunder bumper activity. In fact, a storm was right over the field. Since he had fuel for an hour and a half, this troop requested clearance to remain at 350 until he could tell whether or not he'd have to divert.

Several severe weather areas were forming and people were changing destinations, reporting thunderstorms and conducting other business, so all radio channels were quite busy. In fact, the T-birder couldn't get approach control on either the normal or the back up channel. He switched to 13 for a weather check but found it was hopeless due to other calls. He tried 236.6 for weather and another approach frequency and was told that the thunderstorm was moving but that another was expected to move in very shortly. He was given 296.0 for approach, switched to it and here is what he heard, "This is Major Blankbrain . . . that's bravo, lima, alpha, nectar, kilo . . . etc ad nausem . . . would you cancel a dental appointment for me? The appointment is for the 30th . . . it looks as though I won't make it doesn't it?" Approach asked for the name again, and the transmission was repeated complete with phonetic spelling. Ugh! This garbage is bad enough during VFR conditions when traffic is light . . . but when the weather has gone mean and traffic has started to snarl, such misuse of the air becomes just one notch short of criminal.

WE CAN'T THINK of anything more shattering than to read an accident report attributed to operator error when the operator was known to be a highly skilled, capable, and knowledgeable pilot. We'll screen the report looking for clues indicating a possible failure of the machine, knowing that had this occurred, such a pilot would have properly appraised the situation and abandoned the machine. In the end we are forced to face the fact that the accident was caused by inattention, complacency, or perhaps a day when the individual's performance was substandard. We all have substandard days and we all give occasional substandard performances. Recollecting some of our own is enough to curl our hair, if we had any left to curl. The point is, to recognize a bad day for what it is, and then to take extra precautions . . . being just a little bit more deliberate and just a little bit more careful than usual to insure that our mistakes are caught before they can mushroom into a pillar of dirty black smoke and flame over the scattered remains of a once fine man-machine combination.

TAT

FAST FLAT FIX

Col Wallace L. Anken of the 108th Tactical Fighter Wing submitted this article which describes how he and his men used progressive thinking to solve a problem faced by all fighter units.

Although the exact configuration of this kit will have to be revised to meet the specific requirements of each unit, the idea is sound, well worth adopting, and certainly beats using a bulldozer! More detailed information can be obtained by contacting the 108th Tactical Fighter Wing, New Jersey ANG, McGuire AFB, New Jersey.

S/Sgt Wesley Ward and M/Sgt D'Angelo of the 108th show the neat method used to hold spare wheels, ladder, and tow bar to the front of the Coleman tug. Sgt Ward helped in the design and built the rack while Sgt D'Angelo, as hangar chief, is the man responsible for retrieving sick birds.

"CAMRON, THIS IS Job Control."

"Go ahead, Job Control."

"Camron, we have a bird with a blown tire on the end of runway 34, get at it in a hurry, the tower is holding a half-dozen others in the air and one is low on fuel."

"O. K. Job Control, we'll handle it."

Ten minutes elapse.

"Camron, this is Job Control – I haven't seen anyone head for the runway yet and the tower is screaming, what gives?"

"Sorry Job Control, we're rounding up a jack, emergency wheel, tow bar, and stuff. We'll be ready in a couple of minutes--"

Ten more minutes elapse.

Rear view of the Coleman showing the ramp, additional spare wheels, tool kit, and radio installation.

"Camron, this is Job Control. The old man just called and if we don't get that bird moved pronto, somebody is going to be picking threads off their sleeves."

"O. K., O. K., we're moving out right now!"

Thirty minutes after the first call and many harsh words later, the sick bird was towed off the active runway.

If you maintenance types have ever been in this spot, take a look at the Coleman the 141st Tactical Fighter Squadron has parked in front of the hangar ready to go, with everything needed to get a flat-footed or otherwise sick bird off the active runway.

Mounted tires, an emergency wheel designed to slide into the wheel axle for towing, cockpit ladder, tow bar, tow cable slings are just part of the equipment kept permanently on the Coleman. The Coleman also has a radio for working with job control and the tower. It can still be utilized for towing and if need be, the racks holding the equipment can be removed in approximately half an hour.

The last time the 141st Tactical Fighter Squadron received a call to retrieve a bird with a flat tire on the active, it took exactly seven minutes from the time of the call to the time the aircraft was towed off the runway with two round tires.

The Control Tower will appreciate this speed, as will the airplane chauffeurs waiting to land. The Base Commander will surely like it and it *could prevent an accident!* ●

TAC EVAL

F-84F's lined up at McGuire during the Pow-wow.

This lineup is almost a roll call of the States represented.

MEMBERS OF AIR NATIONAL GUARD units from New Jersey, Virginia, Ohio, Indiana, Illinois, and Missouri recently took part in a Tactical Evaluation Symposium conducted by the Director Tactical Evaluation, Headquarters, TAC. The 108th TFW of the New Jersey ANG hosted the five-day session of classroom and flying operations at McGuire AFB.

The primary objective of the meeting was to acquaint senior officers of these ANG units with the new TACM 60-1 which establishes grading criteria to be used by Tactical Evaluation personnel from Hq TAC and by the members of Tac Eval Sections within TAC units. Two days of classroom activity were used to cover the basic philosophy and details of conducting a tactical evaluation check. This was followed by two days of flying in which 115 scheduled sorties were flown with only two aborts. All flying was in ANG F-84F's and the missions were divided among air-to-ground gunnery, conventional dive bombing, skip bombing, and LABS. For the most part the missions were scheduled as Tac Eval Checks with one pilot acting as the victim and the other as the chase pilot examiner.

Recording the evaluation material while chasing another aircraft in air-to-ground gunnery patterns

Briefings were complete in every detail, giving each mission a sure safe start.

POW - WOW

–By Capt Wm. H. Gillette

proved to be a very real problem and indicated that a simplified form for recording grades was needed. However, all hands agreed that this problem would be greatly simplified in a dual control fighter.

In examining the various aspects of the Tactical Evaluation program, it was borne out that organization itself is an area where attention must be directed. It is extremely difficult for a check pilot to make a completely objective evaluation if he is assigned to the particular squadron in which he is conducting checks. Therefore, if proper results are to be obtained, the Tac Eval Section must be created at Wing level with responsibility only to the Wing Commander.

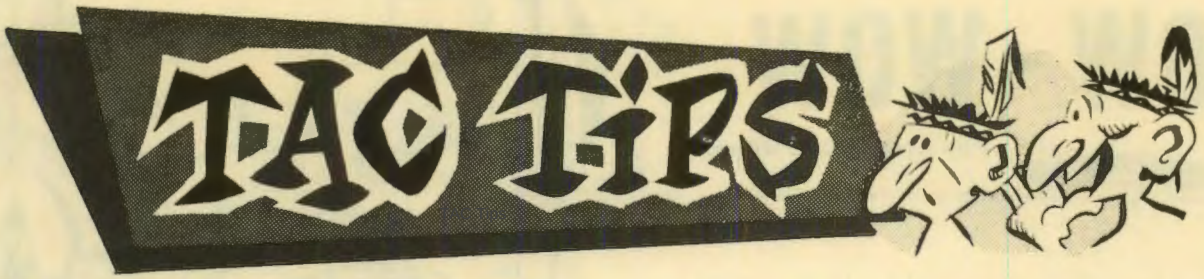
All ANG personnel who took part in the symposium were highly experienced fighter types and did a fine job of flying concentrated sorties off McGuire AFB. This was no mean feat, considering the heavy volume of traffic. A large measure of the credit for a very smooth flying operation must go to the operations staff of the 108th TFW. They did a thorough job of briefing the guest hog herders on the strange field, new range operation.

Coming up soon will be a report on another TAC Eval get-together with F-100 units.

The crew chief assists Capt. Noble of the 110th TFS get ready for a mission. Ed: He passed; no sweat.

Some of the maintenance troops from the Indiana Guard unload their Douglas Racer on arrival at McGuire.

Practice bombs are transported to a waiting aircraft for the LABS bombing phase of a TAC Eval check.



RULE AND REASON. Mechanics noticed an oil leak on the #2 engine power section of an aircraft preparing for takeoff. Investigation revealed that the oil was coming from the engine blower selection valve. When the valve was removed, part of an old base gasket was found lodged between the new gasket and the mounting pad. The rule that all mating surfaces must be clean before a new unit is installed was written for a reason. It is good to remember the reason and the rule, but it is essential to remember the rule.

–FSF, Aviation Mechanics Bulletin

T-33 PILOT FACTOR ACCIDENTS. Because of a sharp rise of T-33 pilot factor major accidents during the first quarter of this calendar year, commands should reappraise the flying programs for these aircraft. The urgency of this action is indicated by the fact that over half the pilot factor accidents during this period involved aircraft with an instructor pilot or acting instructor pilot aboard; several of these could have been averted had the IP performed his duties properly. Low pilot experience and proficiency, and lack of currency, were probable cause factors in other cases. A number occurred under IFR conditions involving particularly severe weather.

The reappraisal should insure that:

- Only the best qualified and most experienced pilots are assigned duty as IPs;
- The spirit and intent of the AF policy requiring two qualified pilots are observed, consistent with operational requirements;
- Conscientious and objective reexamination of flying proficiency is made during semiannual flight checks, with specific emphasis on instrument proficiency;
- Preflight planning is accurate and realistic, considering urgency of mission, weather, alternate availability, aircraft limitations, and aircrew capability.

RB-66 CRACKED NOSE GEAR STRUTS. Excessive side loads during single engine runup may have caused one nose gear strut failure and may have caused fatigue cracks in some others. To keep from exceeding design side loads during single engine runups make sure:

- Crosswind component is less than 20 knots.
- Brakes are locked, or wheels are securely checked.
- Nose wheel is aligned straight ahead.

TO CORNER. Did you know that if you wash your aircraft without insuring that the wheel bearings are protected that you are required to remove the bearings, clean, dry and repack? T O 44B-1-3 has the word plus many other goodies on the care and maintenance of bearings and races. Mates, it's in the book, so take a look!

–Nellis F/S

CLEAN COCKPITS. Did you ever open a car vent while traveling at 60 mph and catch a face full of dust, dirt, etc.? Well pity the poor pilot flying at 400 kts experiencing the same thing. Of all the janitorial services performed by an airman in the Air Force today a clean cockpit is the most important. Take the time to clean your cockpit and exhibit your aircraft pride.

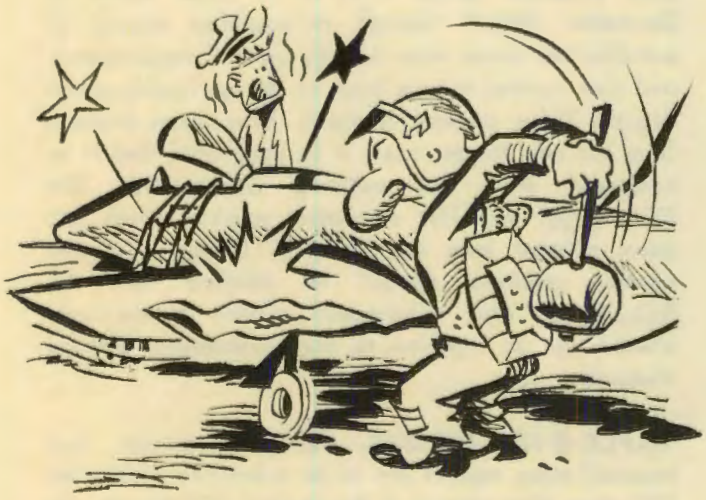
Nothing impresses a pilot more than to fly an aircraft which is clean inside and out. Give pilots a chance to drop the good word about your bird and watch the pilot/crew chief relations swell as well as your own ego.

–Nellis F/S

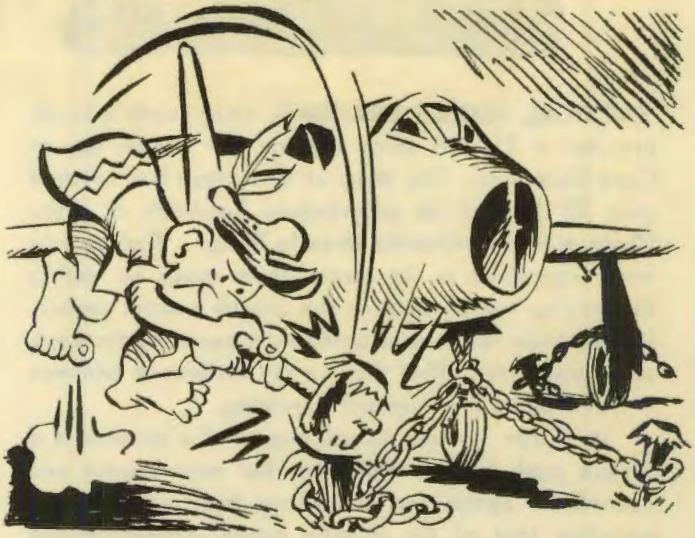
RIGHT WRITE-UPS. There have been write-ups on dual cockpit jet aircraft that did not designate in which cockpit the discrepancy occurred. Normally, it can be assumed that the discrepancy is in the front cockpit but this isn't necessarily so. Recently several man-hours were used trouble shooting a discrepancy in the front cockpit of a T-33 when actually it was in the rear . . . . It would help maintenance and keep the fixers much happier if all information relative to a discrepancy were entered in the form.

H-43 RESCUE HOIST. Recent rescue hoist cable failures have made it necessary to limit use of the hoist to actual emergency conditions or to practice with dummies only. Cable failures result from severe whipping of the hook when it is retracted without a load. Inspection procedures and design improvements are being developed to remove the restriction.

FATIGUE. Fatigue can be classified into two categories – physical and mental. The physical agents are cold, physical discomfort, vibration, glare, wind blast, noise, accelerations, change of atmospheric pressure, hypoxia, and speed. The mental agents are boredom, responsibility, attention, concentration, alertness, apprehension, anxiety, and fear. Carefully planning the profile of each flight can greatly reduce the possibility of fatigue, and result in a substantial reduction of pilot factor accidents.



JAMMED CONTROLS. Jammed flight controls are sometimes freed by excessive pressure on the controls. Subsequently, the cause for the jammed condition cannot be found. Pilots finding controls jammed or restricted while the aircraft is on the ground should make no effort to free the controls by force, but should hold light pressure against the restriction and call for an immediate inspection.



SECURE AIRCRAFT. Pilots should insure prior to departure from an aircraft that the chocks are in place and the landing gear ground locks are installed. Although the above may appear to be an automatic function performed by ground personnel, the pilot is still responsible for proper securing of his aircraft. Don't walk away from an aircraft assuming that someone else will take care of it.

T-33 LIFT OFF SPEED. In reviewing the cause factor for USAF T-33 major accidents during 1960, we noted that four accidents were caused by pilots permitting the aircraft to settle back onto the runway after prematurely becoming airborne. This didn't strike home until the other day when we flew with a compatriot in a T-bird and he snatched the airplane off at 110 kts, IAS. The plane shivered slightly, then slowly picked up speed. Sitting nervously in the back seat, the thought of the four pilots who stalled back onto the runway quickly came to mind. The T-33 Flight Manual, Appendix 1, Part 2, Page A2-7, shows the take-off speed for a T-33 grossing 15,100 lbs to be 120 kts indicated airspeed. Regardless of the tendency for the airplane to bounce, skip, etc., when taking off on a rough runway (which may not be too easy on the tires), it's best to wait for the 120 kts. After all, it's cheaper to replace tires than it is to graft new skin to the bottom of the fuselage. Further, it's easier on the nerves of the rear seat occupant! ●

–Airscoop

AIR MUNITIONS

TACTICAL MISSILE TRAINING. Last month's cover pictures a TM-76B Mace leaving the launch bay at Cape Canaveral. The Mace at this stage has covered only 20 feet of its programmed hundreds of miles flight down the Atlantic Missile Range. The missile was dispatched to its target down range by merely depressing two buttons in the launch control center, an operation less complicated than punching the keys on a typewriter. What then is the difference between a typist and a missileman? Training.

It is true that the actual launch of a missile is a simple push button affair, but the maintenance and countdown operations preceding the launch is an exacting test of the missile crews' endurance and knowledge. To prepare the missilemen for their jobs, an extensive 12 months' training program has been developed.

Formal missile training begins in the classrooms at Lowry AFB, Denver, Colorado, where instruction for launch and maintenance personnel ranges from

five to seven months. Here the courses extend from electronics fundamentals to nuclear familiarization. Upon graduation from the missile school at Lowry AFB, the students are sent to the USAF Tactical Missile School at Orlando AFB, Florida, where they are assigned to combat crews and trained as teams rather than individuals. For approximately six months, the crews train in an environment that closely simulates overseas conditions. After graduation, the complete crews are either sent directly to one of the operational missile units overseas or to Cape Canaveral to launch a missile.

Only through this extensive training program was the missile launch pictured on last month's cover made possible. Each missile leaving the launch bays at Cape Canaveral is a testimonial to the effectiveness of the tactical missile training program.

NUCLEAR WEAPON TEST EQUIPMENT. The K-1934, Multimeter, Type AN/PSM-6, Stock Number 6625-724-8582, was originally authorized for maintenance and assembly operations on initial equippage and added items Air Force Supply Directives. In April 1960, the authorization was expanded to include loading team requirements. It is the organization's responsibility to initiate action to obtain increased quantities on other than NOCM items in accordance with paragraph 5, Section 3, Volume VII, AFM 67-1. Several recent inquiries from field organizations indicate that such supply action has not been taken. The contractor is producing 1000 PSM-6 multimeters a month and if your organization does not possess total authorization of this item, it is recommended you submit a requisition to Dayton Air Force Depot.

K ITEMS. The notation on the cover sheet of the Master List of K Items forwarded with the March E-120 report should be corrected to read "This Master List replaces Master List of K items dated 18 December 1960." SAAMA relinquishes control of out-of-class items when assets parallel requirements and then control reverts back to the applicable prime depot. Since several K items have been dropped from the new Master List, it is suggested that it be compared with the existing ECL/SLOE. The ECL/SLOE may list a control number which has been deleted from the latest K listing. Unlisted control numbers should be deleted from the ECL/SLOE and subsequent supply transactions should not be reported to the Directorate, Special Weapons.

1-AFLC-E-120 REPORT. Just a reminder that reconciliation reports are to be submitted within ten (10) days after receipt of the basic E-120 Report. Do not return your brownline listing, but forward your desired changes by letter or teletype. Authorizations appearing on 18 March 1961 report were computed from the applicable ECL/SLOE and include any pending changes. Authorizations may, therefore,

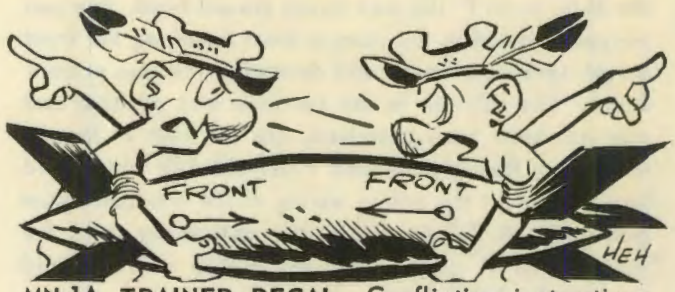
reflect a change from the last report. There is a possibility that the latest ECL/SLOE revision may not have been received by your organization. If any doubt exists as to the quantity authorized, query SAAMA/DSW. To make everybody's job easier, remember these important points:

- The initial reconciliation report should not be numbered. Subsequent change reports may be serially numbered, if desired.
- The cut-off date on the current report is 18 March.
- Transactions occurring after the "as of" date should not be submitted as discrepancies.

Security classification should be based on the content of your correspondence, not the classification of the E-120 Report. In most cases, use of "T," "H" and "K" designators will eliminate the need for classification.

T-259 RADAR RINGERS. SAAMA is receiving a number of T-259 radar ringers with stripped gears. The gears strip when the tuning knob is spinned or forced against the stops at the upper and lower mechanical limits. Operators should be cautioned against this practice.

TRITIUM DETECTOR. SAAMA has found that some T-290A air samplers have not been fully modified in compliance with TO 11N-T290-501 and still contain one-half amp fuzes. The T-290A, box one of two and box two of two, should be checked for one-half amp fuzes. Those found should be replaced with one-fourth amp fuzes. The stock number of the correct fuze is FSC 5920-504-8634.



MN-1A TRAINER DECAL. Conflicting instructions for loading practice bombs resulted when the contractor used the same type loader mounting point decals on both sides of some MN-1A trainers. The decals are correct if "MB-2" points to the rear on both sides of the trainer. All decals on trainers processed through Directorate, Special Weapons shops since the error was discovered have been corrected.

"BUT, SARGE, there ain't nothing wrong with the pressurization system of that T-bird. Like I told you, we put the tester on it and she held 2.75 differential with no sweat."

"Maybe so, Tommy," the old Sarge said, closing the Forms 781, "But the pilot who made this write-up certainly didn't think so. He said cabin altitude was 31,000 feet at an actual altitude of 35,000 feet and that's 'way out of tolerance." He knocked the ashes out of his old corn cob, checked to see that the bowl was empty, then thrust it in his pocket. Getting to his feet, he said, "Let's have a look."

Sometime later, after the testing rig had pumped the T-bird cockpit full of air, Tommy pointed at the pressure gauges. Half shouting over the noise of the compressor, he said, "See, it's holding 2.75 just like I told you." He grinned, just a little smugly.

"Sure is," replied the old Sarge not at all perturbed. "But, Tommy, would you mind jotting down the reading on that flowmeter?" Tommy frowned slightly, but scribbled the reading onto the back of an old envelope.

The Sarge said, "Now, let's go into the T O library where it's quiet . . . and you can shut that thing down."

After the usual fumbling, the old Sarge turned to the index, and finally came up with a page number, looked it up, and said, "See here, the maximum allowable loss is 65 cubic feet per minute. According to your flowmeter, the test unit was having to put out 115 cubic feet per minute to hold 2.75. The test unit was pumping almost twice as much air as the engine is capable of feeding into the cockpit. A new canopy seal will probably help, but I'd also go around and plug up some of the holes in that cheese box. Like most T-birds, that machine has been bouncing around for quite some time and has modifications on top of modifications. After almost every one, a new set of holes were drilled and it's high time some of 'em got filled back up."

Tommy looked a little crestfallen. The old Sarge slapped him on the back and said, "Cheer up, lad; many a maintenance man has overlooked one small item while trying to ground check an aircraft. It's always doggone hard to simulate in-flight conditions and that's why I wasn't buying your 'ground checked o.k.' as a correction for that write-up." ●

CHOCK TALK

F-105 M-61 GUN. The guide pin, part number 57F781409-1, backed out of the rear gun mount while the M-61 in an F-105 was being ground fired. The gun whipped around in the compartment knocking the front barrel stabilizer loose and damaging the gun access doors. The roll pin to the carriage was missing and may not have been installed. On the 15th of March, this year, Republic issued FS61-105-182 which told how to inspect the safety wiring of the rear gun mount guide pin. A TO to correct the deficiency is in the mill. Until it comes out, all F-105 users should consult the Field Service Instruction.

KB-50 ENGINE EXHAUST SYSTEM. TAC KB-50 units should start getting improved exhaust systems this month. Systems are being shipped automatically in sufficient numbers to retrofit the entire fleet by February 1962. The -6 TO will be revised to make the entire exhaust system a time change item. Components with less than 250 hours at an engine change will be reused. Upon completion of the retrofit program, the KB-50 reciprocating engine exhaust problem should be solved.

BUGGED FUEL. After an engine flamed out in flight, investigators checked the fuel system of a C-130A and found a slimy substance in the main fuel tanks. The slime was from several varieties of algae, protozon, bacteria, and fungi which live and multiply in the zone where fuel and water mix in fuel storage tanks. If not controlled, such growths become huge and extend some distance into both the fuel and the water. These bugs grow fastest in humid semi-tropical or tropical areas. However, they have been found in aircraft operating in the temperate zones. Normally, proper filtering and water separating procedures will keep them out of aircraft. After someone gets careless and they find their way into an aircraft, they'll continue to grow, depositing up to 1/16" of slime on the bottom and even the sides of fuel tanks. This slime acts as a blotter to collect and hold the impurities and water which settle out of fuel. These impurities combine with by-products of the bacteria action to make the slime highly corrosive to anything it covers. Strict fuel quality control plus normal good housekeeping will keep the bugs from getting out of hand. Each time a jet fuel tank is opened the filters, sump screen, and bottom of the fuel tank should be carefully inspected for slime and corrosion. The slime will be easier to find when the surface is wet. If slime is found, a sample should be forwarded to the AMC Research Lab and the rest removed by scrubbing the tank with an approved detergent in warm water, flushed with large amounts of cold water; then dried. Lines, filters, and all metal parts that touch the fuel should be carefully inspected for corrosion pits or blisters, then cleaned before being returned to service.

AMENDED SUPPLY DIRECTIVES. SAAMA is initiating and amending AFSD's to supply all applicable items in Special Weapons authorization documents that were not previously supplied on initial equippage. These AFSD's, which will be forwarded within the next 30 days, will cover:

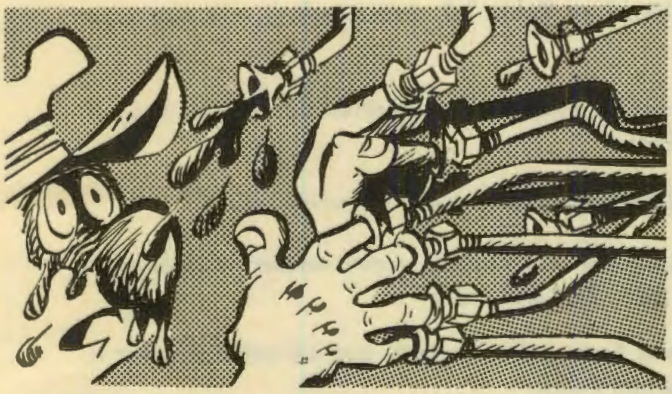
- New items recently added to authorization documents.
- Items in previous editions of authorization documents that have not been supplied.
- All NOCM item shortages, including increased requirements, but excluding replacement quantities. Replacement quantities will be supplied automatically when an E-120 change report is received indicating turn-in of unserviceable items.

These AFSD's will not cover increased authorizations or replacement quantities for other classes (non-NOCM items) of equipment. It is the responsibility of the requiring organization to obtain these quantities through normal supply channels in

accordance with Section 3, Volume VII, AFM 67-1 (Revised).

UR SUBMISSION. The emergency procedure for UR submission outlined in figure 4-3, page 4-4, Section IV of T O 00-35D-54 violates instructions contained in AFM 10-2. This discrepancy will be corrected in the next revision of T O 00-35D-54.

AFSD SHORTAGE REPORTS. Shortage reports indicating items and quantities due your organization with expected delivery dates will be forwarded by the depot every 45 days in accordance with paragraph 24b(1), Section 3, Volume III, AFM 67-1. These reports allow the receiving organization to cancel items not required. Therefore, screen these reports and return them immediately so you don't end up getting equipment you don't need.



CAPPING LINES. Open lines, fittings and accessory parts must be capped off during maintenance. This is necessary, since it only takes a small piece of dirt to cause an engine to fail or a hydraulic actuator to go beserk. Capping should be done with the correct plastic or metal cap, cover, or plug and then only after the capping device has been carefully cleaned. Masking tape should not be used as a substitute, since it leaves its own foreign material. That's right, the sticky stuff on the tape melts when fuel or oil gets on it. Recently a J-79 engine was "protected" with tape. The sticky stuff came off, worked its way into the system, and gummed up the fuel nozzles. It was quite hard to remove too. Anytime part of an engine is disassembled or tubings and lines disconnected in any system, there is danger of contamination. Therefore, always use an approved, clean protective cover. Covers are available in many sizes and shapes, and T O 44H3-1-3, General Use of Boss, Cap and Tubing Seals, gives info on ordering them. In the meantime, while waiting for the proper seals, heavy aluminum foil can be used.

F-100 FY62 IRAN. A heavy maintenance requirement has been established for the FY62 F-100 IRAN Program with 630 aircraft to be processed through AFLC and contractor facilities. The breakout by number affected, type aircraft, flow time, and work facility will be:

• 137	F-100C's	30 days	NAA, Inc
• 368	F-100D's	45 days	SMAMA
• 125	F-100F's	45 days	SMAMA

This program will provide for installation of the cartridge starter and GAM-83 on some aircraft. All aircraft will be equipped with tail arrestor hooks and will be given a heavy maintenance type inspection to correct major discrepancies.

A periodic inspection and accomplishment of OFM T Os are not included in the work specifications. This work will, as in the past, be accomplished by organizational field maintenance activities. Correction of minor discrepancies must be done prior to delivery of aircraft to IRAN. This will speed up processing and return of aircraft. Maintenance supervisors should remember that the condition of aircraft delivered directly reflects on their own effectiveness.

Certain input schedules will be established by tail and block numbers at 12AF Headquarters predicated on availability of appropriate TOC kits. These modifications are mandatory requirements since operational capability of aircraft is affected. No deviation to these schedules is authorized at local levels; therefore, all supervisory personnel must make necessary plans for delivery of the selected aircraft on receipt of delivery schedules.

Importance of the FY62 IRAN Program cannot be overstressed. Its success will require the earnest effort and utmost cooperation of all agencies. ●

UR CHECKLIST

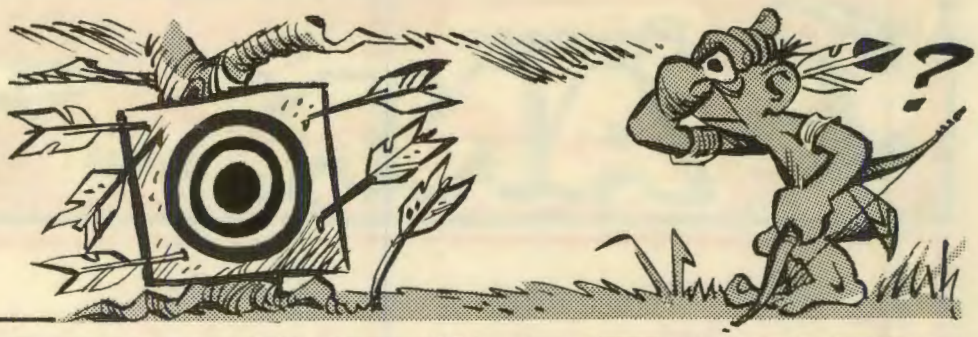
COMMANDERS AND MAINTENANCE SUPERVISORS should make certain that everyone knows how important the UR system is and how it operates. In addition they should assure themselves that UR's are being submitted promptly as specified in paragraphs 2-12, 4-6, and 4-7 of TO 00-35D-54 . . . but before an Unsatisfactory Report is submitted they will do well to see that:

- Everything possible has been done to find out if the failure was caused by poor procedures or a goof in their own organization. Reviewing maintenance data on the part will help to determine this (paragraphs 2-8, 2-9 and 2-10).
- Paragraphs 2-6 and 2-7 have been screened to see if the deficiency should be reported by TWX.
- Conditions, equipment and such, are not listed on Table 1-1, and therefore, are not to be reported.
- The deficiency was not caused by sabotage or some other malicious act. If it was, it should be reported to the OSI (paragraph 4-18).

If, after this review the UR is still appropriate, it should be checked to see if the writer has:

- Properly identified the defective item, giving the part number, serial number, manufacturer and other information listed in paragraphs 2-20, 2-21 and 2-22.
- Made proper entries for the Type, Model, and Series of equipment, and indicated whether it is a War Reserve or a Training item (paragraph 4-30).
- Included all the pertinent details and information on the failure.
- Specified the type of deficiency as outlined in paragraphs 2-17 and 2-18.
- Made a brief statement giving the effect the problem will have on the local mission.
- When applicable, stated in the first line ot block 9 that the report is on a Hi-Value or Critical item list (paragraph 4-43).
- Entered the suggested preventive measures or given recommended corrective action (paragraph 2-31).
- Assigned an appropriate security classification (paragraphs 1-11 and 4-17).
- Taken action on UR exhibits as explained in paragraphs 2-33 and 2-38.
- When required, obtained drawings and photos of exhibits and forwarded them to the proper people (paragraphs 2-35 and 2-36).
- Properly packaged and marked exhibits for shipment (paragraph 4-29).
- Insured that tags, AFTO Form 114, are completed and securely attached to the exhibit and to the outside of each container in which the UR exhibit is packaged (paragraph 2-38).

TAC TALLY

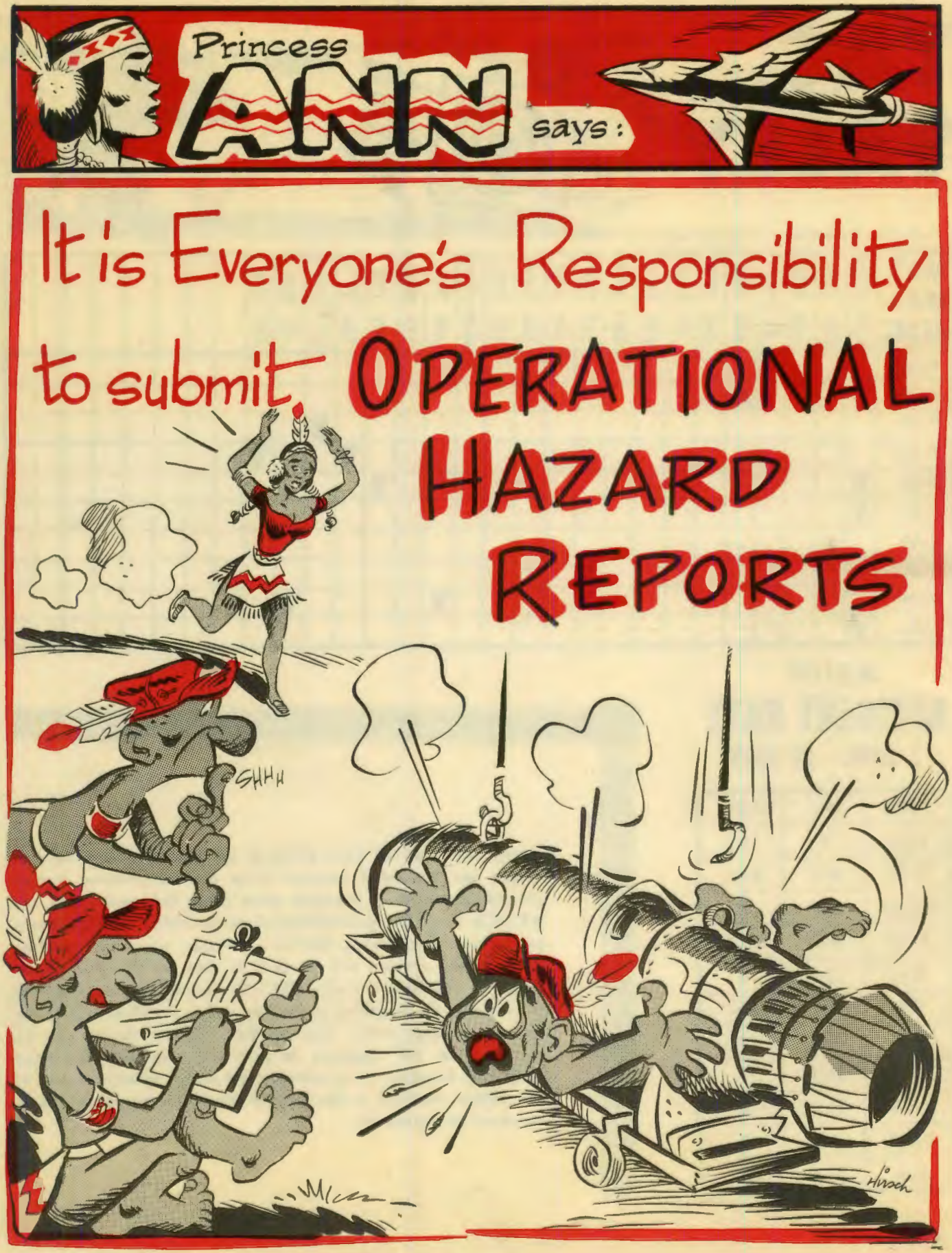


MAY MAJ. ACDTS.	4510 CCTW	433 TCW	464 TCW	31 TFW	479 TFW	140 TFW	27 TFW	474 TFW	4505 ARW	127 TRW	401 TFW	363 TRW	131 TFW	4520 CCTW	463 TCW	117 TRW	102 TFW	354 TFW	4411 CCTG	64 TCW	113 TFW								
F-105																													
F-104					4																								
F-101																			1										
F-100																		1			1								
F-86	1																1												
F-84	1																												
B-66																													
T-33																													
CONV.															1					1									
HEL.	1																												

MAJOR ACCIDENT RATE 1 JAN. - 31 MAY

TYPE	1961	1960
F-105	0	36.5
F-104	65.7	48.4
RF-101	15.6	0
F-100	15.3	26.4
F-84	72.4	0
T-33	3.0	5.4
B-66	41.8	0
KB-50	13.2	7.1
C-130	12.0	0
C-123	8.0	0
ALL	14.4	12.7

Ample copies of the TAC ATTACK are mailed to each base to supply the interested tactical flying and maintenance organizations. However, it has been noted during field visits that the ATTACK is not being distributed to all interested organizations – particularly maintenance sections. Division, wing, and squadron flight safety officers can do much to help get the word to the troops . . . division and wing FSO's by ascertaining that the PDO is receiving the magazine at the base and is distributing it to the appropriate base units. The squadron FSO can do his part by insuring that the magazine is getting the desired circulation within his squadron. It is intended that approximately one-half of the copies received in the tactical squadrons be passed on to maintenance personnel.


Princess
ANN
says:
It is Everyone's Responsibility
to submit
OPERATIONAL
HAZARD
REPORTS
SHHH
OHR
Hirsch