

AUGUST 1964

TAC ATTACK

TAC Attack August 1964 TAWC



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VOL. 4 NR. 8

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COVER PHOTO

A TAC C-130 takes off on an advanced strip built by
Army Engineers.

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Distribution: F, Controlled by OSEPA - TAC Publications Bulletin Nr. 25, dated 17 June 1964

TACRP 127-1

hazards of

EXPERIENCE



In a surprising number of instances the accident presentations by our Wing Commanders include such phrases as "he was one of our most experienced" or "he was one of our very best." A close look at the individual's record discloses that he was worthy of such appraisal, without overstatement. This would seem extremely puzzling, since aircrews of such caliber should have the lowest accident potential of all . . . however the statistics reveal otherwise. The accident trend does move progressively downward as experience increases, but levels at an approximate point of 2500 total hours and then starts upward again!

We all recognize, and take appropriate safeguards, against the hazards of inexperience. However, we do not seem to recognize and give sufficient attention to what I have called the "hazards of experience." While this may seem to be incongruous terminology, such hazards do in fact exist, as is borne out by statistics and underscored by the familiar refrain at accident briefings. It is my thorough conviction that in very large measure these hazards are brought on by complacency and inattention. Webster describes complacency as "a state of serene self-satisfaction" or "calm inattentive contentment", and adds to inattention the synonyms: "unheeding, unmindful, disregard".

Based on a black and white interpretation of these definitions, I am certain that most of our aircrews would forthrightly defend themselves against any charge of complacency. However, these are insidious attitudes that are not easily recognized, and we are not dealing with absolutes . . . but rather with multiple shades of grey. Within these shades of grey I am convinced that we are all vulnerable . . . and far too many fall prey . . . to the hazards represented by these attitudes. At first it may be a small shade of difference . . . perhaps the tendency to skip lightly over a portion of the checklist because it has become "routine." As experience progresses, so may the shade of difference, with the individual edging ever closer to "calm inattentive contentment" and a "kick the tire" complex even while religiously going through the prescribed motions and procedures. Ultimately a switch is left off, or a pull-out is started too late, and these hazards take their toll.

You can overcome these "hazards of experience" . . . if you recognize them, and stoutly resist the notion that with increased experience you, or those you supervise, become immune to foolish mistakes . . . if you resist the "take-off standard; join-up standard; tactics standard" approach in briefings and give full consideration to all of the hazards which will confront all of the members of your flight, including yourself. I am confident with your thoughtful support that we can make real progress in this particular aspect of our operations.



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

stranded



FILL 'ER UP and we'll get out of your hair." Major Wayback deftly lifted a pencil from the sleeve pocket of Capt Kalar's flying suit and reached for the transient service form.

The alert crewman shook his head. "Sir, I think you better look at your left brake . . ."

The brake was shot. There was no doubt about it. Two of the disc retainer lugs were completely missing while a third had jammed between wheel and disc and machined off part of the brake. They'd need a new wheel and brake assembly. Several telephone calls and many minutes later, Wayback put the phone back on the operations counter and looked at Kalar. "They found the parts and will send 'em first thing tomorrow in a T-39 . . . I knew I should have brought some clothes."

"Me too." Kalar replied without looking up from his computer. "I get about three hours, which should put them in here at 1000 local if they get off at 0800 Homepatch time."

Wayback shook his head. Figure four hours. They plan to drop a passenger at Patterson. Call it, ah . . . ten local."

"That's what I said. But if it takes four hours they'll get in at 1100."

Wayback grinned. "Homepatch is on daylight saving while this place is on central standard. Let's find some place we can sit down and eat in a smelly flying suit. You ask around and I'll tell maintenance to hold tight until tomorrow morning."

Finding a decent place to eat turned out to be a problem. After a short discussion with the club officer and a hard luck story, the

stranded pair were finally permitted to eat like two poor relations.

The hard luck story was needed to convince the club officer that sandwiches wouldn't hack the program. It was a good story, beautifully told. The club steward had tears in his eyes and even helped move a table and chairs into the game room.

Bright and early Monday morning Wayback and Kalar checked out of the VOQ and made their way down to base ops after a 45 minute wait on transportation. This proved an accurate preview of the day. Base ops had no word on an inbound. So, after Wayback and Kalar counted the money they had left and invested part of it on breakfast, Wayback put in a call to the command post at homeplate. The aircraft had gotten off a but without the wheel and

assembly. The commandpost was to shake loose another air- and the controller promised to call as soon as the flight was firmed.

The disappointed pair spent the next three hours killing time by asking each other the emergency procedures and running thru the Master Question File study guide. They were in the snack bar drinking coffee when the call came thru. The bird would leap at 1600 Homepatch time . . . with a stop at Snerd AFB. This would put them in at 1800. Kalar passed the word on to maintenance.

Two hours later another call came thru from the Command Post. The bird had launched OK, but they wanted Wayback and Kalar to go on to Gulchville, California, after they got their bird fixed.

"Gulchville!" Wayback yelled at the instrument. "Are you out of your mind? We've been stranded here for a day and a half and you want us to press on. Why don't you send the other bird?"

"I'm sorry, sir, but we need it back here. This bird wasn't programmed on the regular flight schedule. Look, if you are in a hurry to get back, why don't you talk Captain Jones into trading birds."

Wayback shook his head, "He'll never buy it, not unless you people order the change."

"Well, give it a try and if you can't work it out, give us a call."

At 1850 Wayback and Kalar were sitting on the edge of the ramp watching a T-39 make another approach after a couple of low go's. "He doesn't seem to be in any hurry, maybe we can talk him into it," Kalar remarked.

Wayback pitched a pebble at a drain hole in the ramp surface. "Don't bet on it. Hey, see if

you can hit that hole. I give you five tries."

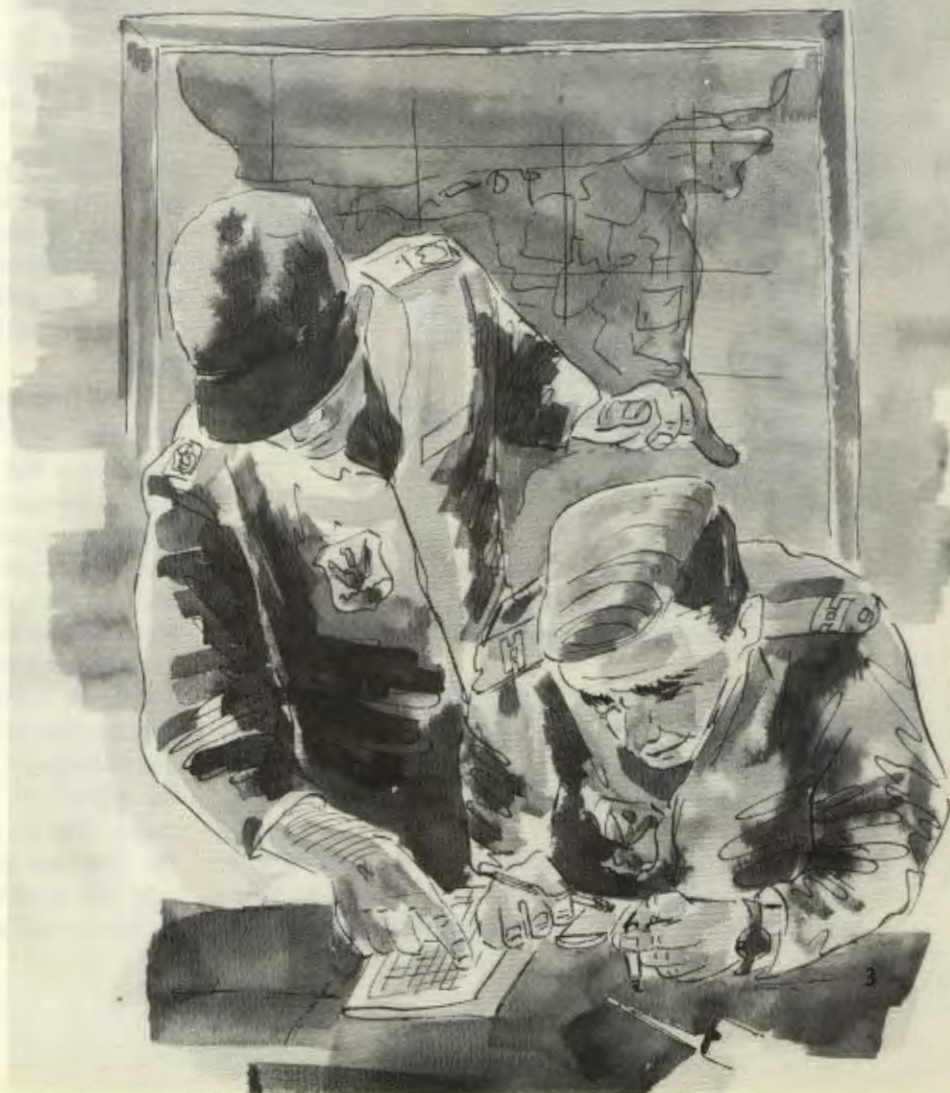
Half an hour later, Wayback was again talking to the command post. "No, they don't want to go on out either, not unless you people direct a change in crew. I'll stand by for a decision." Wayback grinned and covered the mouthpiece. "That ought to hold 'em. There's only one way they can decide, Kalar. We've been on the road since Sunday morning, I have staff duty tomorrow and both of us have already missed a full day of work. These other characters have only been away from home half the afternoon."

The command post duty officer said something and Wayback af-

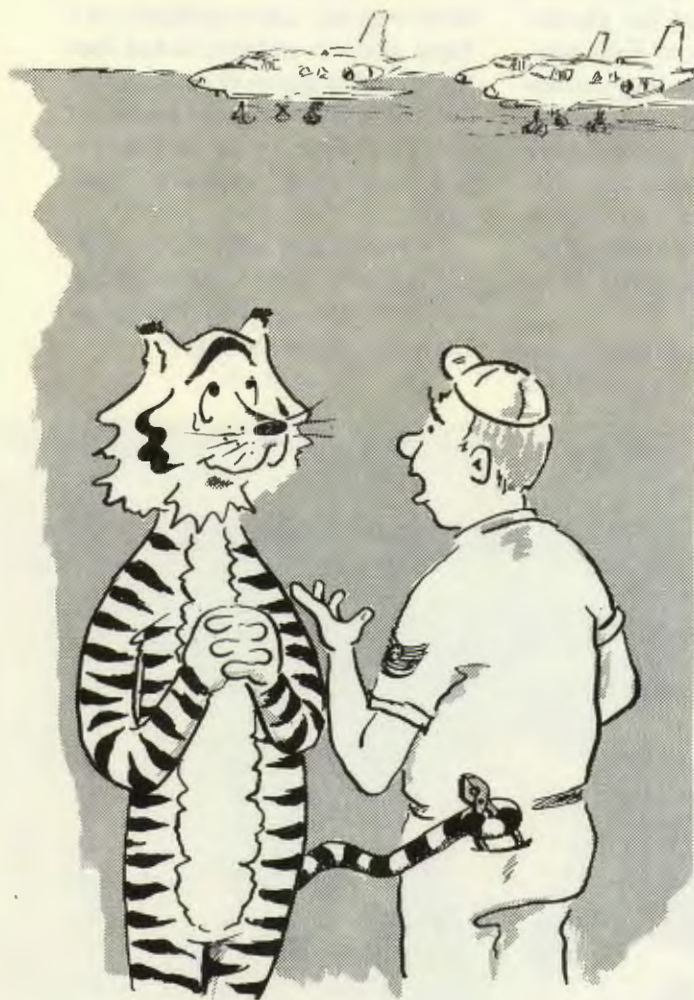
firmed that he was on the line. As he listened his face turned red and his eyebrows came together in a magnificent frown. When he finally answered it was obvious he was barely able to hold his temper.

After he put the phone down, he looked at Kalar. "Well, you heard what went on. Let's go knock out a flight plan to Gulchville and then try to find a place to eat. So help me, the wings will have to fall off before I ever let a malfunction keep me from pressing home again!"

"No," Kalar said, "You're too old for that. But I know one thing, I'll never leap again without bringing some clothes along."



TAT



WE LEAPED EARLY, planning to get there and back before the usual thunderstorm activity got brisk . . . besides, ops wanted the bird for another haul.

Outbound we started getting oil pressure fluctuations that were just under the limits. We didn't have to shut down the mill but it was close enough to max limits we asked transient maintenance to trouble shoot.

This didn't take long. The oil cap was broken and kept the oil tank from pressurizing. No sweat, they promised to get another from supply while we grabbed

a Texas burger and refilled.

No sweat my hind foot. When we arrived bird, the good troop from transient maintenance blushed and said, "TAT, I hate to tell you this, but supply doesn't have an oil cap in stock."

"Heh! Lend me a pair of plyers and I'll see what I can do." I glanced across the ramp at the local T-39 fleet. With over two dozen birds, a cap should be no problem.

Things didn't work that way. He muttered something about cannibalizing and hastened away to make a phone call. To expedite matters we called our own command post, located a new cap and promised the local heroes that we could guarantee that they'd have the new cap the next afternoon . . . one of their birds would be in Langley around noon the next day. Fine, good deal, BUT . . .

To make a long story short, they had to get the paper work squared away before handing us a serviceable cap. We waited. Three hours later we were still waiting, with one eye on the weather. Good old CBs that were building up to 25,000 when we first filed were now reported with tops above 35. Finally, I remembered an old friend was stationed on base. I made a call, he made a call. A half hour later a frightened captain came in furtively clutching a healthy oil tank cap. I again promised to make a replacement would be dispatched and thanked for jeopardizing his future as a maintenance officer by daring to cheat on the system.

Back in the not-so-blue we bounced thru a husky one that somehow failed to show on the controller's scope and I wondered what thoughts would go thru my mind if the tail section snapped off our relatively frail machine.

With no chutes it would be a wild ride and I'd probably spend the whole of it cursing the system. This puts me on well-trod ground . . . everybody cusses the system. It's safer that way. In the old days when things got snarled up a fella could grab the guy who wasn't producing, have a few words and get things halfway straightened out. Not so today. Everybody hides behind the system. It is to blame, regardless.

Well, systems are made by people and it takes people to make 'em work, and so help me, when a system ties up a half million dollar machine over four hours because of a two dollar cap that can be screwed on and off in a few short seconds, something ain't right. I'm no expert, I don't know what the problem is. Perhaps people aren't feeding the proper input into the system, or maybe we've allowed ours to become unthinking slaves to it.

READING THRU ANOTHER Safety pub while
ing a subject, I saw where a T-birdman crunched
he overrun some 300 feet short of the runway
during an SFO. He gave his bird full power as it
rolled and skipped onto the concrete.

OK, so everyone goofs one from time to time and
ends up in the sage brush if they aren't sharp enough
to catch it. Back airborne, this lad had another pilot
tack on his wing and look the gear over. Everything
looked OK, so he proceeded to make another touch-
and-go out of an SFO and followed the touch-and-go
with a normal pattern. He then proceeded to land 18
feet short! The gear hit the runway lip, the bird
bounded onto the runway with the left and nose tires
flat and the right gear broken. It hit some 1200 feet
down the runway and knocked off the right drop tank
as it slid to a stop. The pilot opened the canopy
electrically and scrambled out uninjured ... at least
until his commander got hold of him.

Ye gads, lads! If a fella lands hard enough to ask
for a visual inspection, what in thunder is he doing
making a touch-and-go? A visual inspection only tells
big things like if you got three wheels still reasonably
attached. It doesn't catch misalignment, cracked
fittings and other bad things.

With no better judgment than that, it's only rea-
le to expect this character to misjudge his final
each ... better that day in bed he should have
stood, neh?

THE FRONT SEAT pilot made a control check,
then pushed the throttle to full military and looked at
the gages. Oops, oil pressure was in the yellow. He
brought the power back to 70 per cent and tried again.
The engine belched, so he again pulled the power back
and eased it back up. This time, oil pressure was
steady at 45 psi, with everything in the green. He re-
leased brakes and kicked in the AB.

Speed was good at the acceleration check and he
started back on the stick as airspeed accelerated thru
145 knots ... the stick continued aft of its own ac-
cord! As could be expected, the bird overrotated,
drug its tail skid and leaped into the air like a corn-
cobbed cat.

The front seat pilot was pushing forward on the
stick with both hands but couldn't get the machine to
respond ... he said it felt like someone else was on
the controls. He told his companion to get ready to
bail out and managed to yank up the gear. He couldn't
the pickle button and the bird staggered over
bondocks in a typical sabre dance ... wobbling

from side to side in a semi-stall at around 150 knots
at angels one tenth.

Nuff of this. The aft pilot punched. For a mo-
ment it looked like the front seat pilot could recover,
but the bird started sinking so he too grabbed the
trigger. Nuthin' happened. He tamped the trigger into
the seat handle and looked to see what was wrong ...
FTOOM! Out he went. Both ejections were a huge
success, thanks to rocket seats.

All of this goes to show that these seats can get
you out as advertised if you'll go before the situation
deteriorates too much.

Well, the board dug around in the wreckage, which
was pretty much in one chunk, but couldn't find any-
thing wrong with the bird. At this date it looks like
an unknown.

Rather reminds me of the time old Tom Garvin
decided to find out why we had a couple of unexplained
F-86F takeoff accidents. This was back before line
speeds and rotation speeds. In both accidents the
machine refused to get into the blue after using all
the runway, the overrun, and most of a farmer's back
yard. Tom decided it was possible to get behind the
power curve if the bird was over rotated. To check,
he got me on his wing and we blasted off. On rotation,
I flew normal and told him how to haul back. I let
him get the pipe inches off the deck and soon passed



him. Sure 'nuff, the bird went crow hopping down the
runway and Tom had his hands full getting the nose
back down so it would accelerate out. Two things
come to mind. First, after he reached a certain at-
titude, the stick seemed to come aft of its own accord
and, second, it took considerable forward stick to
break the semi-stalled condition.

I have no way of proving that this happened in this
particular accident - but there is a slight possibility...
the two birds act about alike in this region. Further,
as our F-100 expert was quick to note, these lads
were taking off into a gusty wind. They started to
rotate at 145 knots attempting to meet a 170 knot lift

off speed. A sudden lull in the wind could easily drop that speed to 155 or less . . . and the stick force on the F-100F in this configuration will abruptly lighten at 158 knots. It would take vigorous effort to correct the resultant overshoot into the typical sabre dance attitude. In fact, sufficient control may not even be available. The moral is to add a gust correction onto rotation and lift off speeds just as you would for landing approaches. Also, easy does it on rotation.



AN OVERSEAS F-105 type made a sage brush landing and dinged the lower speed brake pedal and a little metal on the underside of the aft section. It seems he reduced power over the overrun and opened speed brakes to get the proper approach speed. When he rotated, the bird continued to sink. Ulp!

Sitting here with my swivel chair tilted back at a rakish angle it would appear that this lad got took for one of two reasons. He either got a little steep or was just passing thru proper final speed instead of getting it nailed.

The way we fly aeroplanes these days it pays to nail a final approach speed - or angle of attack - shortly after rolling out on final . . . then hold that speed and make early adjustments with power and

stick to aim for the proper flare point. Any deviations from this tend to gum up the works since handspeeds are established for a steady state, reasonably flat approach using power. Use less than normal power and she'll pay off early . . . the opposite effect of what happened in the old days when speeds were set up for power off approaches. In those days, using a little power to get up to the runway guaranteed a long landing.

The moral of all this is to try again if your approach isn't reasonably correct in all respects . . . and that hasn't changed since Wilbur looked at the ground coming up and hollared, "You got it!" . . . get it?

THEN WE HAVE the T-33 type who leaped after dropping another troop at a passenger stop. He apparently forgot to gangload his fuel because as he climbed out in night weather the engine flamed out.

He tried to eject at about 4500 feet but could only jettison the canopy . . . the seat refused to go. He finally gave up on the seat and got back on the controls just as the bird hit the tree tops. By instinct he pulled back on the stick and the bird bellied into a plowed field some distance beyond the trees.

Altho badly hurt, the pilot was able to get from his burning bird.

There certainly isn't anything new about this one . . . but I'd bet a dollar to a doughnut hole that this pilot was one of the few diehards who refused to string along with the gangloading bit (except on stdn/eval rides). Why, I'll never know. It wouldn't hurt to run the bird gangloaded the complete flight, every flight, turning the tanks off as they run dry. But for some odd ball reason we have to go at it the hard way.

Weather and nighttime apparently kept this lad too busy to check his fuel until the fire went out.

By the way, the report I'm briefing this from failed to say what went wrong with the seat . . . it didn't say what type seat it was either.

AT 3000 FEET the hog was a little below computed line speed . . . at the 5000 foot check, speed was 12 knots below normal or about four knots below minimum, so the pilot aborted. Altho he followed the dash one procedure, had a good chute, used max braking and was operating off a 12,000 foot runway, he hit the barrier at almost 70 knots. Fortunately it was a good catch.

The report I received said the engine was tripping on the low side . . . that max EGT was 12 deg.

below the low limit. The report did not comment on accuracy of the airspeed indicator or give runway temperature, slope, or any other data needed to calculate this one out.

It takes no Einstein to see that this bunch was planning too close on their abort point.

Ho hum, early abort, avoid the crush.

COMING OFF TARGET, this F-100 sport retarded throttle as he eased into formation, then re-added power. Gulp! All he could get was 80 per cent. He tried the emergency system . . . no change. The bird was at 2000 feet and airspeed was 200 knots and decaying, so he fired up the afterburner. This gave enough thrust to hold 190 knots still at 2000 feet. He dumped the 335 gallon tanks into the swamp and headed for home, landing long and hot from off a high base leg. The tail hook snagged it to a halt just short of the MA-1A.

This is one time I have no argument with success. This troop handled this one quite well - including landing a little long and hot. Many times we report emergency landings where the hero plunks his sick machine down on the first 500 or 1000 feet and although every one must concede that they did a fine job I can't help wonder if they hit at 500 feet because they were actually shooting for a longer touchdown and ended out by not misjudging things further than they did!

Like I've said before . . . it's better to go off the far end with smoking brakes and a stopcocked engine - regardless of barriers - than to bash in short a few knots under normal approach speed. A slightly long touchdown puts it in the bag with a minimum of papers to fill out, little bent aluminum or spilled blood. So we tip our old hard hat to Lt Richard A. Gaebler.

You done a good job, Dick.

A C-119 CREW got a red light on the landing gear after they tried to retract it. They recycled and the red light went out but came back on about three minutes later. While the crew was scratching their heads on this one, torque and fuel flow dropped on number two. Fuel pressure and oil pressure both remained normal.

The pilot did not notice any drag from the engine, but played it safe and asked for an immediate precautionary landing. Turning short final, number two torque went to zilch along with fuel flow. With the engine assured, the pilot completed the approach without feathering.

Five days later, the oil analysis lab called to report that a routine oil sample taken from the engine before the failure occurred, was indicating an impending failure.



SOME THINGS IMPROVE WITH AGE.

This is the third case I've heard of where a spectrographic oil analysis came up with a pending failure and the report failed to reach the unit in time to prevent it. This spectro-analysis is right fine stuff, I believe in it and all that, but rather obviously we need to get these reports earlier if we're going to realize max benefit from 'em.

ONCE UPON A TIME an F-104 pilot from ADC smelled fumes in the cockpit that were just like some he'd smelled before when an oil scavenge pump failed on him. "Hoo boy," he said as he slammed the unit into AB and started climbing from 17,000 feet . . . headed toward the closest air pasture.

With enough altitude to glide the rest of the way, he came out of AB and checked oil pressure. It was 5 psi. He reduced power to 86 percent and started toward the VOR since he didn't have the field in sight due to cumulus build ups. About ten miles out he found it and hit high key at 15,000. By this time oil pressure was 4 psi, which actually is zero, since air pressure in the lines induce this much of a gage reading.

He deployed the RAT at high key and dumped the gear on the flare for an uneventful landing. A washer tab had broken off allowing the spanner nut to back off. This caused binding and - you guessed it - the number one scavenge pump gear to shear.

Wouldn't it be nice if we could rig our simulators to recreate emergency situations complete with proper noise, smoke and smell?

—TAT—

Sockroller's Sermon



"IT SURE is a shame there isn't BOQ space . . . however, this plush motel with that great, big swimming pool is fitting for a man of my stature in society. Put the bags down, son, and we'll check in."

Ellrod T. Sockroller, self-styled defender of the free world, scourge of the Navy, and protector of SAC, strolled up to the register and signed in.

"Young lady, we need two of your best double rooms for old Fearless Flight. You may have heard we were coming to town. If any members of the press call, please hold them off until we have changed."

As they headed for their rooms, Ellrod briefed on the plan for the evening. "Let's get suited

up and go help out the local economy."

Dropping the B-4 bags on the floor, Clyde Youngfellow sighed and mumbled "It's been a long day, Captain Sockroller, a long day."

"How did you like leading the flight out here, Clyde? There's more to it than just flying in front, isn't there?"

"There sure is, sir. I really goofed on that flight plan too. It gave me a few nervous moments to say the least."

"That was the funniest thing I've seen in years, Clyde. You put the heading down for the distance between legs on your 21a. I almost passed out when you came out with that, 'Sir, I think my TACAN is malfunctioning' bit."

"You kind of threw me a curve

on that one, sir. I showed you that flight plan and you said we would make it OK."

"Well, we made it, didn't we? Besides, you wouldn't have learned much if I had just told you about it during the briefing. That DF steer you called for ought to stick in your mind for a while."

Clyde's face glowed brightly, but then he smiled and said "I've got to admit you're right. This flight leading business is a lot tougher than I had thought."

Ellrod eased out of his salt crusted flying suit and sprawled on one of the sacks. "Unlax a minute, Clyde . . . about this leading business, it is one of the simplest but also one of the most difficult of tasks. Nobody is born a lea

it's a learned art or skill. You put it up both thru experience and analysis, but there are some things you should think about. Leading and thinking go hand in hand. Think of some flights you've had with good leaders and you'll find that they were good because the leaders used their head bone. They knew what their wingmen could and could not do, they understood their own capabilities, and most of all, they were thinking. You with me?"

"I see what you mean, Ellrod, but I'm pretty far down the list and usually a follower instead of a leader, and . . ."

A rap on the door interrupted their conversation as the other members of the flight came in. "Hey, let's get on with it!"

"Hang loose, fellas. Clyde and I were talking a little bit about leading and leadership. Pull up a piece of floor and set a spell."

"Ellrod, you're getting on your box again. Face it, now-a-day we're just airplane drivers. With most of us fully qualified, we don't do much leading."

Ellrod sat up and looked around the room. "I think you're forgetting a lot of things. Nearly everything we do around the squadron needs to show the effects of leadership. How about your relationship with the PE troops and flight line types? In fact, what about the four of us? Granted, we don't have a setup that creates a 'Not for you to wonder why' philosophy, but we need to be good leaders."

"Maybe you're right, but the basic concepts of leadership and organization and all that sort of thing changes all the time. I went to SOS and was told a lot about the qualities and characteristics of leaders, but not much of it seemed to apply to people like us."

Ellrod got off the sack and walked over to the dresser and started leafing thru the Glideon Bible that was on it. "Troops, let me tell you a story. Remember when Moses led his people out of Egypt? He was leading a lot of people, and it was no easy job. In fact, a guy named Jethroe, who just happened to be Moses' father-in-law, came for a visit. He eyeballed the situation and the way Moses was acting as a leader. He wasn't too impressed. Here, let me read this to you.

'And it came to pass on the morrow, that Moses sat to judge the people: and the people stood by Moses from the morning unto the evening.

And when Moses' father in law saw all that he did to the people, he said, What is this thing that thou doest to the people? Why sittest thou thyself alone, and all the people stand by thee from morning unto even?

And Moses said unto his father in law, Because the people come unto me to enquire of God:

When they have a matter they come unto me; and I judge between one and another, and I do make them know the statutes of God, and his laws.

And Moses' father in law said unto him, The thing that thou doest is not good.

Thou wilt surely wear away both thou, and this people that is with thee: for this thing is too heavy for thee; thou art not able to perform it thyself alone.

Hearken now unto my voice, I will give thee counsel, and God shall be with thee: Be thou for the people to God-ward, that thou mayest bring the causes unto God.

And thou shalt teach them ordinances and laws, and shalt shew them the way wherein they must walk, and the work that they must do.

Moreover thou shalt provide out of all the people able men, such as fear God. Men of truth, hating covetousness; and place such over them, to be rulers of thousands and rulers of hundreds, rulers of fifties, and rulers of tens.

And let them judge the people at all seasons: and it shall be, that every great matter they shall bring unto thee, but every small matter they shall judge: so shall it be easier for thyself, and they shall bear the burden of thee.

If thou shalt do this thing, and God command thee so, then thou shalt be able to endure, and all this people shall also go to their places in peace."

"When did you start reading the Bible, Ellrod?"

"It helps pass the time on long deployments. The way you guys fly formation I may need to have it handy! But seriously, it's easy to see that the basic ideas on leadership haven't changed in all these years. There is one key word that really effects us, and that's, able. We have to be able leaders of tens or fours or even twos. Whether it means being a smooth, consistent flight leader or simply spending a little extra effort briefing, we can have a better flying organization if we become better leaders. This means you too, Clyde."

"Sounds good to me, Captain Sockroller, but I'm the lowest ranking man in the flight and I'm probably not going to be leading much."

"Like I said earlier, Clyde, you can learn a lot about this leading jazz by watching and seeing the good and bad points in the rest of us. How about the guy who uses 30 degree of bank for one turn and 20 for the next? Or the leader that turns away from his wing man when he could make it easy by turning toward him? The same type usually manages to turn into number two when he's getting into the pattern. Look for these things and learn to think ahead so you can avoid these errors. You also learn a lot about leading by simply learning how to judge the capabilities of others.

Because most of us are nearly equally qualified, we have a tendency to shy away from taking true command of a flight. Some people feel that leading ought to be offering advice. Well, that isn't leading.

A leader can't hope to succeed if he takes his teeth out and tries to gum his troops. There is an occasional need for fangs and you have to be ready to use them. This is going to be a particular problem for you, Clyde, because there are going to be many times when you will be leading a flight filled with people who outrank you. Today, when you realized we weren't where we were supposed to be, you more or less put the whole thing up for a vote. That's not the way to lead. The leader should

make the decision. If you make a bad one in a training situation like ours, then I'll override it, but not unless it creates a dangerous condition. You need to use a little discretion, but remember this, when you are the flight leader on the clearance and the flight orders, you are the commander, the boss, and you better damn well be the leader. And this brings us back to thinking. A good leader will have thought of most situations before they happen and will also be able to think of the proper

course of action when something strange comes up.

"Since we have a week to ourselves, it's a good time to get a little practice. Each of you will have a go at leading, and I mean leading. The word professional has been overworked, but I want you to show the army how a flight of professional fighter pilots operates."

"OK, Ellrod. Now, how about leading young Clyde to the show-ers so we can get outbound."

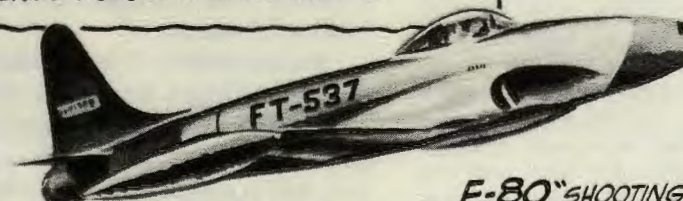
EVOLUTION



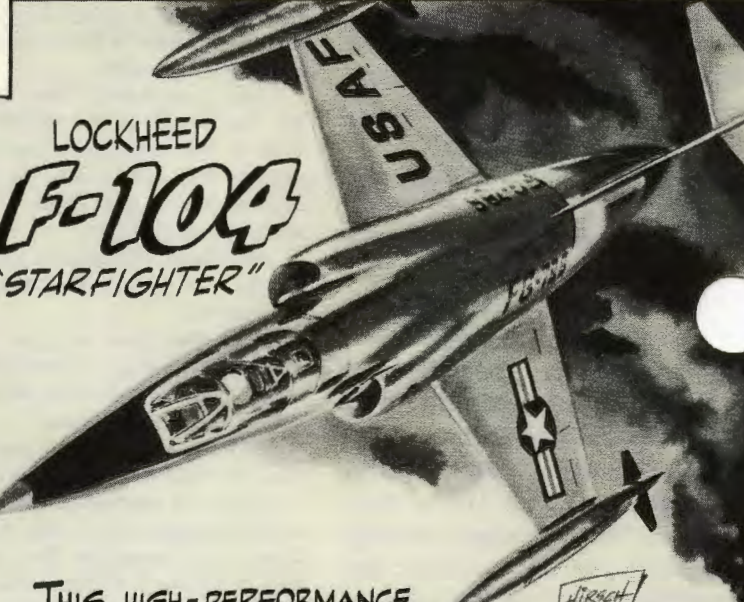
THE LOCKHEED P-38 "LIGHTNING" FIRST MADE HEADLINES ON FEB. 11, 1939, WHEN IT FLASHED FROM COAST TO COAST FOR A NEW RECORD OF LESS THAN 8 HOURS!

DURING WORLD WAR II, THE P-38 WAS ACTIVE IN ALL THEATRES, AND BECAME ONE OF THE MORE SUCCESSFUL INTERCEPTOR FIGHTERS.

MAJ. RICHARD BONG FLEW THE "LIGHTNING" WHILE COMPILING HIS TOTAL OF 40 AERIAL VICTORIES IN THE PACIFIC!



F-80 "SHOOTING STAR" WAS THE FIRST AMERICAN JET TO SEE ACTUAL COMBAT - SERVING AS A FIGHTER BOMBER IN KOREA.



LOCKHEED F-104 "STARFIGHTER"

THIS HIGH-PERFORMANCE DAY AND NIGHT FIGHTER - DESIGNED FOR SUBSONIC CRUISE AND HIGH SUPERSONIC COMBAT - COMES FROM A LONG LINE OF TACTICAL FIGHTERS!



F-94C "STARFIRE" THE ALL-WEATHER INTERCEPTOR WAS A FURTHER DEVELOPMENT OF THE F-2



CHOCK TALK

F-4 OVERHEAT

A Navy F-4 unit reported 14 aft fuselage overheat warning system malfunctions . . . they corrected 12 of them by cleaning the carbon from the sensing element connectors. Old McDonnell says carbon from jet blast or salt and dirt will not accumulate on the connectors if the nuts on the sensing element connectors are kept properly torqued at 45 to 50 inch pounds and are properly safety wired and if the seating surfaces are kept undamaged.

Old McDonnell says you should check connectors at each periodic and if you find a loose connector disconnect the sensing element and disconnect the aircraft wiring at the connectors. Then take a soft brush and trichlorethylene or similar solvent and wash the inside of the connector on the airframe. Rinse the sensing element by dipping it in the solvent.

Dry with compressed air or let it air-dry until the solvent has evaporated. Inspect sealing surfaces of all disconnected connectors . . . if sealing surfaces are nicked or if the ceramic insert of the fixed portion is broken, replace the defective parts.

Check the sensing element resistance as per the TO, then reconnect sensing element and aircraft wiring, torquing connector nuts to 45-50 inch pounds and safety wiring them.

Perform a complete system resistance check.

Connectors that are properly torqued and undamaged should NOT be disconnected for periodic clean-



HANDLE WITH CARE

If this is the way you pack your flyaway and runfast kits . . . then it's no wonder your bird won't go after you install components from them.

Everyone who packs and crates these kits should read up on the 00-85 series TOs. Also, some of you should read the labels. The two cartons under the barrel on the left are both marked fragile.

No, we didn't fake this one. It's a photo of an actual kit and was taken at a TAC base.

TWO BOLTS FROM DEATH

It was a pleasant warm day - the wind was light and the sun was bright. However, the old accident chain had already begun to form at 0800. On arrival at his temporary duty section, which was out of his job specialty, Airman Third Class John Jones was told to take an impact gun - which is illegal - and remove the bolts from the rim of an aircraft main gear wheel. The immediate supervisor for the tire shop, an A2C, left for a briefing he was to attend and left Jones, unskilled and unwarned, to proceed as instructed. While he worked, a qualified man stacked tires. As Jones was loosening the bolts, the accident chain was completed. A careless crew chief, name unknown, had loaded the chain to 250 PSI ... he failed to deflate a tire before he took the wheel off his aircraft and delivered the wheel to the tire shop. Airman Jones received it full in the chest.

He had taken all but nine of the bolts from the rim and fortunately the rim remained in place as the tube blew out. Seven of the remaining nine bolts sheared, two held and contained the explosion enough to keep Jones from his place in the sky. He was knocked eight feet by the air blast, but was uninjured! Unskilled, unfamiliar with the job, and without supervision, Airman Jones had started to work on a job which

almost cost him his life.

Proper management, proper supervision, briefings, adherence to standing operating procedures, and using the old adage "If you ain't sure, ask!", could have prevented this accident.

The mistakes and infractions of the rules are many and the possibility of a fatality was very high. This situation bears out the fact that if you remove any element of an accident chain, you won't have that accident. However, don't forget, the remaining links to the chain will still be there waiting for someone to supply the final link. The only safe way to operate is to get rid of all potential links.

T-39 BROKEN BRAKE

A T-39 pilot managed to keep his machine straight after the right wheel locked on touchdown, accompanied by tire failure and much abrasion damage to the right brake assembly. The disc drive key had broken and jammed on the brake housing causing the wheel to lock. TOC IT-39-737 dated 6 Jan 64 replaces disc drive keys and attaching screws and should prevent this type failure. This aircraft had not been modified with the TOC.

IN THE BAG

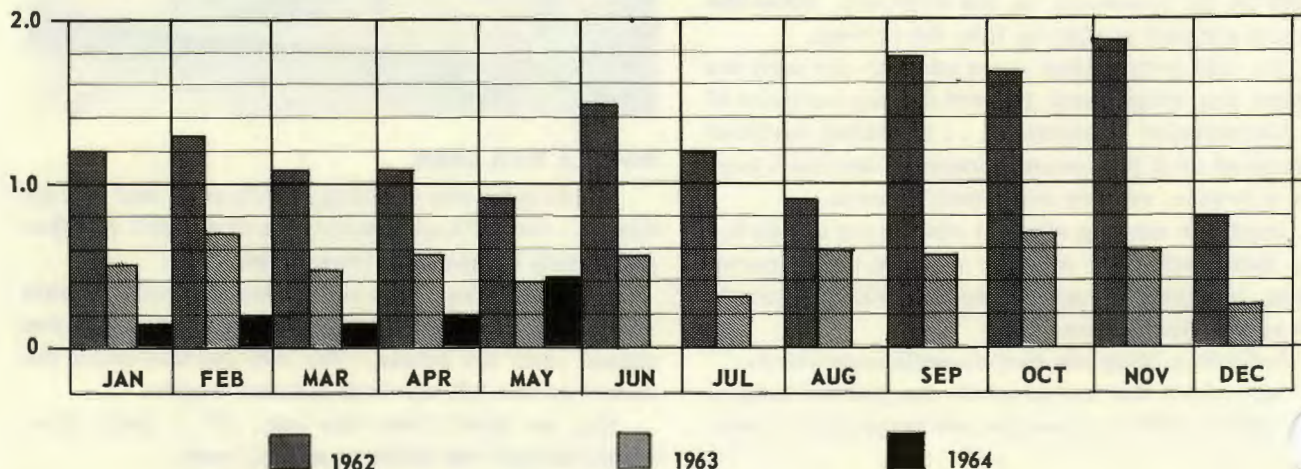
Yes, it's in the bag at MacDill Air Force Base ... literally in the bag. We're talking about foreign objects. Part of MacDill's FOD program is to have crew chiefs and line personnel carry small bags attached to their belts so they have a place to put stray objects that can cause engine damage and tire

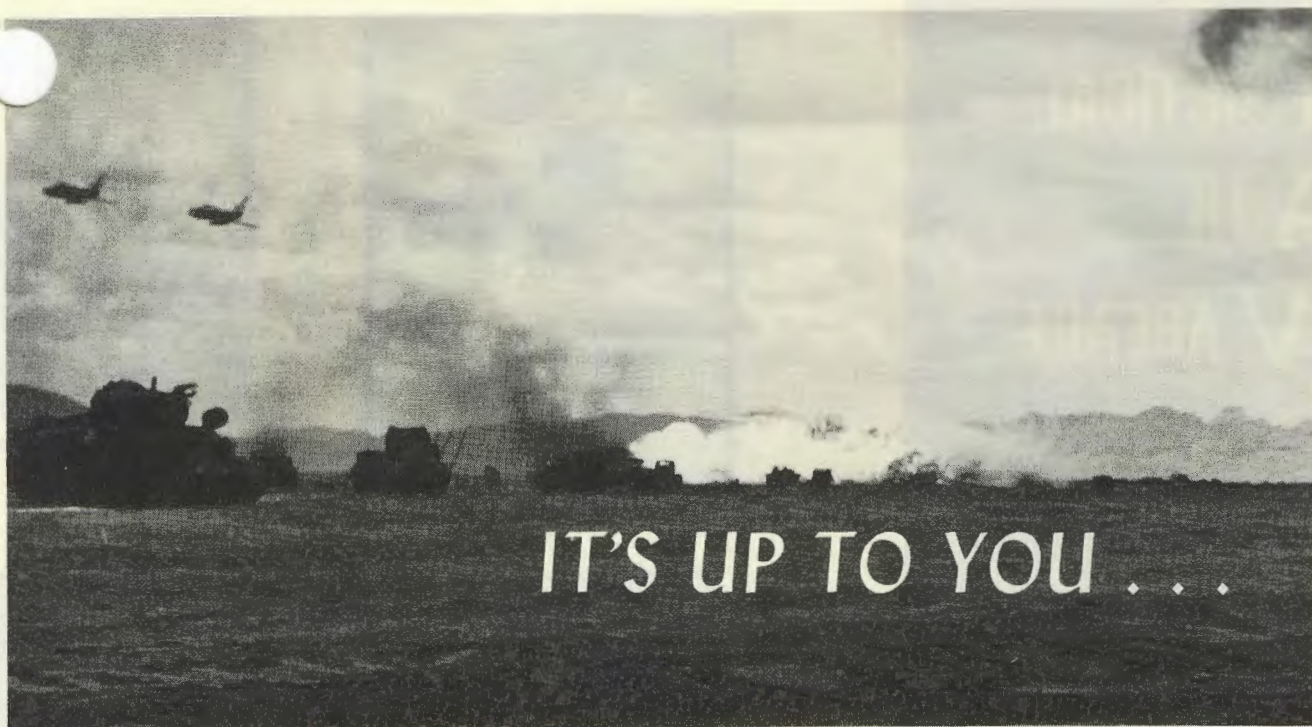
failures.

Ideas such as this have helped reduce the FOD rate in TAC. Each month we'll try to highlight similar ideas so other bases can adopt them in the endless fight against FOD.

The graph shows how you're doing ... we're proud of the decreasing trend, but zero is our goal.

COMMAND MONTHLY F.O.D. RATE
PER 1,000 SORTIES





IT'S UP TO YOU . . .

The exercise is about two days old . . . now that I'm familiar with the local area, it's easier to spot targets. Making simulated passes over the Army troops is fast becoming old hat. I roll in and line up on a troop concentration. OK, pull up now, plenty of clearance, bend it around. How about that, a couple of them hit the dirt on that pass. I'm sure I was at least a couple of hundred feet above them. Well, if they ducked on that one, they'll be digging holes on this one! Another roll in, pull out is a little lower this time, but no sweat and looky there, some of these guys are still groveling on the gravel. Oh my, there's a tank, complete with a mechanized ant smasher standing up in the little man-hole on top. I'll bet I can get him to button up in a hurry. Line up, looks good, pull now, pull, pull, it's mushing. Whew! That was too close!

While this situation isn't actual fact, a little soul searching by TAC's fighter and recce pilots will probably reveal that it isn't too far from it. Somewhere within, most pilots have a desire to impress people on the ground. And, there is probably no more tempting target for a buzz job than Army types. The head shrinkers don't know any easy way to remove the desire and even if they could, should they want to?

The result of beating up Army troops is pretty 1. In recent years, TAC pilots have run into over lines, poles, trees, Army tanks and trucks, as

well as the ground itself. Most of the time, these pilots aren't around to feel the secondary result of their spectacular last flight. Those that are left, watch the minimum altitude restrictions go up and up.

Supervisors must bare a great deal of the responsibility for allowing an atmosphere that results in low flying. But, when the moment of truth comes, there's no supervisor in a single seat aircraft. Based on recent exercises, those units that emerged unscathed can't enjoy the luxury of believing that none of their pilots were busting minimums. It just isn't so! The difference between an accident and the many near misses that were reported can be measured in inches. The depth perception and judgment of those pilots who hit the ground just wasn't that much worse than that of everyone else.

For every pilot who has misjudged a low pull out and bashed, there are many who have misjudged and almost bashed.

We are fast getting into trouble. If this needless buzzing continues, everyone will suffer . . . minimums will be jacked up, a system of spotters to catch the offenders will be developed, and not only will those who violate pay their penalty, but all of TAC will lose because of less realistic exercises. There isn't any way to pass the buck. Each TAC fighter and recce pilot has to make the decision, and they must make it right now.

TACTICAL AIR WARFARE CENTER

THIS MONTH THE ATTACK HIGHLIGHTS A RELATIVELY NEW TAC UNIT. TAWC, THE TACTICAL AIR WARFARE CENTER.

Located at Eglin AFB, Florida, TAWC was organized to improve Air Force concepts of air support for Joint Forces.

Testing is just part of the story. TAWC must also develop techniques and train for these tests. It's a big job that uses elements from TAC fighter, reconnaissance and assault airlift wings along with communication and control units.

Actual training started in early summer of this year and will extend into fall.

The training phase is called Indian River. When it is complete, the U. S. Strike Command will conduct field tests to find the best way to use the Air Force in joint operations. The formal evaluation

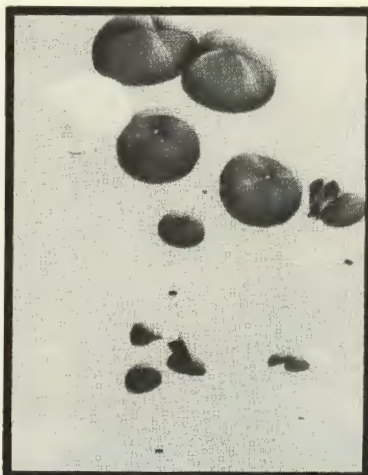
will start in October, and will be known as Goldfire.

The JCS-approved test plan is designed to find the best way for the Air Force to fly a typical modern Army division with its full complement of combat equipment into a combat zone, and then give it logistic and air strike support. In the TAWC exercises and tests, Army and Air Force units will be under a joint force commander and will be controlled by a Joint Test Force Headquarters with a staff made up of both Army and Air

Force officers. By tailoring weapons, equipment and forces, this flexible combat team will be able to handle threats of varying degree.

Currently the Army plans to use more helicopters for moving its forces in the general battle area, bypassing rough terrain, mud, and jungle. TAWC will join the 1st Infantry Division to improve on the technique of vertical envelopment.

It takes a lot of fuel and to support a highly mobile strike



Heavy loads being paraded.



C-130s carry short range eq



An F-105 fires a rocket salvo on a close support mission.



Equipment into the battle zone.



Tactical air control party arrives for duty in the approved manner.



Proximity extraction is one way C-130's spot deliver material into advanced combat areas.

force . . . witness Patton's dash across Europe in World War Two. This is where the Air Force's assault airlift shines. TAWC units will be the tactical air line of logistics for the Army on the battlefield. They will use the C-130 which is self-deployable and capable of carrying 16 tons 3000 miles in about ten hours.

In the tests, the C-130 will make long and short haul deliveries using primitive airfields throughout the simulated combat zone. TAWC will also test and

evaluate a wide variety of delivery modes including parachute and ground proximity extraction.

A very promising new technique, now under test, is the flex-wing glider, or Regallo wing. It can be dropped and then steered to the desired area using very light weight radio equipment on the ground. The C-130 doesn't even need to fly over the delivery zone. Other tests such as extracting integral combat units using personnel pallets, or peoplepods, should provide new ways to deliver troops

and supplies into combat areas.

Returning from forward area bases, the C-130s can carry prisoners, reparable equipment, and battle casualties, taking them directly to rear areas without intermediate stops.

To complement the C-130s in the air line of communication, both Army and Air Force helicopters will deliver cargo or personnel to dispersed units in the forward battle area. The Air Force will also have some choppers in the forward areas to position and reposition remote radar and communications sites, for air rescue, and so on. These will supplement Army helicopters at other tasks.

Experienced assault airlift officers will be in the field with the 1st Infantry Division to help plan and coordinate airlift and determine the best way to deliver items.

But that's only half the story. TAWC will also test air strike and reconnaissance operations using high performance multi-mission aircraft against modern enemy defenses, including fighters. The RB-66 and the RF-101 will be used mostly at low altitude . . . particularly during those portions of the test when the exercise enemy has a significant air defense capability.

The RF-101 is being retro-fitted to use a photo delivery system for high priority photographs. Utilizing specially adapted rocket launching tubes, our fighters will also deliver processed prints directly to front-line commanders. Another capability to be tested is a system for transmitting the data collected by electronic sensors aboard reconnaissance aircraft. This will let the ground commander see what the reconnaissance pilot sees as he sees it.

Continued next page . . .

TAWC will test a control system designed to integrate air strikes into the fire and maneuver of friendly ground forces. The

distributed across his front, how much should be committed against pre-planned strikes, and how much should be placed on air or

against each target, determines the air tactics to be employed controls each mission to insure safety and success. In short, the Army commander specifies the "what," "when," and "where" of close air support; the Air Force commander determines the "how." The joint commander determines the "how much."

These tests will also provide an opportunity to fully evaluate the F-4C for close air support, interdiction, air defense and air superiority, using it against varying levels of enemy capability. It will operate from temporary airstrips made from metal planking.

TAWC will also test the Air Force's capability to provide fighter escort and suppressive fire for a helicopter-borne assault against a determined and



The RF-101 is being used for low altitude reconnaissance.

system is reliable and responds quickly to the ground commander. This system will commit and control all close air support strikes during the tests. The salient feature is fast and reliable communications. When a front-line Army commander wants close air support, the tactical air control party, who is right with him in the field, sends his request directly to the Air Force agency that has available air support and the authority to commit it.

The joint force commander establishes mission priorities and allocates combat resources. Based on his guidance, the air commander makes a specific number of close air support sorties available to the Army. The fighter sorties belong to the ground commander. If more are required, the entire effort of the fighter force can be provided. The ground commander specifies how the close air support effort will be

The F-4C shows much promise at close support.



ground alert. For specific close air support missions, the Army commander designates the target, the required time on target, and the effect he wants . . . destruction, neutralization, or delay.

The Air Force commander matches aircraft and ordnance

capable enemy.

The test and evaluation program at the Tactical Air Warfare Center should do much to improve our combat capability . . . a capability already well proven during Korea and World War II.



- Adapted from an article by Mr. H. A. Strzelecki which appeared in Aviation Mechanics' Bulletin

THE LAST TIME you took a physical you may have wondered what the doc was up to when he took that funny little flashlight and peered into your eyeballs. Actually, he was getting a fairly accurate check on your overall condition. The eyeserves as a window into the body. Looking in, he can see veins, arteries and such. He knows what danger signs to look for and uses this "window" for trouble shooting.

Those of you who work on piston engines have a similar window to use for your trouble shooting. Like the doc, you have to know what to look for.

I'm talking about spark plugs. No mechanic worth his pay ever takes out a plug without looking it over.

If he finds a bad plug he knows that other engine trouble often makes the plug to fail and that the plug may be the first clue. In

short, a bad plug isn't always the cause of an engine malfunction.

Oil fouled plugs are an excellent example. If only one plug in a cylinder is fouled, chances are it is a simple case of fouling, especially in a lower cylinder. However, if both are fouled, look for a mechanical failure. On some engines this indicates a valve failure. With other engines it could indicate the upper land has failed on the piston.

Oil fouling is a black wet deposit. Fuel fouling is a soft fluffy and dry carbon deposit and means the fuel-air mixture is too rich. Excessive idling can cause it, or the carburetor may be out of adjustment.

Lead fouling shows up as a light tan film or fluffy coating ... or sometimes as a dark colored glaze. This has little effect at low speed but shorts out the plug at higher loads and temperatures

when the compounds start conducting electricity. This time, the cure is to replace the plugs.

How about a loose plug? If your people are as careful as most, you should assume the plug was properly torqued when it was installed. Regardless, the particular cylinder has probably been detonating or firing too soon and extremely high pressures and temperatures may have caused the plug to loosen. This calls for a very careful inspection. Look for a collapsed exhaust valve head or burned piston. Make a compression check and carefully inspect the fins, looking for a bulged cylinder head. Check the other plug to see if the ceramic is loose. If either plug has a failed nose ceramic, the basic cause may be pre-ignition.

If a spark plug is installed loose it can have the same effect, since the plug won't cool properly and will act as a glow plug to cause pre-ignition. This is why any loose plug calls for a complete trouble check.

Another indication of pre-ignition is melted and fused spark plug electrodes. Pre-ignition can be caused by anything in the combustion chamber that gets hot enough to ignite the fuel charge early in the compression stroke.

The piston is forced over top dead center against the exploding charge and there are few things more destructive to an engine. Pre-ignition can be induced by a burned valve, incorrect timing due to crossed leads at the distributor plate, a piston that is starting to fail, local hot spots, or most common, a failed nose ceramic on a spark plug. The broken pieces of ceramic get trapped between the electrodes and are soon heated to the critical temperature.

Occasionally, a nose ceramic

fails and the cylinder is operated in pre-ignition long enough to fuse the plug and cause back firing. The pilot reduces throttle and the engine will then operate almost normally with one dead plug. Such plugs will appear badly oil fouled and it is hard to detect the fused condition. If the mechanic fails to detect it and installs new plugs, the cylinder and piston will usually fail. Be extremely suspicious of oil fouled plugs!

Badly eroded center electrodes . . . where the copper core of the center electrode is worn away with the gaps too wide and the ground electrode thinned is another indication of bad trouble. Usually, all plugs in the set will

be affected. It indicates a serious overheat condition, usually caused by ignition timing being too far advanced or by the carburetor being set too lean in the high power range. Check all combustion chambers for damage, along with timing, compression, and the carb and ADI systems.

Sprayed metal on the spark plug nose . . . usually this is obvious, with metal splattered over the end. Incipient failures may release very little metal and the plug may appear badly oil fouled to the casual observer. Look close, and if you see any metal in the fouling and it is confined to one cylinder you can be certain the piston is burned. If all plugs show metal

spray, bet on a dragging blower impeller shedding aluminum d

Some rare type exhaust valve release metallic sodium when they fail. This shows up as a heavy powder deposit or as metallic sodium on the plug nose.

One last tip. If the plug end is peened or gouged, chances are loose parts are bouncing around in the cylinder. This effect isn't always readily apparent because, once again, the plug can appear oil fouled. Always check oil fouled plugs for evidence of other failures . . . and anytime you find two plugs dead in any cylinder you can usually bet that something is seriously wrong.

GROUND SAFETY NOTES



ONE FOR THE ROAD

Booze has been cussed and discussed since the first man discovered that grape juice was no longer the same after he tried to store it. Probably the most cussing has come from safety experts who flinch at the number of drivers who get into an accident after having downed a few. The reaction of these experts has been to flood the country with signs telling us not to drive after drinking.

This is pretty good advice . . . but unfortunately,

not always easy to heed. Take the case of Swillie Boilermaker. Swill was an average Joe with no brain. In fact, some folks say he was a little stupid. However, he wasn't stupid enough to walk home from the pub after having a beer with the boys. He drove. To his surprise, he drove rather well and had no difficulty.

Swillie liked beer, and the only thing that had kept him on the wagon was the long walk home from the pub, so it wasn't long before he was driving home with two, three and even four beers under his belt.

Eventually he found the point where the beer affected his driving. Unfortunately, he did not survive the accident, or keep a record of his experiments.

Others have kept records and tell us that over one third of the drivers who are involved in accidents have been drinking . . . however, no one knows how many of these accidents were actually caused by drinking since only a few of the drinking drivers were considered legally drunk.

What is "legally drunk?" Well, it's pretty tight . . . right close to being limber-legged falling-down drunk. So don't pity the guy who is grounded from driving for a year because he got picked up for drunken driving.

Obviously, some of the less intoxicated drivers shouldn't be driving either and a lot of 'em are Ol' Swill. Smart enough to know that they can ha

their car with a few drinks under their belt but not smart enough to avoid a boozed up bash.

Everyone reacts to alcohol differently. In fact, the same man has different reactions on different days. But by-and-large the effect will progress thru broad stages that are about the same for everyone.

Shortly after the first shot or bottle of beer goes down the hatch, most people feel better. The cares of the day becomes less noticeable and they loosen-up, become more talkative and the world just seems a better place in which to live. Of significance, they become more self confident and more optimistic.

If they keep drinking, they'll enter the second stage and will reach a point where fine actions are affected . . . where they slur an occasional difficult word . . . where coordination deteriorates . . . where they start to get sloppy when pouring drinks or trying to eat. The upper limits of this stage are where most states consider you to be legally drunk.

A man who continues to drink after reaching the upper limits of this stage will eventually reach a point where his equilibrium is affected. This is where he has difficulty focusing on things, sees double and, in the upper limits, gets sick and eventually passes out.

The time it takes to go from stage to stage depends on how much you drink and how fast you drink. You can go all the way to the end of the third stage in about an hour of real business-like drinking or you can drink all night without ever reaching stage three by spacing your drinks. A 150 pound man will be legally drunk if he polishes off a six pack of beer in about an hour. Three double scotches will have the same effect.

The guy who drinks just enough to enter the second stage is probably the most dangerous driver. He is more optimistic and has an inflated opinion of his ability. Odds he wouldn't accept when sober begin to look real good. His self control and will power have eroded. He's the driver who zooms along 20 or 30 mph over the speed limit chatting and laughing with his buddies. Easily distracted, he's the guy who doesn't make the curve, who loses control on a straight road or runs the stop sign. He isn't drunk enough to have trouble manipulating the car . . . he's just slow recognizing trouble or takes chances he wouldn't normally take.

One other problem made worse by alcohol is fatigue . . . George Partyboy has a date. He shaves, showers and puts on his best rags and brand new tone blue suede shoes. He picks up his gal and s, dines and dances her until he eventually takes

her home in the wee hours. Then he starts back to the base. The booze has started to wear off by now and he has the start of a hangover. He's tired and stands a good chance of falling asleep at the wheel unless he stops some place for a cup of coffee and perks up. Yes, we have a lot of these accidents, too.

All of this goes to prove that the experts ARE correct . . . that drinking and driving DO NOT mix . . . and the guy who thinks he is a special exception had better guess again. His driving has been effected more than he realizes . . . much more.

BOAT NONSENSE

Two airmen from another command decided to go fishing using a 14 foot fiberglass boat with a 25 hp outboard. The boat had all prescribed safety equipment including three life jackets. The water was choppy with waves up to three feet and wind gusts to 25 mph. Small craft warnings were out. Nevertheless, the two airmen proceeded to a small island and one of them threw the anchor overboard. It went right on going . . . he forget to tie the other end of the anchor rope to the boat. They finally tied up to brush on the shore line but soon lost too many hooks and lures and decided to move out about 300 yards and tie up to some piling. In the process they sheared a pin on the prop. One man stayed in front while the other tried to lift the motor out to keep from losing the prop, but capsized the boat. They tried to tie the boat to the piling using a cord from a field jacket, but the cord broke.

The boat was almost submerged and offered no convenient handholds, so they decided to stay with the piling. The life jackets floated away with the boat.

Then the piling gave way, and both struck out for shore. One made it, completely exhausted, but the other drowned.

Only the inexperienced have the supreme overconfidence to venture forth in that kind of weather and, from the way they handled things, this pair obviously had little boat sense. Incidentally, when a good boatman is forced into really rough weather, he doesn't leave life jackets stowed in the forward compartment.

POWER MOWERS

A TAC Chief Master lost an argument with his power mower. He noticed grass was not being thrown out and reached down to brush it away from the throat . . . ZAP! Scratch one finger.



SEG NEWS

4450th Standardization Evaluation Gp.

Change of Command

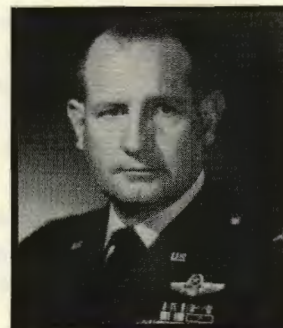
Colonel
Devol Brett



During the month of July of this year the reins of the 4450th Standardization/Evaluation Group were handed to Colonel Joel D. Thorvaldson by Colonel Devol Brett. Colonel Brett is off to the National War College at Washington, D. C., having served as Commander 4452nd SES, as Deputy Commander SEG and as Commander SEG, since January 1962. While we say goodbye and good luck to Colonel Brett, we welcome our new commander, Colonel Thorvaldson.

Colonel Thorvaldson comes to us directly from an overseas tour in the Pacific area, where he commanded the 6002nd Standardization/Evaluation Group, headquartered at Kadena AB, Okinawa. He entered the service in December 1941, graduating from pilot school in 1942. During World War II, he flew 186 combat missions in P-40, P-47 and P-38 aircraft and was credited

Colonel
Joel D. Thorvaldson



with three confirmed and four probable victories. Colonel Thorvaldson became jet qualified in 1945, checking out in the P-59 and P-80; he has flown jet aircraft ever since.

Following the Korean fracas, where he completed another 55 combat missions, Colonel Thorvaldson spent two years with ADC in both command and operational positions. In 1959 Colonel Thorvaldson returned to the Pacific theater and served in the operations field at command level for the next three years. In 1962 he took command of the 6002nd SEG and retained that position until his return to the United States and his assignment to the 4450th SEG.

Colonel Thorvaldson hails from Spanish Fork, Utah, and holds an engineering degree from Oklahoma University. His wife Mildred and two sons, Eric and Allan, reside with him at Langley AFB, Va.

JUST ONE MORE IDEA!

During formal stdn/eval visits to TAC units throughout the command, SEG has the responsibility to evaluate unit flight manual control systems as a part of the unit's administrative evaluation. In the course of these visits, we have noted several different control systems being used with each system normally tailored to the unit's individual requirements. Most of these control systems are effective.

Some are not!

An effective control system must insure that timely technical order distribution is made to all aircrew members and that appropriate distribution records and receipts are maintained. Also, AFR 55-48 requires that flying organizations establish a card file or release system that insures each crew member has read the latest information posted in the information files before he goes on a flight. Nei

AFR 55-48 or the new TACM 60-2 contain specific detailed instructions on how these requirements to be accomplished since it would probably be impossible to outline a control system that would work effectively for every unit in every situation. There is, however, an uncomplicated yet effective system being used by several TAC units that seems to work very well, especially with multi-place aircraft operations. If you are having troubles in this area, perhaps you can pattern your control system along these lines and obtain results. The system is based on the mandatory use of mission folders, or flimsies, and TAC Form 109, Flight Crew's Information File Review Card. These mission folders and a complete card file on all assigned and attached aircrew members are maintained in the aircraft dispatch section and are normally controlled by an operations officer or NCO. The flight crew information file and technical order distribution point are also located in this section. The number of the latest item posted in the information file, along with any changes or additions to flight manuals, checklist, etc., are placed inside the mission folder to be picked up by the aircrew. Each crew member's file copy of TAC Form 109 is also placed in the mission folder, with the latest additions posted to the card. The crew member must fill his card and return it before going on the mission. If there are no additions since his last flight, the Form 109 will indicate this and the crew member will be assured that he has all the latest information pertaining to his aircraft. The system must be closely monitored by the Squadron Flight Manuals Control Officer and the unit operations shop to insure full participation. After the system has been implemented and all crew members are oriented and understand how it works, satisfactory results can be expected. It is not mandatory that the flight crew information file review and flight publications receipt system be tied together, but it does seem to work satisfactorily.

Any control system devised is only as effective as operations personnel and aircrew members make it. Let's give ourselves every advantage possible to help assure safe, well-planned flights.

NEW - TACM 60-2

By this time, all you TAC S/E men should have had a peek at TACM 60-2 dated May 1964 and, I guess, some of you are saying "It's about time!"

You're right - it is about time! But the time that has been spent getting this manual published has been spent. It represents the latest thinking and includes all of the up-to-date procedures that have been

discussed during SEG visits and in the SEG School seminars. As you read through the new book, you will notice several major changes.

The first and perhaps most significant change is the switch from AFM 60-2 to TACM 60-2. This was the result of a command conference between USAF, TAC, PACAF and USAFE earlier this year, Air Force Manual 60-2, the Tri-Command Standardization Evaluation Program was rescinded 1 July. TACM 60-2 replaces AFM 60-2 for all active TAC units and those ANG and Air Force Reserve units for which TAC is gaining command. It became effective for those units on 15 June 1964.

Here are some other noteworthy changes:

- * Implementation of TAC Form 110. The new AFM 60-1, which was scheduled for the field 28 May 1964, established the AF Form 8, Certificate of Aircrew Qualification. This form now replaces both AF Forms 8b and 8c. Since the form does not lend itself to the data analysis function of TAC's S/E Program, TAC Form 110 was developed as an attachment to AF Form 8 to get information needed for data reduction within the command.

- * Implementation of TAC Form 37. This form is similar to the old TACHQ Form 0-39. The form is titled "Summary of Standardization Evaluation Checks" and will now be used by all SEFs to record each flight check administered. The forms have been designed to let each SEF make a self-analysis and to give the SEF Commander a way to analyze unit strengths and weaknesses for his boss.

- * The Quarterly Standardization/Evaluation Activity Report (F-12) no longer serves a useful purpose and does not have to be submitted.

- * The 60 day waiver authority on overdue checks has been deleted. Personnel who go overdue on any check will be handled in accordance with AFM 60-1.

- * The requirement to immediately report changes in flight examiners to SEG is deleted. These changes will now be reported in the minutes of Standardization/Evaluation review panels.

- * Format of S/E status charts have been revised.

- * SEFs will now prepare and publish questions on safety supplements and on local area procedures for the master question files and SEFs do not have to send these questions to SEG for approval prior to publication.

- * SEFs no longer have the authority to conduct no-notice checks.

Continued next page . . .

* S/E organizations in active duty units are now being specified by location.

* Routing of AF Forms 8 and TAC Form 110 has been modified.

* S/E check critique policies have been thoroughly overhauled.

In addition to the above specific changes, the entire manual was reedited in an attempt to eliminate ambiguous and conflicting statements. We hope that all of this will provide a more dynamic and effective standardization/evaluation program within the Tactical Air Command. But remember, this is still a "we" program. SEG cannot do it all merely by giving you improved manuals, directives, etc. Each SEFE must use this material in a way which will guarantee the best possible results from all the effort put into the program. As time goes by, this manual, like all other publications, will need revision. Policies will change as will possibly the mission. It's our job in SEG to keep TACM 60-2 as current as possible, but it is also the direct responsibility of each and every person who uses the manual to help us insure currency and effectiveness by submitting their suggestions and comments via the AF Form 847 route. You have a new manual and it's a good one! It will always be a good one if everyone concerned with standardization and evaluation continues to support and contribute to the program.

ROCKET SEATS AND EQUIPMENT

During an orientation flight conducted last year for some ROTC Cadets, one of the local T-33 IPs was overheard briefing his eager cadet. In essence he said, "While we are flying, pay attention to every word I say - because if I tell you to eject and you say 'huh?', you're going to be talking to yourself - I'll be gone!"



Needless to say the cadet was impressed and was most attentive throughout the flight. With the old,

altho sometimes still used, T-33 ejection system, this may have been possible. The new rocket seat as most of you T-33 Dash-one readers know, will permit a rear seat passenger to witness the pyrotechnics displayed by a front-seat-first ejection. The new seats were designed to give a greater margin of safety during ejection and to prevent a rear seat occupant from being injured by a front seat ejection.

Let's suppose that you are flying an aircraft equipped with a rocket seat and something comes up that makes it necessary to get out - quick! If you are in the front seat, you can raise both armrests and squeeze the trigger located in the right hand grip. However, if in your haste, you forget to tell your back seat buddy what you are going to do, he may never speak to you again. Of course, the rear seat man can eject himself anytime he likes, but in an emergency, if he is too slow or frightened to act in his own best interest, his front seat companion can squeeze the trigger and blast the back seat off a half second before the front seat. Altho sometimes you may wish you could, it's not possible for the troop in the back seat to punch out an overly critical IP from the front seat!

Another point. Most pilots fly nowadays with a seat type parachute which fits snugly into the ejection seat. The automatic pilot-seat separator is housed with this type of commodity. It is a proven fact that most pilots have a tendency to hang on to the seat handles following ejection. The seat separator temporarily eliminates the need for thought following the trigger squeeze. It forcibly separates the pilot from the seat one second after ejection. If the pilot remembers to connect his anchor lanyard to the lap belt, the seat separator will also deploy the parachute for him. And while we are talking about the lanyard, let's not forget the proper way to route the oxygen hose and interphone cord. The hose and the cord should be routed under the lap belt to keep them from inadvertently opening the lap belt latching mechanism during ejection. As a matter of fact, this point is stressed in Safety Supplement IT-33A-SS-1-24.

Fellas, this equipment was designed, made and bought to give you the best possible chance of getting out of a faltering T-Bird with all your working parts intact. You - the gent that wraps the equipment around you - can really mess up the works by not knowing every little detail of its operation. We can only remind the particular chap who's not too sharp on the system that it's time to go back to the books and read up on it . . . OK?

by Capt Max
4450th SE



THE OLD SARGE stirred his coffee and watched the stocky master sergeant gulp down about half a chocolate shake before pausing to lick his chops.

"Jake, I hear you gave up smoking."

"Yeah, I sure did. But I'm going to have to take up the weed again . . . I'm gaining too much weight."

"Oh?"

"Yeah, I'm pushing 220 again. And on a starvation diet, too."

The Old Sarge shook his head sympathetically and muttered, "I can't understand it. Guess I better not quit either. I'd swell up like a balloon."

Jake looked at the Old Sarge but could detect no hint of humor. Nevertheless, he decided to change the subject. "Say, I have one for you. My shop has been trying to trace down an OMNI malfunction on one of the T-29s. The course needle fluctuates . . . at least that's what the pilots say in their write-ups. We've gone over the receiver, the antenna, the balun coil, the coax . . . in fact, we changed 'em all but it still comes back with the same cotton pickin' write-up. Eight or nine times it's been written up." He paused to gulp down the rest of his shake.

The Old Sarge scratched his

head. "Not being an electronics man, I can only guess. Ah, did you power it with the aircraft electrical system or use an APU when you checked it out?"

"Both."

"How about other equipment? Did you try it with everything on that a pilot would normally have on? I mean the UHF and VHF and anything else along that line."

"I'm not sure, I'll check with the troops."

A couple of days later Jake

dropped by to see the Old Sarge. "Hey, I owe you a shake."

The Old Sarge looked puzzled. "Yeah?"

"On that OMNI squawk. You steered us right to the trouble. We rechecked everything with the command radios and other gear on. At first nothing happened, then we selected B channel on the VHF, that's 126.2 megacycles. With the OMNI tuned to the local ground station on 114.2, the course indicator started to fluctuate and the warning flag came down. We disconnected the VHF antenna, and by keeping the coax from grounding, it quit interfering."

We figure this problem can come up anytime the VOR frequency is 12 megacycles below the VHF frequency. We cured it by changing crystals on the VHF B channel making it 126.18 instead of 126.2. This is still in the band width, but stopped the interference."

Air Force Museum



TAC TIPS

F-4 ATTITUDE GYRO

The Navy reports over 175 incidents and one fatal accident as a result of attitude gyro failures in the F-4. Altho the F-4 will eventually get a two inch standby indicator, this will only partially solve the problem. Some Navy F-4 units are doing a little partial panel practicing since this is the only way they can hope to cope with a failure without the standby indicator, or to recognize which attitude indicator is in error when one fails.

A closer to the point solution is suggested by this incident . . . when ground power was applied, the ADI rotated in pitch. The next time ground power was applied the ADI spun around all three axis. The problem was traced to failed segment switches.

One squadron observed that a bad external power supply often affects the AJB-3 attitude gyro system. They have had very little trouble with their attitude gyros since adopting the policy of pulling the circuit breaker prior to engine shutdown and reengaging it after the engines are started and external power is unplugged. No one likes to use circuit breakers as switches; however . . .

F-105 HYDRAULICS

"We'd been up a little over three hours when I noticed a loud grinding noise," the captain reported. "I started checking the instruments and heard some thumping noises in addition to the grind. The AC generator, fuel inlet pressure, stab aug, forward and aft boost pump caution lights all came on. Utility pressure was zero. It looked like an ATM failure to me, so I called Blue Lead and told him I'd try for Lockbourne.

"About then I tried to restart the ATM and found it still running. I reset the AC generator and all the caution lights went out but the grinding noise was still there and utility pressure was still at zero. After my wingman came off the tanker, he escorted me to Griffiss.

"I lowered the gear using the emergency system and landed from a straight in approach."

The utility pump case cracked and the utility hydraulic fluid went out the crack. The pump cavitated, causing the ATM to go off frequency and this induced the AC generator to go off the line.

TRAFFIC CONTROL

A handy method for recording the position of local traffic is used in the control tower at Chanute Field, Illinois.

An 8 inch by 18 inch chart is marked off at half-inch intervals to represent each 500 feet of altitude over the local area. As an airplane is assigned altitude for practice range orientation or for actual instruments letdowns, tower operators place a numbered miniature airplane at the proper level on the chart. Thus, the operators, who also handle the voice range, can tell at a glance at what levels planes are flying.

—Air Force Magazine, Aug 1944

APPARENTLY

The tech looked at the form 781 and shook his head, "Fuel shut off valve appears to malfunction." He snorted, "Appears to malfunction! Maybe I'm stupid, but to me it either malfunctions or it doesn't malfunction. That's like writing 'apparent oil leak' after you see oil drooling from an engine. Obviously it's a leak, there's nothing indefinite about it. I wonder why people feel they have to be so wishy washy?"

GET THE WORD OUT

Many times a new or modified piece of equipment comes along and nobody really knows about it. For example, the SRU-16/P survival kit was installed in the parachute but many crewmembers didn't even know they were there. Many aircraft modificati-

particularly on navigation and other support systems, in to just appear in the cockpit. Other times the engine is invisible until something goes wrong and the pilot finds his old, habitual solution doesn't work. Getting the word to the troops will solve these problems but everyone has to get into the act. Maintenance, supply, personal equipment, ops types, EVERYBODY . . . keep an eye open for all minor little changes in both equipment and procedures and pass the info along to the FSO or your boss, and make sure the straight poop gets to the man that needs it.

TINY LINER

About ten minutes after reaching flight level 350, the right engine fuel low pressure light came on, then went out. About five minutes later the right engine flamed out. The crew shut it down using the check list, descended to 20,000 and restarted the engine. All indications were normal until they returned the crossfeed switch to normal then both low pressure lights came on. When the pilot put the switch back to crossfeed both lights went out but fuel only fed from the left wing.

The pilot held the bird in a side slip with the right wing high for over six minutes without getting any fuel from it. He eventually landed with 2900 pounds in the right wing and 1900 in the left.

A failed right hand boost pump caused the flameout. According to the incident report, the unbalanced fuel load was caused by inadequate handbook information on the crossfeed system.

The pilot also reported that the right hand boost pump circuit breaker popped before the flameout and refused to reset . . . this was firm indication that the electrical powered boost pump was responsible for the low pressure light. With a failed boost pump, the dash one warns that wing fuel may become unbalanced and recommends a side slip to balance it OR returning the crossfeed to normal and continuing flight at 25,000 or below, using differential power to maintain fuel balance. When using the latter technique, the low pressure light will remain on, but is of no concern as long as the engines run. Apparently slipping doesn't always work.

X-C COMMENTS

A few years ago, so the big boys tell me, weekend cross-countries were pretty routine. Flying time was plentiful, TDY commitments were light, and a Friday Monday trip once a month broke up the monotony

very nicely. Weekend trips give a guy a chance to see old friends and make new ones, a chance to own an airplane for a while and at times to work on the bird and learn something about care and feeding of the modern aircraft.

Nowadays, for many reasons, weekend trips are neither as available nor as desired. When a chance to spend a weekend at home comes along, not many troops want to spend it on the road.

On the other hand, when we do get a bird for a weekend, most of us have a tendency to try and pack too much into it. Next time you plan a weekender, use a little restraint. Here are some things to think about:



* Don't plan on early morning takeoffs. More likely than not you will run into an old friend or two and stay up pretty late talking over old times. Make your takeoff time late enough to allow for adequate crew rest.

* Take time for a decent meal at noon. Far too often pilots try to exist on a chili-burger and a cigarette.

* Plan on an 8 to 10 hour day at the longest. Remember, it's going to take longer for transient alert to turn you around than the troops at home.

* Don't get trapped by get-home-itis. It's a lot better to get there a day late than to almost get home on time.

TOP CREDIT

To get the F-4 program started, TAC borrowed 27 of the Navy's F-4Bs. The 4453 Combat Crew Training Group flew 5335 sorties and 9351 hours in these birds and then returned all of them to the Navy . . . no scratches or dents. Good work 4453rd, you got the job done and maintained TAC's credit rating as well.

JEEPERS!

One minute from the drop zone, the loadmaster on a C-130 released the left hand rail locks and the load - a jeep on a pallet - promptly rolled out of the aircraft. Both chutes deployed, but the jeep landed somewhat short of the drop zone.

A crank plate was installed backward, a spring was not attached to the linkage assembly and the right hand linkage was out of adjustment because the plate was on backward. As a result of these combined discrepancies, when the right hand emergency handle was placed to "check," the check was not valid.

Operators had not been properly trained . . . having received about five hours instruction on the kit some months before the incident.



THEY'RE YOUR EYES

A man's eyes are priceless . . . certainly no one would trade them for any amount of money. Yet, many pilots are needlessly endangering both their eyes and their lives by not using a simple safety device - the helmet visor. A bird strike in the canopy can change from a disconcerting incident to a tragic accident if the pilot is even temporarily blinded by feathers and blood.

The visor can be a problem if it doesn't fit perfectly or if it is scratched or distorted. The answer here is simple . . . get a new visor and get it ground down to a perfect fit on your oxygen mask. Every PE shop either has the equipment or can get it. If the visor bothers you on takeoff or landing, include it in your after takeoff and pre-landing checks, but keep the visor down as much as you can. For those who haven't used the visor for years, it's going to take a little getting used to, but remember, you can't get a new set of baby-blues out of BEMO.

THUNDERSTORM TIPS

From a recent fatal accident . . . the pilot intentionally flew his aircraft into a violent cyclone within a thunderstorm. The location and severity of this cell was not known to the pilot and radar weather avoidance information furnished him by the center was incorrect. The scopes used by center controllers do not provide a good display of weather information; consequently, this particular controller was unable to recognize the entire storm area. THIS IS AN INADEQUACY OF CURRENT FAA RADAR SERVICES.

Altho the worst part of the thunderstorm season is behind us, we aren't thru with them yet. Be cagey, use the aircraft radar if it has one, check the weather sequences by listening to FAA stations, pay attention to radio chatter from other pilots and you can get a pretty good idea on storm activity.

Keep the center controller advised of any storm activity you observe so he can warn other pilots . . . pilots flying above 35,000 can often provide excellent storm location service to their fellow airmen.

HOT SEAT

Most ejection seat birds have an alternate canopy jettison system. But, in many accidents, pilots raised the armrest to blow the canopy during emergency ground egress. This needlessly hots up the seat and puts the pilot in even worse danger. Most pilots stated they simply didn't think of the alternate handle. Troops, give a little thought to ground egress procedures daily and try and work the alternate canopy jettison handle into your automatic reflex pattern. You don't get paid to test the zero-zero capability of ejection seats.

F-105 OIL PRESSURE

F-105 pilots have been reporting high oil pressure during ground operations with the new oil. At lower temperatures, the new oil is thicker than the old oil, but both have about the same viscosity at normal operating temperatures. It takes about three minutes at military power to get the oil hot, so the oil will be cool during most ground operation before flight.

No sweat, as long as the oil pressure stays below 80 psi.

Mechanics should be careful and make all adjustments with hot oil to keep from inducing low oil pressures (40-50 psi) during flight.

AWARD OF HONOR



General Walter C. Sweeney, Jr. accepts the Award of Honor from Brigadier General Henry J. Hoeffer (US Army Retired) Assistant General Manager of the National Safety Council.

For the second straight year, the Tactical Air Command has received the National Safety Council's highest award . . . the Award of Honor. The award is presented not only for achieving a low ground accident rate, but for significantly reducing the rate from its previous level. This makes TAC's two in a row award a noteworthy achievement. Two TAC subordinate units also received the Award of Honor, 12th Air Force and the 401st Tactical Fighter Wing. The 831st and 832d Air Divisions, the 354th Tactical Fighter Wing, 4510th Combat Crew Training Wing, and 4504th Missile Training Wing received the council's second highest award, the Award of Merit.

This outstanding ground accident prevention record did not come easy. It took effective command, staff, and individual action that payed off in lives and dollars saved. We can achieve an unprecedented three straight if every man and woman in TAC continues to strengthen their efforts and tries to eliminate all hazards.

PILOT OF DISTINCTION



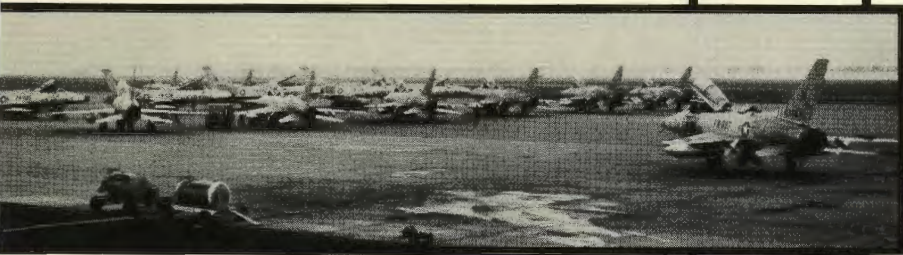
First Lieutenant Charles E. Cotton, of the 401st Tactical Fighter Wing, England Air Force Base, Louisiana, has been selected as the Tactical Air Command Pilot of Distinction.

Approximately twenty minutes after takeoff, the cockpit of Lieutenant Cotton's F-100D filled with smoke and the utility system pressure

failed. He advised the flight leader and was escorted back to the base by the element leader. After reducing speed, he actuated the emergency gear lowering system. The main gear extended normally but the nose gear trailed the down and locked position by some twenty degrees. All recommended procedures failed to solve the problem and several rounds of 20MM ammunition, practice rockets and bombs made the situation more hazardous. A final attempt to bounce the gear into safe position during a touch-and-go landing failed. The command post ordered the fire department to lay a narrow strip of foam, three thousand feet long, near the approach end of the runway.

On final approach, when landing was assured, Lieutenant Cotton stopcocked the throttle and turned off the engine master switch. By excellent timing and expert airmanship, he completed the landing so that aircraft damage was limited to the pitot boom, nose wheel fairing door and MNIA dispenser.

Well done Lt. Cotton.



**CREW CHIEF
OF THE MONTH**



**MAINTENANCE MAN
OF THE MONTH**

Recognition

Airman Second Class Jean P. Pakula of the 4510th Field Maintenance Squadron, Luke Air Force Base, Arizona, has been selected as the Maintenance Man of the Month.

Airman Pakula has consistently demonstrated exceptional ability, willingness, dependability and sound judgment while performing his duties in the 4510th electrical shop. He accomplishes all tasks in an outstanding manner and has the capability to accurately diagnose and repair electrical malfunctions with much less supervision than is normally required for airmen of his grade and experience level.

Recently he helped accomplish TO 1F-84-811 on all assigned F-84s and was able to organize things to cut the workload in half.

Highly respected by his fellow workers, he recently received a special award for his exceptional military bearing and neat appearance. Although he has only been a resident of this country less than four years, he has mastered the language and completed ECI courses and earned 80 college credit hours toward a degree in Engineering, all thru diligent self study.

These and numerous other accomplishments readily qualify Airman Pakula as the Maintenance Man of the Month.

Awards for Outstanding Maintenance of Aerospace Vehicle Historical Records for the month of June

A2C JOHN W. BRIGGS
401TFW, England AFB, La.

SSGT PAUL R. STRICKLAND
4442CCTG, Sewart AFB, Tenn.

A1C JEFFREY P. JENSEN
15TFW, MacDill AFB, Fla.

Staff Sergeant Eugene W. Carriker of the 463d Troop Carrier Wing, Langley Air Force Base, has been selected as the Tactical Air Command Crew Chief of the Month.

Sgt Carriker's duty performance has long been characterized by his outstanding ability and attitude. Sgt Carriker returned with his aircraft on 26 March from an extended 90 day TDY tour, during this tour, his aircraft flew over 190 hours without an abort. This was accomplished despite the fact that a major portion of the maintenance required was performed by Sgt Carriker and his assistant without specialist support. His aircraft was flown the day after it returned from this extended TDY and has met an extremely heavy schedule with no maintenance delays or aborts, again attesting to the sustained excellent condition in which Sgt Carriker maintains his aircraft. In addition to his demonstrated technical competence, Sgt Carriker possesses supervisory and management capabilities that enable him to perform any and all type flight line, as well as administrative duties, connected with aircraft maintenance. His ability in this respect was recognized by a letter of commendation from the 463d Troop Carrier Wing Commander and an outstanding rating of his aircraft records by the Ninth Air Force Inspectors. His extensive knowledge of the aircraft is used to excellent advantage in the training of newly assigned personnel, and he has expended many voluntary off duty hours conducting on the job training. He has proven himself a valuable asset to his organization and to the Air Force.

Major Jim Flowers, expert on Air Traffic Control Procedures, big wheel of the TAC ATTACK's awards section, and general smoother out of rough spots on the publications road, has been running around the office the past few days with a fist full of orders to such places as COIN, STEAD, and . . . gulp, South you-know-where. The office will be practically empty without him. We'll miss his help on the thousand and one things that he so capably took care of. You readers will miss his articles on such varied subjects as Air Traffic Control, Tire Hydroplaning, and Physical Fitness.

Oh yes, if you notice a sudden increase in errors on the awards page or TAC Tally . . . have patience with us survivors and blame personnel.

TAC TALLY

A COMPARISON OF TACTICAL AIR COMMAND ORGANIZATIONS

JUN TALLY

UNIT	MAJOR	MINOR
354TFW	1	
23TFW	2	
4510CCTW	1	
102 TFW	2	
113TFW	1	
1 ACW		1

ACCIDENT FREE

MAJOR & MINOR

JET

ACTIVE	MONTHS		ANG
12TFW	13	17	121 TFW
27TFW	8	14	140 TFW

CONVENTIONAL

ACTIVE			RESERVE
463TCW	36	91	434 TCW
4500ABW	36	46	349 TCW

MAJOR ACDNT RATE

TYPE	1964*	1963
ALL	12.7	10.3
F-4	7.7	0
F-105	41.4	23.5
F-104	17.9	33.2
F-101	25.8	13.9
F-100	18.7	12.8
F-86	0	0
F-84	27.4	22.9
B-66	0	0
B-26	133.0	8.6
T-39	0	0
T-33	0	1.6
T-29	0	0
KB-50	0	4.1
C-130	1.3	1.0
C-123	8.2	4.6
C-47	0	0
U-10	46.2	11.6
T-28	0	37.2

The month of June was marred by eight accidents, four of them fatal to the pilots involved. Three F-100s, two F-105s and an F-86H were destroyed. Another F-86H received major damage while an O-1E received minor damage from a ground loop accident.

An F-100C pilot was killed when he crashed while engaged in air combat maneuvering. Apparently he encountered adverse yaw and fought it all the way to the ground without recovering. An F-100D pilot crashed while flying number four in a four ship in-trail formation. The flight entered an Immelmann from 8,000 feet just prior to the crash and no one observed the final phase of his flight. Another F-100D had an oil loss and engine flameout which forced the pilot to eject over the North Atlantic during a deployment. He was rescued 13 hours after his successful ejection, but died shortly after being picked up.

An F-105 pilot failed to eject after his aircraft suddenly lost altitude during an approach for a night emergency landing. A radio failure kept the pilot from telling anyone what was wrong and investigators are still searching for clues at this writing. Another F-105 pilot ejected successfully after an inflight explosion robbed him of elevator control. An F-86H pilot ejected after all oil drained from his engine because an oil cap was left off during servicing. The engine failed shortly after the oil drained out. The other F-86H pilot made an emergency landing at night after losing his utility hydraulic system. He jettisoned the external load in order to get a good barrier engagement but a B-37K store failed to jettison and resulted in a partial arrestment. The gear was sheared as a result.

Princess ANN

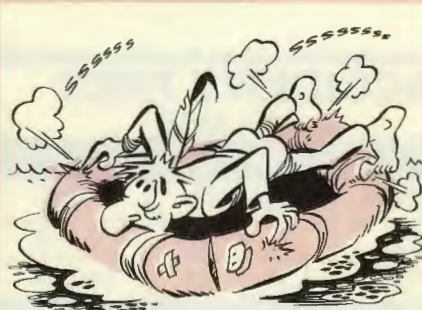
NEST
HIRSCH
8-64



WHenever you have time on your hands
while flying an aircraft — **WATCH OUT!**
you are in danger of **GETTING BEHIND!**



THE SECRET OF SAFE FLYING
IS TO CONSTANTLY **PLAN AHEAD**
SO YOU WILL BE PREPARED FOR
THE EXPECTED ...



...THIS GIVES YOU MORE TIME
TO COPE WITH THE **UNEXPECTED** —
—AND WITH **EMERGENCIES**.



HAVE **ARRIVAL CHARTS** OUT AND
READY BEFORE ENTERING OR
DEPARTING **CONGESTED AREAS**



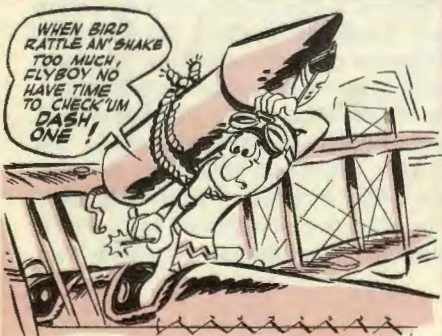
STUDY THE **LET-DOWN PLATE** AND
LOCATION OF NEARBY **FIELDS**
BEFORE **TAKEOFF!**



MAKE SURE YOU KNOW YOUR **MISSSED**
APPROACH PROCEDURES — YOU
WON'T HAVE TIME TO LOOK THEM UP
WHEN YOU NEED THEM!



KNOW THE OVERALL **WEATHER**
TREND OVER YOUR ENTIRE **ROUTE** —
—SO YOU KNOW WHERE TO GO IN
AN **EMERGENCY**.



MEMORIZE YOUR
BOLD FACE PROCEDURES!

