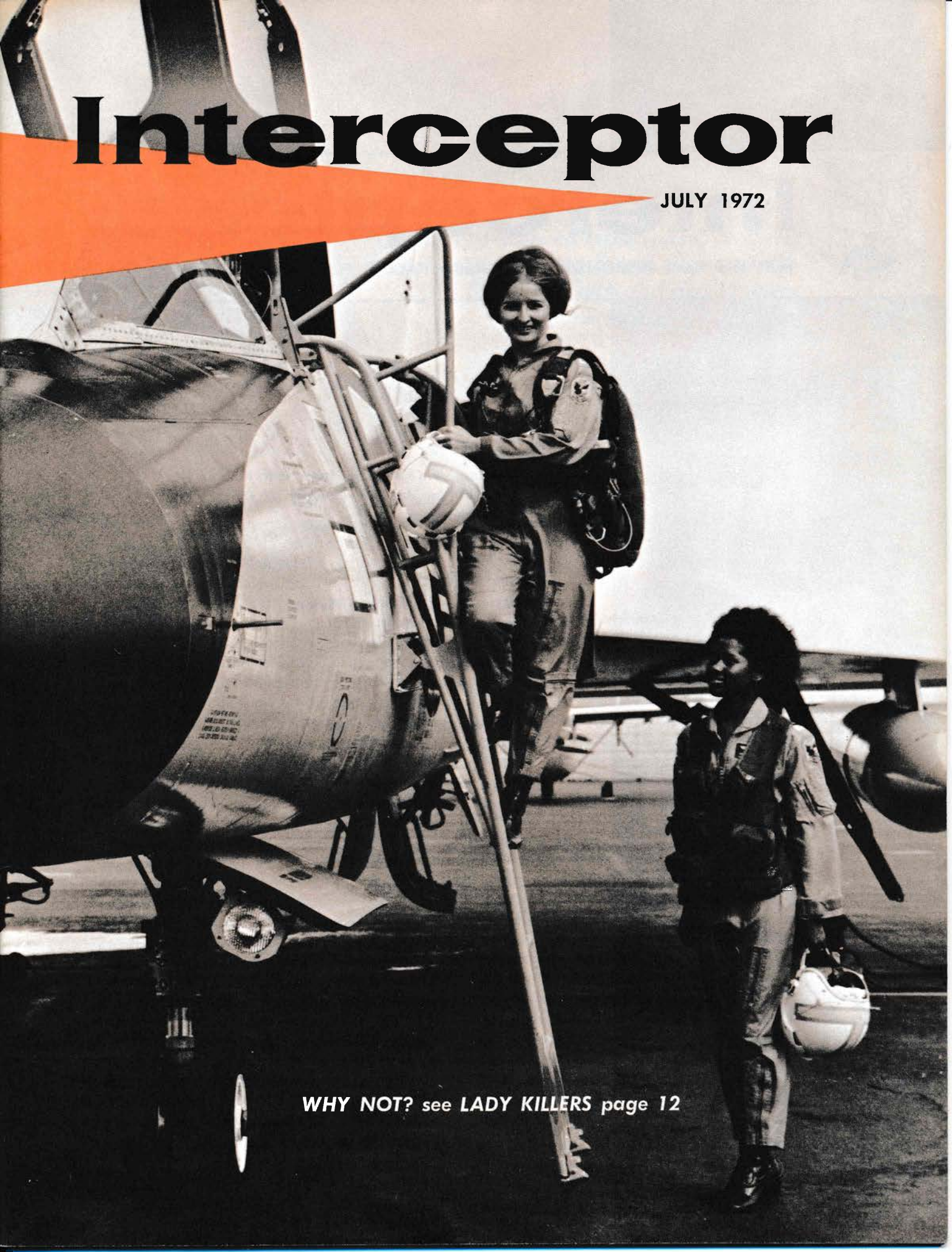
Interceptor

JULY 1972



WHY NOT? see LADY KILLERS page 12

Interceptor

FOR THE MEN RESPONSIBLE FOR AEROSPACE DEFENSE

VOL 14
NO 7

SPOTLIGHT

The truth is a luxury for those with nothing to hide; but an absolute necessity for those with poor memories.

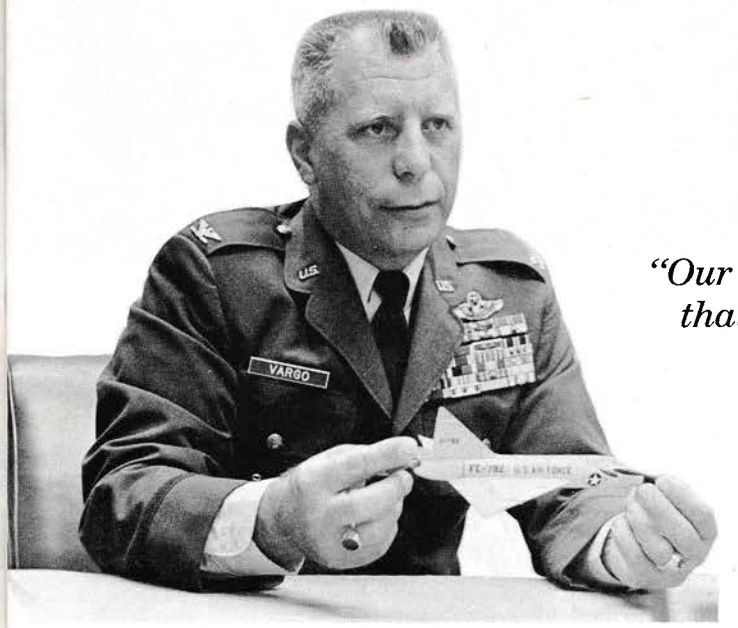
INTERCEPTOR

DEPARTMENTS

SPECIAL FEATURES

OUR COVER

A glimpse into the future to see what might happen if women were allowed to "do it better."



"Our experienced types must recognize that they have a moral responsibility for the growth and development of new aircrew members."

Everyone admires the ease with which an "Old Head" makes a difficult job look simple. When the weather is hanging on the treetops or when the target is high, fast, and evasive, he hacks it — and does so with a flourish. He provides the knowledge, judgment, and capability that wins A awards and bring the squadron successfully through the ORIs. He handles the emergency, does the job right the first time, and generally makes the difficult look like a piece of cake.

This special individual — the real pro — is in part the type of a person who holds down our supervisory slots. Notice, I said "in part" because many like him are filling cockpits as buck pilots. As such, he doesn't have an official status, except perhaps as an Instructor Pilot or Flight Examiner. In some instances he may even have the rank and experience to be running the "whole show," but because of the crowded grade structure, he may not be the "boss." Yet, in his close daily association with the younger troops, he provides the backbone of our continuation training program by his guidance and shining example.

But because of what appears to be a routine approach to professional flying, his luster becomes tarnished, especially when we consider that his "no sweat" approach to flying can inadvertently trap a younger troop into trying something which he has neither the proficiency nor experience to finish. Of course, no "Old Head" would deliberately do this, but he may unknowingly give challenge just by his expressions, mannerisms, or his confessed inclination to "bend" a reg just to get a hack. My concern, then, is for the young, gung-ho troop who, in his attempt to emulate the big boys, can get in a little over his head trying to keep pace and luck may not be enough to get him home safely.

I'm not advocating that our experienced fighter people play down their accomplishments, but they've got to be especially careful of the manner in which they discuss them. Think of the effect of statements such as . . . . "Our local Chapter 7 says we're supposed to be on initial with 3,000 pounds, but if you're really cagey, you can get that extra intercept and be on the ground with 1500," or "The Dash One states . . . , but my personal procedure is . . . ."

Some "Old Heads" think they're beating the system when they successfully deviate or stretch the mission . . . however, when they do, they are wrong twice. First because they knowingly bent the regs, and second, because they told the novice about it. On both counts they may foster an attitude among their younger colleagues that breaking the rules is a safe and accepted practice.

Our experienced types must recognize that they have a moral responsibility for the growth and development of new aircrew members. Pride in self and unit; proficiency and competitive spirit can all be developed without posing deceptive challenges. Such an environment is greatly dependent on the impression the "Old Head" creates.

COL JOHN M. VARGO
Chief of Safety

HOT LINE

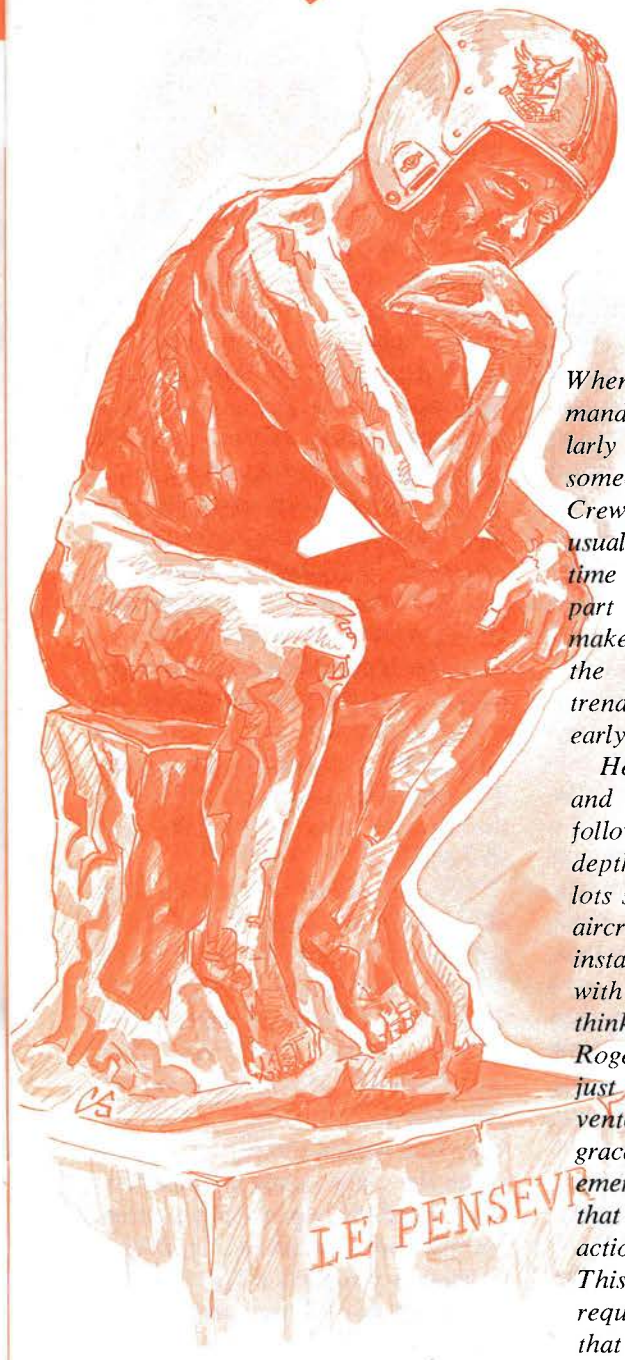
COME FLY WITH US. With the advent of good old summer, most squadrons' thoughts lightly turn to Squadron picnics with the accompanying taxi rides in the birds for the wives and sweethearts. But there are times when these and the "Dollar Rides" for some of the guys in the squadron end up costing considerably more. Recently one of our troops was going to get such a ride in a T-bird. He listened dutifully as the P.E. expert told him all about the parachute and the other gear. He met the pilot and they went out to the plane. The crew chief strapped him in as the pilot made his walkaround, then the pilot briefed him on the seat, the armrest, the pins, and all the other things he should and should not touch. Well, somehow the mass input of data caused some confusion in our passenger's mind. As they were taxiing out, he interpreted the command, "You can pull out your seat pins," to mean that he should also raise his armrests. This was followed by the inevitable loud bang and the departure of the canopy. Although everyone thought that they had adequately briefed this passenger, maybe the excitement of the pending flight along with the plethora of esoteric terms he had heard made him think he understood more than he actually did. The base where this happened has adopted a plan to prevent this from happening again. You might use it too if your squadron is planning some passenger orientation flights. Here's the drill: First of all, the Squadron Commander must approve each such flight. Then the Personal Equipment Officer must provide written certification that each rider has received *and absorbed* adequate training by Personal Equipment technicians in using the helmet, parachute, ground and air egress procedures in a 24-hour period before the flight. The passenger must then arrive at Operations one hour before the flight where the pilot will brief him on his oxygen equipment and procedures, altitude restrictions, cockpit procedures (to include radio and interphone techniques), and then review with him the parachute operation and his egress procedures. Finally, after all this, if the pilot feels that the passenger cannot safely perform these operations and procedures, he will postpone or cancel the flight. If the pilot agrees to the flight, he will personally assure that his passenger is properly strapped in. These passenger orientation flights must now be flown only over land.

SPIN UP, SLOW DOWN. For you F-101 drivers who have lately been given good cause to wonder how (or maybe where) your landing on a wet runway is going to end up, take heart. The search for a way to "keep the pointy end going frontward" continues. We recommend an article entitled "Whoa Woes" which appeared in the February AEROSPACE SAFETY. We are starting to realize that getting the tires spinning is fundamental if we want any directional control at all on a wet runway. We're also learning that a "grease job" is *not* the best way to get the wheels spinning. A firm landing on both main gear is reported to be a better way to get spin-up. If it looks like you're going to have directional control after touchdown, immediately lower the nose gear to the runway and engage the nose wheel steering. Stay off the brakes until you have both positive wheel spin-up and directional control. Most Voodoo drivers know that the F-101 antiskid will sense a false wheel speed until it reaches the proper spin-up. This will cause the brakes to cycle improperly and will prevent spin-up.

EVERYONE UNDERSTAND? On page 31 of our May issue we published a salute which congratulated the 112 Fighter Group (ANG) at Greater Pittsburgh for over 8 years of accident-free operation. On page 30 of that same issue, our "The Way the Ball Bounces" department put them "on top of the Air Guard Heap" with 108 months accident-free. What is 108÷12, class? Everybody come up with *nine* years? So did we, but our Analysis Division, who tabulates these data, goes by accident-free months. Both pages used figures that closed out on 31 March 1972. The Pitt Guard had their last accident on 16 March 1963. That made their first accident-free month come up on 30 April 1963. So they did have 108 months accident free, but weren't *over* 9 years. Incidentally, they did *pass* nine years before they broke their streak.

DECIDE TO SURVIVE

by **ROGER G. CREWSE** • *ADC/SEY*



When the Aerospace Defense Command is confronted with a particularly knotty flying safety problem, someone usually asks Roger G. Crewse for an answer — and Roger usually has an answer. ADC's full time Chief of Safety Analysis and part time creator of "Coolstone" makes it his business to stay up on the flying activities and to spot trends, either good or bad, in their early stages.

He thinks he's spotted one here and we agree. In the article which follows, he delves in considerable depth into the phenomenon of pilots staying with hopelessly crippled aircraft. We've had several recent instances when crews have stayed with the aircraft when many people think they should have gotten out. Roger proposes that maybe they just weren't prepared. As our inventory ages (and sometimes not too gracefully) the prospect of a dire emergency in a critical situation that calls for correct, instantaneous action becomes a distinct possibility. This possibility, the author believes, requires some advanced planning so that pilots can cope with these catastrophic emergencies. Mr. Crewse calls it "pre-thinking" and tells how we can use it now to plan for those reactive situations when there just isn't time to "think it out."

We need to have a discussion on our joint desire to preserve your posterior, because, in recent months, nine ADC and ANG aircrew members have died in aircraft accidents. We don't think that any of them should have died, regardless of the situation in which they found themselves. Furthermore, we aren't rightly sure why they did not make the decision to live. All but three were young troops, right in the shanks of their careers and their lives. All of them, every one, were in a position, after the emergency developed, regardless of type, where the decision to survive could and should have been made. An aircraft accident would have occurred in all but one instance, but the crews would have been flying today.

So, what this discussion is all about concerns possibilities which bias the aircrews' logic process, resulting in a deadly decision or none at all; and some ideas we have on how to survive based on our review of far too many accident reports.

Years ago, in primary flight training, our instructor, an old man of 22, constantly pounded into our heads that in an emergency, *any* decision is better than none. He was particularly vociferous about this

When the engine quit at 300 feet on final approach, the pilot ejected immediately. He apparently had pre-thought the emergency circumstances that would drive him out of the cockpit without a second thought. He is alive today.

fact just after we had been given a "forced landing" at about 1,000 feet and had vacillated between a great big pasture which would have required a stretched glide and a small cactus patch for which we were already on a great base leg. The instructor would give us about a second or two, then through the gosport, yell, "Make a decision, damn it. Make it now!" To him, the lack of a decision or a delayed one was far worse than missing the field on a forced landing attempt. When he would give a forced landing at, say, 500 feet, he expected only one thing. That was a straight-in approach to the best opening you had. He would allow just minor heading corrections and then only to avoid big pieces. The aircraft we were flying then — this one happened to be a Ryan — were small, flew slow, and you could pretty much tell just what kind of shape you were going to be in if a forced landing really became necessary instead of just a practice. I suspect that in the past 28 years, that "old man" who was our instructor probably saved our lives more than once.

In a recent F-102 ejection which occurred at 300 feet on final, the pilot had probably made the ejection decision ten years before. He had already thoroughly "pre-thought" the circumstances that would drive him out of the cockpit without a second thought. When those circumstances finally all got together, he punched. Had a pilot who had not made this decision — had not pre-thought it — been in that aircraft it is possible that he would still have been evaluating the possibilities or exercising Bold Face items as he hit the ground.

Two young pilots in a T-33, one on his first flight out of flying school and the other in the front seat with just under 600 total hours — and very highly thought of by his supervisors — experienced an engine failure on a low-go from an SFO. They were about 500 feet near midfield when the engine "crumped." Probably the very worst place a pilot can find himself with a bum engine is right in the middle of an airport, too high to set it down and too low to do 90-270 or 180. There just isn't any concrete available to land the bird. These two pilots apparently kept their altitude, bled off the airspeed; then the aircraft wobbled and fell off on one wing. Both pilots were fatally injured in the crash; neither of them even attempted to eject. We think that if a firm decision to do anything had been made, chances are these two pilots would be flying today.

Two more, both involving the F-101 . . . the first a night takeoff . . . cold . . . actually below zero. An emergency developed as the aircraft got into the air; it was a fire of some type. They continued the takeoff, and the aircraft pitched up at 100 to 200 feet, then crashed less than 4,000 feet from brake release. The gear and flaps were still down; the throttles were in AB; the crew was dead.

The second one was also on takeoff — formation wing — both burners were lost near the point of rotation. The wingman fell behind the leader, but pressed on and became airborne about 5,500 feet from brake release. He brought up the gear and flaps, gained 100 or 200 feet, then started sinking, and at this point the pilot called for ejection. Neither chute opened completely because malfunctions occurred when perfection was required. The WSO made it because he landed in mud; the pilot did not.

In the first of these takeoff accidents, probably no decision was made. In the second, it was made, deferred, then made again, but too late.

Another takeoff accident in the "101". Before rotation on an 11,000-foot runway, the aircraft ingested a bird into the left engine causing at least one gigantic compressor stall. The pilot aborted. No drag chute... no aerodynamic braking . . . just stopped the takeoff. Near the end of the rollout, he realized he was not going to be able to stop on the runway. Now the drag chute came out; the right brake locked and the right tire blew. The aircraft went into the overrun at about 40 knots with the "hook" up and the tank still on. We find that Fate has a nasty habit of jumping right up and hitting you in the face when you press her at all. In this instance there had been a ditch dug across the overrun (probably to install some electrical wires) which had been covered by asphalt. The right wheel with the blown tire sank into the ditch, which caused the gear to snap off. The fuselage fell on a full drop tank; the tank ruptured causing a tremendous fire. Both crew members burned to death before they could even start to egress.

The decision to abort here was great; the decision not to exercise all methods of stopping the aircraft as quickly as possible was deadly. The blown tire occurred either because of an antiskid malfunction or because the pilot paddled off the antiskid. And, at the last moment, the failure to drop the tank and the hook . . . deadly.

Another accident where we think the crew should not be dead concerns a join-up after takeoff by an F-106 instructor pilot and a student. They approached the lead with a high overtake and with everything hanging out. They attempted a roll, up and over the lead, for spacing. While they were almost inverted, at approximately 3,500 feet, Fate did her thing again . . . the pilot probably advanced his throttle at this time and found absolutely nothing because the engine was in the process of failing. The nose fell through as the aircraft was rolled, wings level. They ended up nose down — low, low, low. When the pilots noted their attitude in relation to the ground (and we can only speculate here), they abruptly changed it to nose high and their aircraft started to spin. They ejected with a rate of descent of over 10,000 feet per minute. Neither chute had time to open even though there were no malfunctions. Once again, there was time to eject and certainly more than enough time to make the decision to do so; but the airplane had to be flown first, and Bold Face items referred to later, if at all.

The problems of survival . . . and that's really what we are talking about here . . . your survival . . . not the aircraft's . . . are difficult to pinpoint exactly. No man knows what is in another's mind. You know what you told him, but not whether he believed it or even understood. No man knows another's adrenalin level. But we do know for sure that knowledge, training, and prethinking can reduce the panic level for most any situation. None of us really know, except those who have been there, exactly what we will do when pressed to the limit, or even where the limit is. And unfortunately, the right decision cannot be a "legislated" one.

We do know that people who have 4 to 5 thousand flying hours will give the bird an honest try regardless of what the problem is . . . and that's all. When necessary, they will smartly excuse themselves from the machine. If exquisite timing is required . . . they must excuse themselves and never mind the try. This is a simple fact of survival.

If the engine quits just as your wheels go into the well, these pilots will certainly not do any of the one-potato, two-potatoes of an airstart. Not at all.

The pilot who sensed the loss of thrust on final at 300 feet and ejected would give you Work Unit Code 101 if he were asked what the engine instruments read before ejection. (Loosely translated, WUC 101 means "You must be jesting, Sir.") The pilot didn't need the instruments to tell him he had lost power or that he wasn't going to make it with the aircraft.

We have found, in past examinations of the decision problem, that a pilot is more often likely to delay a survival decision if he generated the problem, or thinks he did, than if a clear cut problem, not at all of his own making, existed. But, Gentlemen, the penalty for being human is error. Just recently, in a candid discussion concerning survival, a General, who actively flies our interceptor aircraft, said, "On every flight I make I find that I have made little errors of one sort or another. I use the checklist. I know the aircraft well. I have been flying for a long, long time; yet the mistakes are there."

Another pilot, a well-experienced one at that, stated, "The system can no longer accept an honest mistake; and therefore, the hangar flying that used to take place anytime two or more aviators were together is now limited to a large degree."

The system cannot tolerate willful violations, disregard of good, standard operating procedures, negligence, or dereliction of duty, and we all know that. But perhaps, honest mistakes, somehow over the years, have been commingled with the nontolerated items simply because the results are the same. Because of this, the bull (information/education) sessions at the hangar and at the bar are extremely covert —perhaps to the point where they

are practically nonexistent, as far as current problems are concerned. If this is true, it would at least partially explain the absence or reduction of information we used to receive through the Safety Officer's Reports on just plain scare stories. Stories, which on some occasions ended up with the Coolstone treatment, but at least were always worth a giggle and from which we all tucked something away in our computer for future use.

Another portion of the problem may concern the fact that our aircraft . . . all of them . . . have been generally very reliable. Years ago, when jet flying first started, the emergency was the rule instead of the exception. You just couldn't have had many hours in a jet without a fire warning light — real or false — a fuel feeding problem, or a base go below minimums (and you found it out on final). Engines used to fling themselves to the four winds with a great deal of regularity. The good old 86D IEC, with an errant electron, would disconnect you completely from your engine and did it so often that every pilot was ready for it.

In those days, you expected an emergency, and oftentimes you were not disappointed. Well, the wheel has turned. The aging process has caught up with us. The emergencies are coming back at greater frequency. You can't afford not to be ready, or you'll not make that survival decision. For instance, we went for three years without a dead stick landing in the T-33. Since January '71, we have had three actual flameout landings made and two more where less than idle power was available. In the three flameouts, had we gone through our entire pilot roster, we could not have picked pilots better qualified than the ones which were at the controls at the time. But, in the fourth one, there was only 800 hours in the cockpit, adding both pilots' time. As an assumption only . . . those pilots just weren't ready for that emergency.

Let's talk specifically about ejections now. No one ever promised you a rose garden when you punch yourself out of an airplane. This will be a traumatic experience at best. On the other hand, the alternatives aren't too good. If you have doubts in your equipment, put them into words and get the answers. If you don't really understand the equipment capability and its limits, get briefed. If you have decided that the equipment's limits, as pertains to low altitude, low airspeed, and sink rate, are your limits, you had better rethink that decision.

If you won't use your ejection equipment because of rumored high opening shocks or injuries associated with its use, remember that the shock of the aircraft striking the ground with you in it will make all others pale.

"Prethink" right now, those situations where you will, without additional thought beyond that necessary for recognition of the problem, eject. There are not too many of them, are there? Just after your wheels are in the well; on final or on a low-go and the engine comes unglued, are a couple. When the controls freeze and the RAT doesn't hack it,, and the pointy end isn't going where you want it to, is one more. When a fire is snapping at the legs of your rompers, that will drive you out quick! These are all times for which you should have already made the decision to survive. The rest of the emergencies which may ultimately develop into ejection situations provide some time where you can work your potatoes in a text book or simulator fashion. But those few we prethought together don't allow you the luxury of time or even, in some cases, the luxury of developing a decision, based on a cool, calm evaluation of the facts. When they occur, you must have already made the decision by prethinking so that the old pine block has a channel already set up. You give it the circumstances and the decision immediately spits out.

We have talked about some of the things that may affect the decision to survive, and they have mainly been from an experienced standpoint. Some of our young pilots, however, have a different problem, so we are told. They believe that, no matter what kind of an accident they may be involved in, it will immediately spell finish to their budding careers. They are sure that if they are put under the spotlight of an accident, the investigators will find that they made mistakes. Like the General we spoke about earlier . . . on every flight; they also know they make mistakes, and they are sure that they have made some on the accident flight. Therefore, they are certain that their professional ability will be questioned; that mistakes will be treated as noncompliance and not be tolerated. They are also certain that, if they did not do everything that the book said to do covering the emergency, no matter what the problem is, they would be at fault.

Their decision to survive, then, is biased by the real or imagined consequences of an accident. It may be delayed so that they can be sure they have done everything humanly possible to neutralize the emergency. That decision to survive may be . . . just may be . . . so modified by fears of reprisal (again real or imagined) that they don't make it at all.

If this attitude exists in any form as a product of the system's processing of accidents, then the system is

going to have to readjust. But, in any case, the atttude is completely wrong, justified or not.

There is not one Bold Face item in the world that is worth your life. You are a product of our system, good or bad. You've nothing to apologize for. Time after time, you have proven that you are the best pilots in the world.

The emergency procedures are developed because some designer, engineer, or some support agency could not make their product totally reliable. They did the best they could and handed the whole mess to the pilot in the form of another Bold Face item. The pilot is then expected in the stress of emergency to be 100 percent pure. Incredible!

Here is the truth. Within the past 16 months, our pilots faultlessly fielded 2,000 emergencies caused by part failures. At the same time, they were totally responsible for two accidents, and by their mistakes, contributed to six others. In every one of the six, something went wrong which put the pilot under stress. Now pilots, like everyone else, make mistakes under stress. But it is obvious that this same pilot is the strongest force in our accident prevention efforts. When served up a mess, the pilot has 500-1 odds that he will be able to handle it. But all he should be expected to do is just give it an honest try if time is available . . . then, make his survival decision. There is no time to second-guess an accident board, a book, an inspector, or himself.

Let's look at the emergency prethinking again. We feel that this is as important as anything a pilot can do. Every pilot, every one, no matter how much experience he has, should, at the end of the runway, on every flight, prethink the takeoff survival decisions. If an emergency develops with the wheels on the ground, abort . . . and do it all . . . the whole works. If it's necessary to add power so that you can get far enough down the runway after the abort to turn off, so what? That's nothing to be ashamed of. Not at all.

If the aircraft is airborne with the wheels down when the emergency occurs, set it back down on the runway; drop the hook, punch the tank(s), and take the barrier. Barrier reliability is fantastic . . . a real lifesaver. Actually, it's over 100 percent because we have engaged it a few times when we didn't mean to.

If the emergency develops after the gear is in the well, press on . . . fire warning lights be damned. If you've got two engines, this is no time to decide which one to pull. All you want is ejection altitude. Punch the tanks and get it. Then coolly evaluate the emergency; isolate it if you can. And, if you can't, tidy up the cockpit, pick a nice soft spot, and get out.

What kind of an emergency is worth an abort on takeoff with the wheels on the ground or still down just after you go into the air? The obvious things, of course: fire warning lights, explosions, frozen controls, oil lights, loss of AC, flameouts, loss of thrust, pegged EGTs . . .we know about all of those. But there is one other item. It can be covered in general terms by saying anything that happens that you don't understand, such as: momentary flight control drive, a loss of thrust, high EGT, loss of burner, sudden unusual noise, cockpit going full hot . . . and so on. Depending on where you are in your takeoff, if you don't understand what's happening, *abort!* Abort because your problem, especially if you don't understand it, may immediately change and get a whole lot worse. If you have the gear up, go for altitude, and *then* figure it out. The experts

During a low go-around from an SFO the engine failed. The pilots apparently kept their altitude and bled off the airspeed. The T-bird faltered and fell off on one wing. Neither pilot attempted to eject.

The plane caught fire right after liftoff at night. At 100 to 200 feet in the air the 101 pitched up and crashed less than 4,000 feet from brake release. The crew went in with the bird.

tell us that we should try for 2,000 feet if we can get it. Experience tells us that this altitude will practically guarantee 100 percent survival should an ejection be necessary.

OK. We have covered the prethinking of those emergencies which develop in the takeoff phase. Now, how about the landing phase? Final approaches, low-goes, touch-and-goes once again place you in a critical position should an emergency occur. You've established a rate of descent, you're close to the ground, and you must pre-think the decision.

An airplane doesn't have to go up in the air, but it damned well has to come down . . . with or without you. So let's look closely at the landing emergencies. How about this one? It's happened a time or two in the past few years. The pilot hits the initial, drops the boards, pulls the power back, then impresses the tower operator with his precision break. When he advances the throttle on the downwind . . . nothing. Emergency fuel, airstart . . . still nothing. What's left? Another airstart? Work Unit Code 101, if your answer is "yes." The engine quit . . . you gave it an honest try . . . now make your decision to survive. Get it pointed away from the housing areas if you can . . . use your airspeed to break the rate-of-descent, or effect a zoom . . . then punch! Any other action on your part is futile and, worse than that, may be deadly. In a T-bird you have an additional problem. You have to keep your airspeed above 120, or the ejection capability is no longer as advertised. The 120/zero capability is just exactly that. If you don't have at least 120 knots, you aren't going to have a zero capability, or anything approaching it. Therefore, it is important to keep the airspeed about 120 while you are fighting your engine problem or whatever. Fly the airplane. Let the Bold Face come second. Also, in the T-bird, you have a trim problem. You can't trim the airplane hands-off at the low airspeeds. Therefore, it may become necessary, when you eject, to hold the stick with your left hand. Maintaining your nose-up attitude as you squeeze the trigger, let the force of the ejection pull your hand off the stick. If you don't, the nose may go straight down and you will no longer be within the ejection envelope. This attitude problem is true in other aircraft if you don't trim. You grab both handles, the nose pitches down, and now you are in a world of hurt regardless of the type of ejection equipment you may have.

How about the emergency where you are on final and very, very unexpectedly you need a percent or two, but it's not there? If you are in the ejection envelope, break your rate of descent, trim as you do so, and, at the point where you have the rate of descent neutralized, punch. No airstart . . . no Bold Face . . . just excuse yourself.

If you are not within the ejection envelope, remember that Primary Instructor's advice. Keep your glide speed. As you near the ground, flare, take advantage of ground effect, bleed off the airspeed, and ride it in straight ahead. Only minor turns, now, just to miss the big stuff. Concentrate on flying the airplane . . . not the Bold Face . . . your survival depends on it.

Now, how about the low-goes from ILS approaches, GCAs, or SFOs? You probably have some altitude here, so, if you find the power won't come when you advance the throttle . . . maintain the glide speed. You might even be able to make it to the runway. Ignition and emergency fuel . . . give it a little time . . . while you still

fly the aircraft. Hold that glide speed. If it doesn't start, level, with trim, and punch. If it does catch, but with an extremely low RPM, forget it . . . level off and punch.

You should know how long it takes for the engine of your aircraft to accelerate from idle to full mil on emergency fuel. If you don't know now, find out. This is a critical part of pre-thinking . . . this particular emergency. You should also know the rate-of-descent you get with your aircraft at the optimum glide speed without an engine. This is also part of your pre-thinking. Now you know how low you can go trying to start the engine before further attempts are futile. This is above ground, though . . . remember that! If you are not in your engine's particular ball park, then all you can do is punch. Or, if you are really low, ride it in, straight ahead and maintain control until you land.

Probably the majority of our recent pilot graduates never have flown a single-engine aircraft prior to having been assigned to the Deuce, Six, or T-bird. They have never had to pre-think an emergency based specifically on an aircraft that starts out with just one engine. There is a difference. All single-engine fighter pilots say, "Viva la difference!"

If these recent graduates are flying a T-33, they have an additional problem. When you cob the T-bird, it does not jump right out from under you like the T-38 did. About a year ago, a recent grad fire-walled a T-33 on a low-go. He immediately declared an emergency for a power loss and landed, only to find the old J-33 slowly cranking itself up to 100 percent with the normal groans and moans. Pre-thinking here involves that after you get the engine back, you don't have much. You'd better pay very close attention, when you are practicing, to how much altitude and time are required to get the airplane from a descending situation to level flight.

Once again, as with the takeoff emergency, when the bird quits on final or on a go, have the pine block pregrooved so that the circumstances will trigger your decision to survive as soon as you recognize them.

The ejection equipment which we now have in all of our fighter aircraft has a zero altitude capability and, at the most, requires 120 knots to be effective at zero altitude. Naturally, the more altitude and airspeed you have, the better chance you have to make it. The sooner you make your decision to survive, and that decision requires an ejection, the more likely you will be flying aircraft again one day, should an emergency trigger you right out of the airplane. Prethinking those takeoff and landing emergencies is something that must be done continually. every flight. Few pilots who have weathered a thousand hours, or two, in jet aircraft, don't prethink their emergency procedures on every flight.

Telling war stories, exchanging information on problems which you have experienced in the air is, by far, more effective than any other type of information you have. We don't do it as much as we used to . . . for whatever reason. Talk to the "ol' heads" . . . bring up what happened . . . ask them for a reading. And they, in turn, must understand that their flying experiences, what they faced, and how they solved it . . . may very well help another pilot out of an extremely critical bind.

Tight spots in flying usually involve low altitude, low airspeed, and bad engines or control problems. If you are going to stay with an airplane in trouble, you must keep on flying it. And, if you are going to get out, you must do it now. If someone criticizes your decision later, just smile a lot. You'll be alive and you'll be there.

Flying and fighting is our business. We've got to train for it and we must be professional. We must know the aircraft systems; recognize their failures, and understand the neutralizing procedures . . . no question about it. But we are well aware that we cannot establish a norm for our pilot operation and then judge them only during an emergency. And we are aware that when we accept less than perfection from our equipment or its support, we can't then demand perfection from our pilots, or even imply that perfection is our standard.

We learn by our mistakes. Everybody in our business has made lots of them and, hopefully, learned a lot. We must have a free discussion if this learning process is to continue. But if you gain nothing else from this article, please remember that the accuracy of your decisions, logically arrived at, without the adrenalin pumping, predict exactly your chances of survival should an emergency catch you in one of those tight places.

And, finally, when you are strapped to a machine by yourself or with your WSO, only you have control over that survival decision. Not another soul can help you. The responsibility is all yours and, if you happen to be faced with one of those emergencies and excuse yourself from the mess, expect it to be "second-guessed." Expect that we will search in great depth for both the cause of your emergency and your methods of handling it, not because you are under the gun, or because your personal integrity, flying proficiency, or professional abilities are being questioned, but only because we want to stop the same thing from happening again. ★

Lady Killers

One squadron's adventure with two WAF fighter pilots

Early this year the United States Congress passed the long debated Equal Rights for Women Amendment and sent it to the States for ratification. If 38 of the States ratify, it will become law as our 27th Amendment to the Constitution. A consequence of this amendment has been a great deal of debate concerning the role of women in the Armed Forces. Since the restrictions that prevent U.S. women from bearing arms in combat may soon be lifted, the possibility of having women fighter pilots has suddenly become a probability.

A recent article in "Air Force Times" quoted Secretary of Defense Melvin Laird on this subject: "I don't see why there shouldn't be a woman fighter pilot . . . . Why shouldn't a woman be a jet fighter pilot?"

Now, if you are presently a fighter pilot and know the answer, you might as well put your hand down — Mr. Laird isn't calling on anybody today. And before you write him a letter, we ask you to consider the following:

During WWII, Jacqueline Cochran, a racing pilot and holder of numerous air records, was the Commander of the U.S. Women Airforce Service Pilots (WASP). In her story in "The American Heritage History of Flight"*, she tells how she and other pilots ferried fighters during the war. "We landed planes like the Hurricane and the Spitfire in fields where I wouldn't land my Lodestar today, if I could avoid it. When planes were damaged in flight, the boys often put them down in the first field and we girls would then fly the damaged planes to a depot. When a mission was being organized, ferry pilots would assemble the planes — we would fly perhaps five different types in a day — and after

the planes were returned, we would disperse them and put them on satellite fields . . . . The men were saying that they were willing to be killed in war, but wouldn't fly the B-26 . . . . I flew the plane and didn't see anything so difficult about it . . . . So I had 150 gals flying B-26s. They towed targets while live bullets were being shot at the targets from B-24s. They did 70,000 hours of tow work, and with that all-girl crew there was only one minor accident and not a single fatality. They also did radio control work — a girl would fly the airplane and another girl would sit beside her and fly another plane without anybody in it . . . . The girls also tested new engines and did some instructing . . . . One time I saw a girl get out of a P-51. That was one of the most difficult planes to fly. Obviously she was going to have a child. I said, 'A pregnant woman has no business flying,' but I couldn't help but admire her."

Now we know that none of you guys feel challenged. You can clutch your Silver Stars and DFCs for security and say, "That's all well and good, but how would the girls do in actual air-to-air combat? That's a man's job." We don't have any information on American women in this situation, but we present the following information about Russian women fighter pilots taken from the book "Air Facts and Feats." *

• During the Second World War an all-female unit, the 586th Fighter Air Regiment, flew 4,419 operational sorties, took part in 125 air combat engagements, and were credited with 38 confirmed victories.

• Junior Lieutenant Lydia Litvak was killed in action at the age of 22, a Russian fighter pilot in the mixed-sex 73 Guards Fighter Air Regiment. She flew Yak fighters and had 12 confirmed kills to her credit.

• Thirty Russian airwomen received the Gold Star of a Hero of the Soviet Union for their gallantry during WWII.

Do any of you still have a good answer to the question: "Why shouldnt a woman be a jet fighter pilot?" We don't have an answer, but we can easily imagine the reaction a couple of WAF fighter pilots could cause in an ADC fighter squadron. So we present the following fantasy as just that—our fantasy.

* * * * * * *

The doors to the briefing room burst open and 25 fighter pilots dashed madly to the dining room shouting 25 different orders to an obviously deaf cook. The operations officer, Lt Colonel Nelson, had dismissed the morning briefing a little early so that his men could get a good breakfast. As the cook, with practiced indifference, broke yolk after yolk on the greasy grill, the squadron lined up with their colorful, unwashed cups for a chance at last night's leftover coffee. Major Slayer felt a nudge at his elbow and turned to look into an ear-to-ear smirk on the face of Lieutenant Hotdogue.

"You worthless, dirty ol' man," said the Lieutenant, "how did you manage to get scheduled for alert with the toots? I know you, you son of a gun, you're trying to line up the little blonde for a TDY next month."

Major Slayer stepped forward in the chow line, tried to hide a blooming Sierra Echo grin, and spoke in his often rehearsed, most condescending voice.

"Lieutenant," the word seemed to hang in the musty food odors and absorb every other sound in the room, "if you are referring to the two new WAF officers in the squadron, I think you are quite out of line. I did notice their names on the alert schedule next to mine and Lt Colonel Nelson's; however, I assure you that this came about quite coincidentally. It has always been the Commander's policy to mix highly qualified personnel with new men . . . ah . . . pilots for their first alert tour. I was chosen strictly for my experience and. . . ."

"You lying sack," interrupted Captain Suave, "we know you make up the schedule. And how come you two decided to pull alert again, you haven't seen the inside of the alert barn since the brown-shoe days. Highly qualified personnel? Right! You couldn't tell a steering dot from scope noise. The last time you scrambled, you identified a PAN AM-707 as a Russian bomber. And who was it that nearly went non-current last quarter?"

"Leave 'em alone, Suave," came a voice from the crowd. "They're just ticked off because all the headquarters weenies came up from Division and the 'Springs' to give the chicks their squadron checkout."

"Yea," said Hotdogue, "and it was downright unpatriotic the way they checked out so fast. We had nearly fifty colonels on the list, all volunteers, to help out — and half of them weren't even current in the aircraft."

One of the squadron IPs shuffled his feet and spoke in a small voice that was just audible above the clatter of dishes. "I don't see what everyone's so excited about, they're

just trying to do a job like the rest of us. Just because they're women."

"Well, listen to that," said Suave, "our hot rock IP has come out of his shell. We haven't heard any rousing lectures from you since the girls waxed you in ACT."

"That's right," someone yelled, "you might say he was 'woman-whipped'!"

"Ham and eggs," shouted the cook through the pilots' laughter. Three guys lunged forward, but the Ops Officer was there first. As always he was the last one out of the briefing room, but he had maneuvered into position while the others were arguing.

"Thank you, Technical Sergeant Brown,' said Nelson very politely, "and do you have my other orders?" When he smiled his face seemed to reject this unfamiliar facial movement and cracked into a million wrinkles. The last time anyone had seen him smile was two years ago when the former Ops Officer was fired.

"Yes, sir, I have 'em right here," Sergeant Brown placed two orders of poached eggs, dry toast, fresh orange juice, and hot tea on a sparkling white linen covered tray. From somewhere in his domain of hot stoves and garbage cans he retrieved a somewhat wilted flower, which he dropped carefully between the plates and the napkin-wrapped silverware.

"Would you check this action?" quipped Captain Suave. "I believe ol' cookie has flipped like the rest of these guys."

"What's with this Technical Sergeant Brown jazz?" asked Lieutenant Hotdogue. "I thought his name was Sergeant Cook. And no wonder the girls didn't show for the briefing this morning, it looks like they're gittin' breakfast-in-bed."

Taking advantage of the diversion, Major Slayer slipped forward and picked up a plate of cold SOS from the serving counter. "Just watch your lip, garbage mouth, they're having breakfast with the ol' man." His tone and vocabulary had quickly slipped back to normal. "He's givin' 'em a personal orientation briefing."

"They ought to be pretty well oriented by now," said the Maintenance Officer. "Everybody from the Division Commander on down has tried that trick. You'd think this was the only base in the ZI serving breakfast. We've been so busy turning TDY aircraft we'll be lucky if we have two birds for the gals to fly."

"Cry a little for us, Babe," Lieutenant Hotdogue mocked. "You could get the birds out on time if you wanted! How come you got four airmen out polishing the girls' aircraft. Their birds are the only ones on the flight line with E-9s for crew chiefs."

Everyone's eyes in the line followed the Ops Officer as he carried the tray to the Commander's corner of the dining area. There he distributed the plates onto the immaculate white tablecloth and carefully straightened the red leather covers that had been slipped over the backs of the scarred metal chairs.

"I knew this would happen," said Captain Suave. "You let these women have a man's job and right away everyone starts jumping through his tail. They ask for an equal opportunity and they get a sideshow. I'd been here for three weeks before I even saw the ol' man, and that was when I aborted and came in here for another cup of coffee. Nobody *ever* sees him this early unless they're in deep, serious trouble."

"There may be a sideshow going on, but nobody's been able to get them gals to perform in it," scoffed the PE officer. "You shoulda been here last week when I tried to fit their flight gear. Man, I couldn't sleep all the night before just thinkin' about it. I could see me helpin' their soft warm bodies into poopie suits, checkin' their winter thermals for a snug fit, tightenin' their chute straps. . . . But when I got here there were at least 20 guys crowded into the locker room with the same ideas. The girls took one look and ran us all out. I just went outside and cried."

"Hey, troops," whispered the Hotdog, "I heard the guys in the CAC say the brunette has a boy friend over in the chopper outfit."

"She can't do that," one of the other pilots cried. "She'll ruin our image."

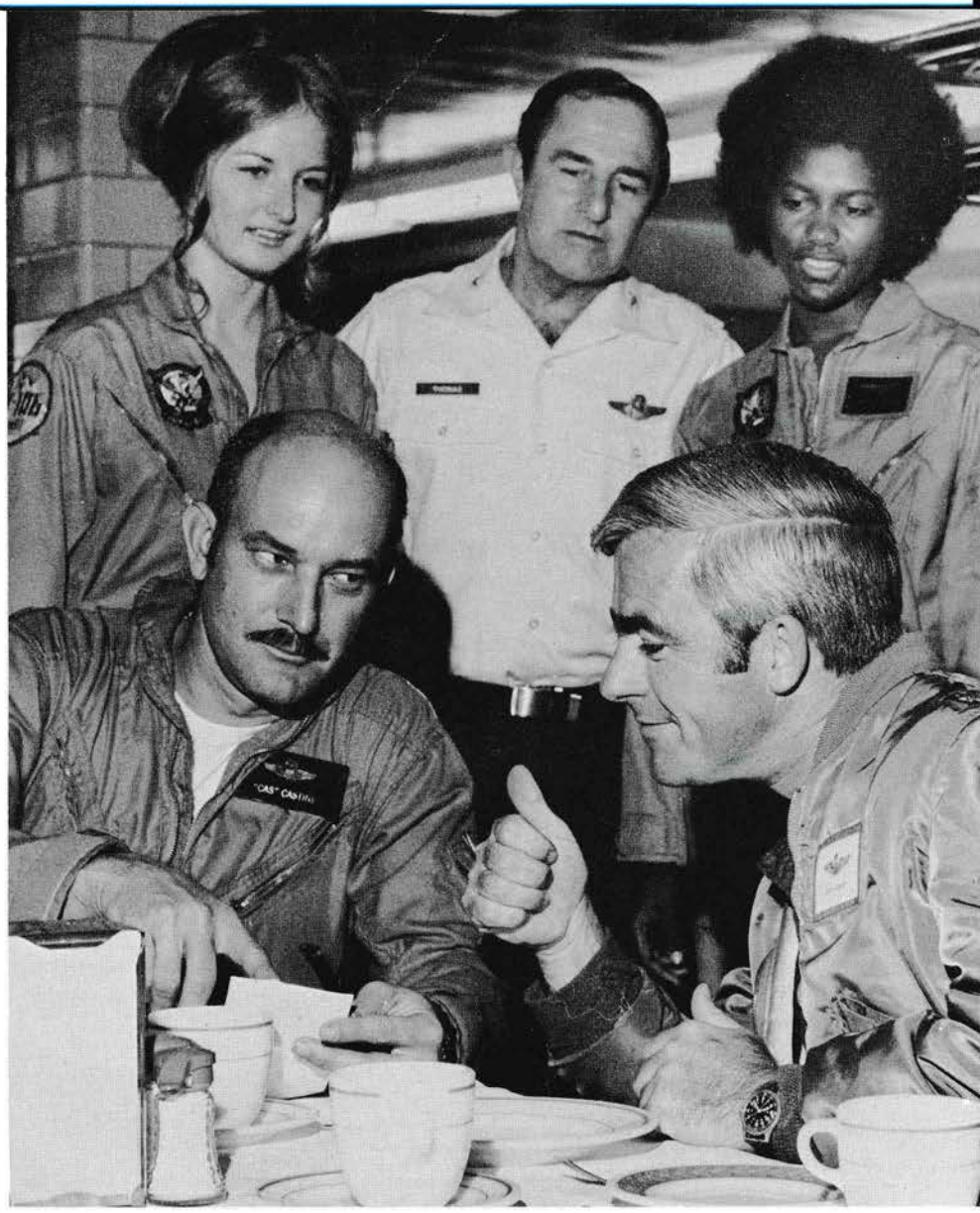
"What image, stupid?" Suave sneered. "The only date you've had in the year you've been here was that ugly secretary from the bomb squadron, and she dumped you because you were such a weenie."

"Aw'right, you bunch of gawkin' yard birds, off yer cans and get this flyin' circus in the air." The Ops Officer's smile had faded to his normal scowl and his polite voice was now a roar. "I want on-time take-offs, and if you dont get two good hacks, don't come back. Any guy that lands with a code three aircraft doesn't fly again 'til it's fixed."

Lieutenant Hotdogue picked up his flight gear and started out the door. "I might as well go, anyway. My ol' lady has already warned me she's leaving if I try to pull alert with those two. If I even fly in the same formation, she gets suspicious. I've tried to tell her there's no mile-high club in a single seat fighter outfit."

"Yea," said Captain Suave, "I got the same treatment from my wife. She wanted to sniff my T-shirt for perfume when I got home from Happy Hour. This sub-zero weather has been warm compared to the

PHOTOS BY SGT RICHARD THOMAS



"This is going to cost us plenty, but it's worth it. . . . The weather observer has agreed to report the field below minimums . . . we'll be stranded all night . . . how about the champagne and the movies?"

temperature in our bedroom. I hear the Wives' club even sent the girls an invitation to their coffee. Maybe the wives want to keep an eye on them. As far as flying goes, we might as well slow down; it'll be a while before we can get a crew chief to start us. They're all over at the alert barn trying to decide who gets to strap the toots in if there's a scramble."

The pilots filed out the door leaving only Lt Colonel Nelson and Major Slayer in the dining area.

"I got to hand it to you, Slayer," whispered Lt Colonel Nelson, "this is the best plan you've come up with since you got us declared too tall to fly the T-bird. Let's see now, the guys at the SAGE blockhouse quietly take us off our alert commitment and have the 85 FIS pick it up. Those 85th weenies owe us one. Then I call a practice scramble and we divert to Goose Bay. Then, while the maintenance troops are out fixing all our fake writeups, we have the girls all to ourselves."

"This is gonna cost us plenty, but it's worth it." Major Slayer's smile was so broad the ends of his mouth turned up and hid under his big mustache. "I checked with the guys up there, and they have the place all set up. And the weather observer has agreed to report us below minimums all night. We'll be 'hopelessly' stranded, so the girls won't be able to leave."

"How about the champagne and the movies?" said Nelson. "Did you get the one where the Masked Marvel breaks in and . . . ?"

"Good morning, gentlemen, I believe you've met our two new pilots." The Commander and two ladies were standing behind them. "I'm putting them on the 15-minute alert birds this weekend; you two will be on five-minute status in the ID aircraft. There will be no changes without my permission. And, while I've got you here, there's a few changes that I feel are necessary now." The

"There'll be no more sitting around on alert in long johns . . . everyone will have suitable pajamas . . . and no more X-rated movies."

group sat down.

"There'll be no more sitting around on alert in your long johns," continued the Commander, "everyone who stays overnight will have suitable pajamas. I have notified the NCOICs of the alert facilities that there will be no more 'R' or 'X' rated movies, and all the pinups are to come down. Since we now get both PENTHOUSE and PLAYBOY, I have decided to cancel one of these subscriptions and replace it with COSMOPOLITAN. In the spirit of equal rights, the ladies have agreed to tolerate the TV football games when they are on — in exchange for equal time in soap operas. As for operations, Colonel Nelson, until these new pilots become familiar with the local area, they will only recover here at the home base, unless they have a legitimate emergency."

The Commander was quiet for a moment, then turned to Major Slayer. "Major, the ladies have reported a few incidents of misconduct among the enlisted men. I want you to put the word out that they had better respect the girls' rank or I'll take away part of theirs — and I hold you personally responsible for the conduct of the pilots. Is that perfectly clear, Major?"

Two chairs squeaked in unison as the two men climbed to their feet.

"Listen, Slayer," said Lt Colonel Nelson, "you better get the Hotdog for my alert. I just remembered I promised my ol' lady I'd take her to the commissary tomorrow."

"Yea, and I think I'll take that bird to California tonight," said Major Slayer. "I've been a little low on flying time lately."

Major Slayer picked up the telephone outside the alert center door. "Put out a recall for Lieutenant Hotdogue and Captain Suave, they've got five minutes to be on alert — and make sure they bring pajamas."

Rumors! Rumors! Rumors!

by **MR. ROGER G. CREWSE** ● *ADC/SEY*

The first jet airplane that Coolstone ever flew didn't have an ejection seat. This didn't brother him in the slightest, because he had never flown an airplane with an ejection seat. They told him for the 84B, "If you get into trouble, just dive for the wing tip like you would in a P-51. Or, if you have time, roll it inverted, put in full forward trim, get rid of the canopy, undo the lap belt, and the rest will take care of itself."

Now they had decided to put ejection seats in the F-94As. The first thing the pilots noticed after the modification was that the fuselage tank, which had held over 100 gallons without an ejection seat, now only held 55. This irritated everybody, because sweating fuel was the name of the game even with the large fuselage tank.

Another problem—Coolstone was pretty nervous about sitting on the thing in the first place. It wouldn't have surprised him a bit to be flung to the wind everytime he raised or lowered it. The installation of the ejection equipment was not at all to most of the pilots' liking.

When Coolstone's squadron came up on alert in 1951, scrambles were plentiful. And, at McChord, when the weather really got down — not the normal weather which, in itself, would have gagged a buzzard—but the kind where you need a seeing eye dog just to get to the taxiway—the folks at the blockhouse really had themselves a ball. They scrambled on everything from a flock of geese to the scheduled airliners which always came in from the same place at the same time. So, when driving to the squadron one evening to go on alert in the most miserable weather that The Rock could imagine, he knew it was going to be a tough 24 hours.

Alert was pulled in the crew lounge and the two aircraft on five were hangared in a corrugated tin lean-to out by the main taxiway. When you scrambled, you had to run down a flight of steep narrow stairs, out the hangar door, down a sidewalk along the side of the

hangar, across the ramp, then to the lean-to where the airplanes were. The taxiway took you to the end of a 5,000-foot runway where you took off to the north over Tacoma. The citizens of South Tacoma knew this only too well.

Another thing about the alert operation . . . there were all sorts of false alarms. "Red One to Standby" rang out through the squadron area constantly day and night. It was about five to one you wouldn't scramble from standby . . . but that one was enough to keep you honest. So, when on alert, you did your thing and ran your mile with great enthusiasm every time it was "Red One to Standby."

Coolstone arrived at the Squadron area, and met his RO who had been in Beaufighters in War II who said he had never panicked since he had no adrenalin left whatsoever. They set up on five out in the lean-to, went back to the lounge, got some coffee, and waited for the other crew to finish setting up their aircraft.

"I guess I'll check the weather," said Rock One to his faithful RO, Rock Two. Two watched One carefully as he talked to the weather man because Two had learned from past experience that he could tell what the weather was going to be by the amount of white showing in One's eyes. One hung up.

"Bad, huh?" said Two.

"Bad, bad, bad," said One and added, "What's more, it's going to get worse, if that's possible. Storms are going to be going through here all night, keeping ceilings and vis at minimums and below. There'll even be some thunderstorms."

Two's eyes began to show a little white also in spite of himself. "What have we got for an alternate?" he asked.

"Larson," said One. "The weatherman says it will stay above 2,000 feet, with rain all night."

The second alert crew came back, got their coffee, and now the negotiations began. The two crews on five rotated the number one position every four hours. The trick was to second-guess when all the action would come and compare it to the forecast. The crew, who had done this the best, would trade the early morning shift for a much more desirable midnight shift as a magnanimous gesture, if it looked like the weather was going to be bad during the high action period. This time there was no quarrel. They matched for it and Coolstone's crew was number one first.

"Have you flown that new ejection seat yet?" the second pilot asked The Rock.

"Yeah. How about it?" said Coolstone. "It cost us 50 gallons of fuel and we will probably end up blowing somebody right over the top of the main hangar."

"That's not all," said the second pilot. "You know what I heard?" And without waiting for an answer, added, "A guy tried it last week. Lost both his feet."

"No!" said Coolstone, properly horrified.

"Yep," said the second pilot. "Both feet came off clean. Hit the bow of the windscreen."

"It doesn't surprise me," said The Rock. "But you'd think that someone would have figured that out before they put that seat in."

"Are you kidding?" said the second pilot. "I heard that even the tests were run from a mockup without a windshield on it. And what's more, when they fired the seat, the whole mockup came unglued so they only had one firing. You get about 80 Gs, they say, just from the seat firing. Bad news."

"Bad news is right," said The Rock. "I didn't trust that thing from the beginning."

At about 2130, The Rock casually strolled over to the window and checked the weather. It was bad. In fact, it was raining so hard he couldn't even see the lean-to where the aircraft were. He sat back down, picked up a much thumbed magazine, and, at this point, "Red One to Standby" roared out of the intercom. One and Two did their thing. Down the stairs, out the door, down the side of the hangar, across the ramp, and, drenched, they arrived at the lean-to.

Two beat One slightly, and, therefore, started up the ladder first. This irritated One. It wasn't the first time that Two had done this to him. "I'm going to talk to him about it when we get down," he thought to himself. "The Captain should be the first one on board and the last one out. Any other way looks bad." He got himself in and put his helmet on his wet head just in time to hear somebody give someone scramble instructions.

"They've got to be kidding," thought One.

"Doo Dad from Coolstone One, on standby."

"Roger, Coolstone. This is Doo Dad. Scramble. Gate climb, heading 260, Angels twenty."

"Roger," said Coolstone. "Cranking up now."

"How do you hear?" he asked Two.

"Loud and clear," said Two, "but I don't think I am going to like it."

"Looks like we will stay at Larson tonight," said the Rock. "We'll never get back in here."

At the end of the runway he received tower clearance, lined up, advanced the power, checked the instruments, and plugged in the burner. He checked eyelids, felt the thrust, and released the brakes. As he began the roll, the rain on the windscreen blurred the runway lights just enough so that the Rock

had his entire attention concentrated on them. He glanced in the cockpit; saw the airspeed moving through 110 and began to raise the nose. Out of the corner of his eye, he saw an amber light flicker just momentarily. It was the overheat light he was sure. He stared directly at it for a moment, but it was out. "Abort," flashed through his mind, followed directly by three other flashes: one: the General gets tight jawed when you abort; two: no barriers; three: less than 2,000 feet left. He pressed on. In the air, he pulled up his gear, milked up the flaps, picked up his climb speed and heading, and called radar.

"Doo Dad Control from Coolstone One. Heading 260, climbing to Angels 20."

"Roger," said Doo Dad. "Our weapon's bent. You will be controlled by Tarnish. Check in with them when you are level."

"Boy," said One to Two, "now I know we aren't going to get back into McChord. Ain't no way with that ADF. That needle's flopping around from side to side. Precip static is wipin' it out."

They continued with their climb, and Coolstone held his heading even though the turbulance had increased to a point that he was really having to work at it. Occasionally, lightning lit the clouds up around him to a bright purple. He promptly turned up all the cockpit lights to full on.

At just about 18,000 feet, Coolstone's way of life was adjusted dramatically. The engine groaned, lost RPM, the EGT climbed rapidly, and the overheat light came on steady.

"We've had it," said One.

"What's wrong?" said Two.

"The engine's comin' unglued," said One. "Looks like we may have to get out of this thing."

"Roger," said Two slowly. "Ready anytime you are."

The noise quit and the EGT came back down slowly. The RPM was about 60 percent since The Rock had smartly snatched the throttle at the onset.

"We'll start back down," he said to Two, "and see how close we can get anyhow."

"Doo Dad from Coolstone One declaring an emergency. Please get a clearance from McChord and tell them to crank up their GCA. We may have to eject."

Then to himself he thought, "Eject? Lose my feet? Eighty Gs? It's going to have to get a lot worse than it is right now for that to happen."

He completed a 180, tried to tune the ADF better, then tried to null the station, but he could get nothing.

"We can't get back in there," he said to Two. "I don't even know where we are, except west."

"Doo Dad from Coolstone One. I can't get TCM so I'm heading for Larson. Tell them I'm coming and have GCI ready when I get across the mountains."

He pushed up the power and, at about 95 percent, the engine did it again . . . groaned, growled, grumbled, with the RPM starting down and the EGT going up. The overheat light was always on.

Coolstone once again pulled the throttle smartly aft. He was at 16,000, but Ranier was just over 15,000 so he decided, rather than try for more power than the engine liked (obviously) he would put his throttle at about 85 percent and try to hold his altitude. The aircraft just wouldn't fly with 85 percent.

"Bad, bad, bad," he said to Two. "Something is really wrong with this engine."

"I was beginning to get that idea," said Two. "Where do you want to get out at?"

"Look," said One, "I'm not getting out until this thing absolutely quits, blows up, or comes apart. You lose your feet if you eject from this front seat."

"How about the back seat?" asked Two, genuinely alarmed.

"No sweat," said One. "You haven't got a canopy bow on a windscreen."

"Roger," said Two, relieved slightly. "I'll go anytime you are ready."

The Rock slowly eased up the power. He stopped at 90%. It still wasn't enough to hold altitude. He eased it up to 95. Yep. That definitely was too much. The grinding began again, with some rather distinct thumps. The Rock was ready for it this time. He pulled the power immediately back to 92 and waited. The engine settled back down again.

By now, Coolstone could look away from the gleaming yellow overheat light for maybe a second or two at a time. And, at 200 knots, he *was* holding his altitude. He pressed on. Why couldn't he have been a lawyer, he thought, like his mother always wanted? He held his heading and altitude and drove east. Finally he heard on the radio, "Coolstone One, this is Bright Light Control. I have an emergency squawk on an easterly heading, just east of the mountains. Is that you?"

"Bright Light from Coolstone One. I hope so. I'm heading 085 at 16. Need pigeons to Larson, a GCI/GCA and, what's Larson's weather,"

"Roger, Coolstone, I've got you. Turn one zero five for Larson, and you're about 110 miles out at the present time. Larson's last observation was 1500 overcast 5 miles in rain."

"Roger, roger, boy," said Cool-

stone. "I'll start down about 40 out."

One and Two collectively sighed, relaxed from rigid to tense, and the interphone breathing rate was halved almost immediately.

"Can't figure out what's wrong with this thing," said Coolstone One. "Something serious has happened to that engine. We're just limping along here with 92 percent. We should be doing over 300 instead of 200. And that overheat light hasn't gone out yet. The EGT is a little high — that's about all I can see wrong . . . but . . . it looks like we are going to make it now."

"Rog," said Two. "I had no desire to eject back there over those mountains, or water, or whatever we were over. I think my survival training would have been overtaxed quite a bit."

"You and me, Babe," said Rock One. "I could see myself floating down with no feet and about a foot tall after pulling those 80 Gs on ejection."

"Eighty Gs!" said Two. "You never told me about that."

"Didn't have time," said One.

"Coolstone One from Bright Light. You are about 40 miles out now. Suggest you start a rate of descent and GCA is standing by."

"Roger, Roger," said the Roc and pulled the power off to about 80 percent, holding 200 knots. The bird descended nicely. It wasn't long before he had checked in with the GCA controller and was vectored to the final. He was then handed off to the final approach controller. He checked in.

"GCA from Coolstone One. I am going to hold my gear until I start down because I have an engine problem. If I have to use too much power, I am afraid the engine will quit."

"Roger, Tombstone One. I understand you will be at your rate of descent in about 30 seconds."

"That's Coolstone One, not Tombstone," said the Rock, "and I'm putting out the gear now."

He watched as the nose gear showed safe, the right main gear safe, but the left main said "up" "up" "up."

"Radar from Tombstone, er . . . Coolstone One. I have an unsafe gear and I'm going to have to take it around."

"Roger, Tombstone, er . . . Coolstone One. I understand your gear is unsafe."

"Roger," said The Rock, and he advanced the throttle slowly as he cycled the gear. At about 90 percent, the engine gave a tremendous thump — worse than any before — then it vibrated threateningly, regardless of the power setting.

"Keep talking," said The Rock to GCA. "I am going to have to land, after all."

"Roger, Tombstone. You are high on the glide path. Descend immediately. Get it down. Get it down."

The Rock pulled off the power and dropped the gear again. The left gear still was "unsafe." He used the emergency gear extension. It was still "unsafe." He advised Two, "Here's what I am going to do. I will touch it down on the right gear, then the nose gear, and I won't let it down on the left gear until I absolutely have to. If the gear is not actually down, we should be going slowly enough by then so we won't ding anything too badly."

"Roger," said Two without a lot of enthusiasm.

The GCA final controller kept talking and, at about three miles, Coolstone saw the field. He was holding 80 percent to keep the bird flying and the engine vibrations were horrendous. He got to the threshold and started his flare. He let it down very gently.

Now, Larson is 500 feet wide. McChord is 175 feet wide . . . so, as the Rock dropped down into the black hole, he tried to land the bird about 10 feet in the air. It didn't land. He held it off. If stalled. He made one of the hardest landings that he had ever made in his entire life and . . . it was on all three gears.

"The gear is down all right," said Two to One.

"GCA from Tombstone One. The gear was down. Thanks."

When they finally got to the parking area, followed by an impressive array of fire equipment, The Rock shut it down and wasn't worried about who got out of the bird first. The weakness in his legs caused his ladder operation to be very, very nervous. As he hit the ground, the crew chief said, "Come here a minute. I want to show you something. Look." He pointed.

Coolstone looked and saw from the plenum chamber back every raindrop was turning to steam as it hit the fuselage.

"Pretty hot," the crew chief said.

"Roger," said Coolstone, weakly. "Pretty hot."

He then heard another of the crew chiefs yell. "Look back here, Lieutenant!" He was shining a light up the tailpipe. "Look," he said. "There's not enough of those turbine blades left to do anything with. I don't see how it could fly."

It was two days before Rock One and Two got back to their Squadron. "The Old Man wants to see both of you," they were advised. They went to his office, knocked, were invited in, and saluted.

"Good to see you fellows," said the Commander and shook both their hands. "Boy, I am sure glad you made it. That just shows you

how much more reliability we have in jet engines than we do in conventional ones. I've always said that, and I was just real pleased with your operation. You could have bailed out just anytime. We will tell the whole squadron about it and, maybe even, the General will give you a medal. *Real* proud of you boys . . . the way you handled that emergency. They told me on the phone from Larson that the nozzle diaphram was up against the turbine, the turbine blades had hit the eyelids when they came off, causing the eyelids to stay partially open, and the aft bearing was completely shot. They couldn't even rotate that engine by hand after you shut it off. You could have bailed out anytime you wanted to and nobody would have said a word to you, but I am sure pleased you brought it in. How did you manage to do that."

"Well, it was this way," The Rock said weakly. "I heard this rumor about losing your feet if you eject. You hit them right on the bow of the windshield. When I got in the airplane that night, I looked, and sure enough that bow is going to get your feet every time."

The Old Man jumped out of his chair and looked at them. "Lose your feet! Like hell you will!" he shouted. "That seat doesn't come straight up. It slants back. Your feet aren't going to be anywhere near that canopy bow. How stupid can you get?" His question went unanswered as he stared at the pair. Then he added: "We are going to brief the squadron allright, but the subject will be a little different than I had originally planned." ★

OPERATIONAL READINESS INSPECTION TEAM

HQ, ADC

I CAN'T BELIEVE I BLEW THE WHOLE THING!

Once upon a time, there was a crack flying organization whose motto was fight, fly, and fool around.

It was a cold and windy day at Frost Butt Field that third day of February 1914. The ORI portion of the combined ORI/CI had just been completed when the following events transpired:

1200/3rd day The ORI Team Chief, Colonel Sweigerschtick informs the Aereoplane Squadron Commander, Lieutenant Colonel Rickettybacker, that he has successfully passed the ORI. The only discprepancies noted were minor in nature:

1. Two barrage balloons were prematurely deflated during the AWST.
2. Three pilots were observed with leggings unwrapped during the egress exercise.

1230 Lieutenant Colonel Rickettybacker declares another local holiday — with the exception of the military police corps personnel and the observation platform controller, all personnel will attend a mandatory beer muster in the priority B Zeppelin hangar. *NOTE:* On the way to the victory celebration the Chief of Maintenance notices a dirty and decrepit bus driving into the squadron tent area.

1300 After a successful three-day inspection at the DOB, the CI Team joyfully arrives by camouflaged bus to help MOB personnel.

1330 The CI Team Chief, Major Paine, unable to locate the squadron commander or any of his staff, decides to brief the team members *again*.

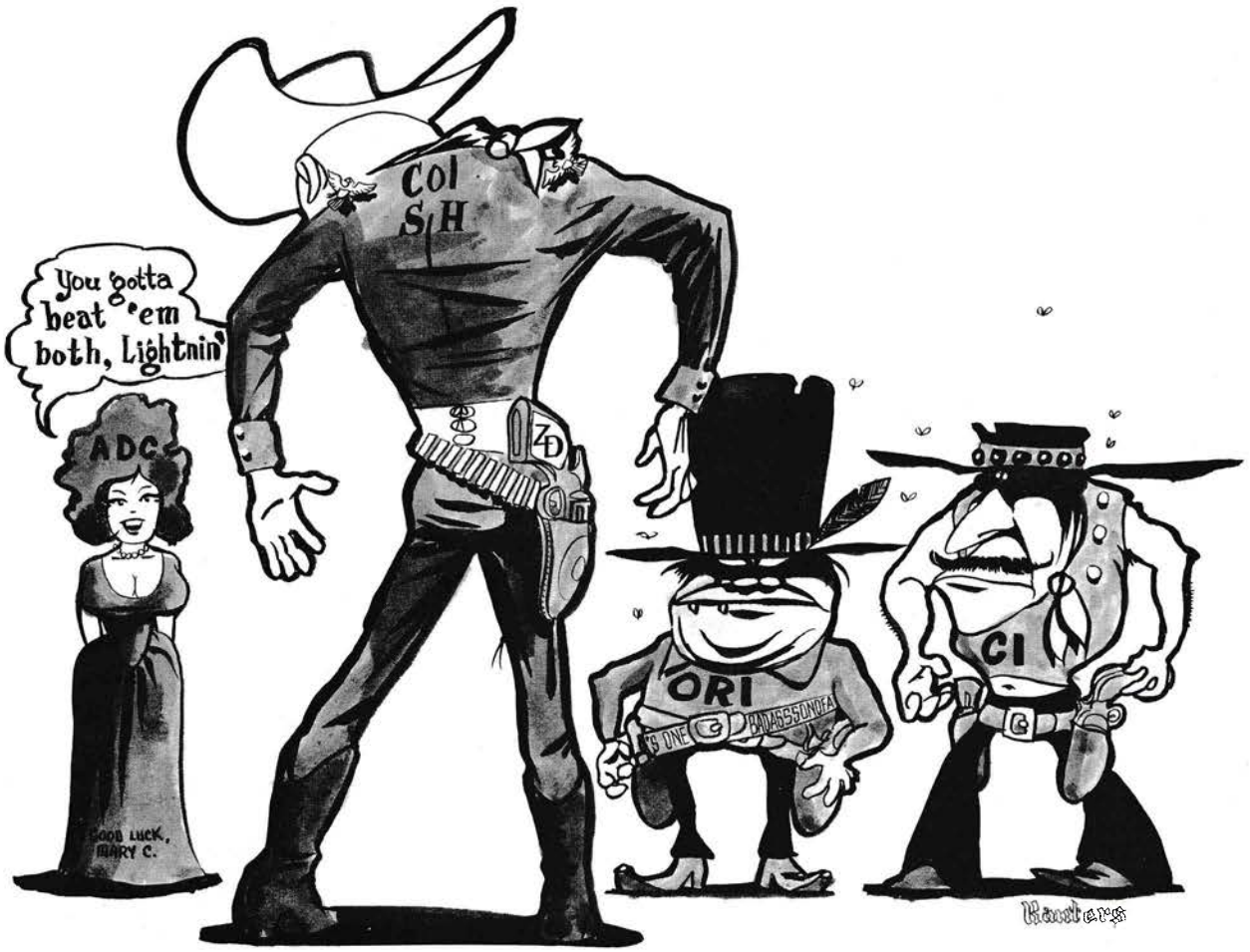
0730/4th day The munitions maintenance officer, Captain Bang, informs his men that, "A general clean-up team arrived yesterday, but don't sweat it. Didn't we convoy the ammunition and load those tricky Springfields in minimum magnificent time?"

0745 The CI Team begins its portion of the inspection.

1300 Major Paine informs the Aeroplane Squadron Commander that he has found a few problems in the storage area behind the white picket fence:

1. The IDA (infrequent detection alert) system is not working.
2. Munitions personnel do not have the proper tools or practical experience to perform their primary mission.
3. Two-man key control for the mess tent was not enforced.
4. HRP (Homosapiens Reconnaissance Program) was not properly administered.
5. Two warnings and three cautions were violated during major ordnance operations. Additionally, an outdated Ethan Allen checklist was used and the "Private Alvin York Kentucky Windage" gauge, although required, was not used during weapons calibration.

1600 Lieutenant Colonel Rickettybacker stands in his tent surrounded by his perplexed staff. In his left hand he holds a message to good old General "Twenty-one" Pershing which states: "Well,



Twenty-one, we successfully passed the ORI and received another ready rating of 'go and cheer'." And in his right hand, he holds a tearstained message which reads: "Sir, General Pershing, Sir, the CI was unsatisfactory and our rating is 'stop and train'."

1630 Darkness descends on Frost Butt Field. The black hats are casting their ominous shadows as Lieutenant Colonel Rickettybacker reluctantly insures that:

1. All rubber bands are removed from the aircraft.
2. Barrage balloons are unceremoniously deflated.
3. Munitions personnel behind the still immaculately white picket fence are restricted from handling or transporting black powder until properly trained.

1700 Lieutenant Colonel Rickettybacker is observed sitting in his office, head in hands, a big red padlock dangling from his white scarf. He mumbles, "I CAN'T BELIEVE I BLEW THE WHOLE THING! ! !" The operations officer replies, "YOU DID, RICK. YOU DID!"

The moral of this fable is quite simple, but the ramifications are extremely serious. Regardless of the type of inspection — ORI or CI — each is a direct reflection of overall combat readiness of the unit. In the past, inspected units received separate and distinct inspections. Personnel were prepared both mentally and operationally and seemed to direct all available resources toward the achievement of outstanding performance. The new inspection concept is to perform a combined ORI/CI. During some recent inspections, the unfortunate tendency has been to relax and not sweat the "behind the fence" inspection because the ORI results were satisfactory. An unsatisfactory rating on either inspection will lower your capability status and could cause a serious void in our overall defense posture. DON'T YOU BE THE ONE TO SAY, "I CAN'T BELIEVE I BLEW THE WHOLE THING!"

Good luck on your next combined ORI/CI.

JAMES M. THOMAS, Colonel, USAF
Director, Operational Inspection.

DOWN and out

T-33, UNDETERMINED

It was a clear, crisp spring morning with light winds and no turbulence — a perfect day for flying. After making a few jokes about being target, the pilots of Snap 11 had preflighted their T-33 and prepared for takeoff. Their "clean" T-bird climbed quickly to the departure altitude and then, after reaching the target area, descended to 3,000 feet for the target run. It was going to be a routine mission.

The five F-102s scheduled to run against Snap 11 had flown a high altitude attack first, and would complete their high-low profile with an IR pass on the nonevasive low target. The Operations Officer had briefed the target to remain at 3,000 feet until the interceptors had a "Judy" and then descend to 1,000 feet for more realistic training. Snap 11 was on a northerly heading while ME-01 through 04 completed their passes, and then the T-bird turned to the south as GCI vectored ME-05 for his pass.

The pilot of ME-05 descended on his data link command and leveled at 2,500 feet. At this altitude GCI was having trouble keeping radio and radar contact, so his "dolly" indications were jumping in and out in range. ME-05 transmitted to the target that they would have to find each other without GCI help. The front seat pilot of the T-bird acknowledged this and began making clearing turns. This maneuver would give the F-102 pilot an easier target to see, and allow the T-bird pilots to look for the interceptor. When ME-05 first saw the target, the T-33 was in a 45 degree left bank; so he transmitted, "I've got you. Roll out." No one acknowledged this call. Instead, the T-bird rolled to the right past wings level and into a steep right turn. The nose of the aircraft dropped to the vertical position and Snap 11 did a split "S" into the trees, impacting on a northerly heading. Neither pilot attempted to eject.

When the investigating team reached the crash site, there was little evidence left intact. The aircraft hit the ground in a 60 degree dive at over 250 knots, and the resulting aircraft and grass fires burned a 25-acre area surrounding the impact spot. The extremely detailed analysis of the wreckage only served to rule out most of the possible causes.

Material tear down reports indicated that the engine was operating normally prior to the crash. At impact the rpm was 96%, the oil pressure 26 psi, and the fuel pressure was between 110 and 120 psi. Investigators found no evidence of an overheat condition or an inflight fire, and the turbine wheel and buckets were still intact. Materiel experts examined the flight controls and eliminated this system as a possible cause. The ailerons were in a neutral position and the elevator was trimmed for level flight at 260 knots. The pilots had extended the speed brakes prior to impact. All of the other systems also appeared to be operating normally.

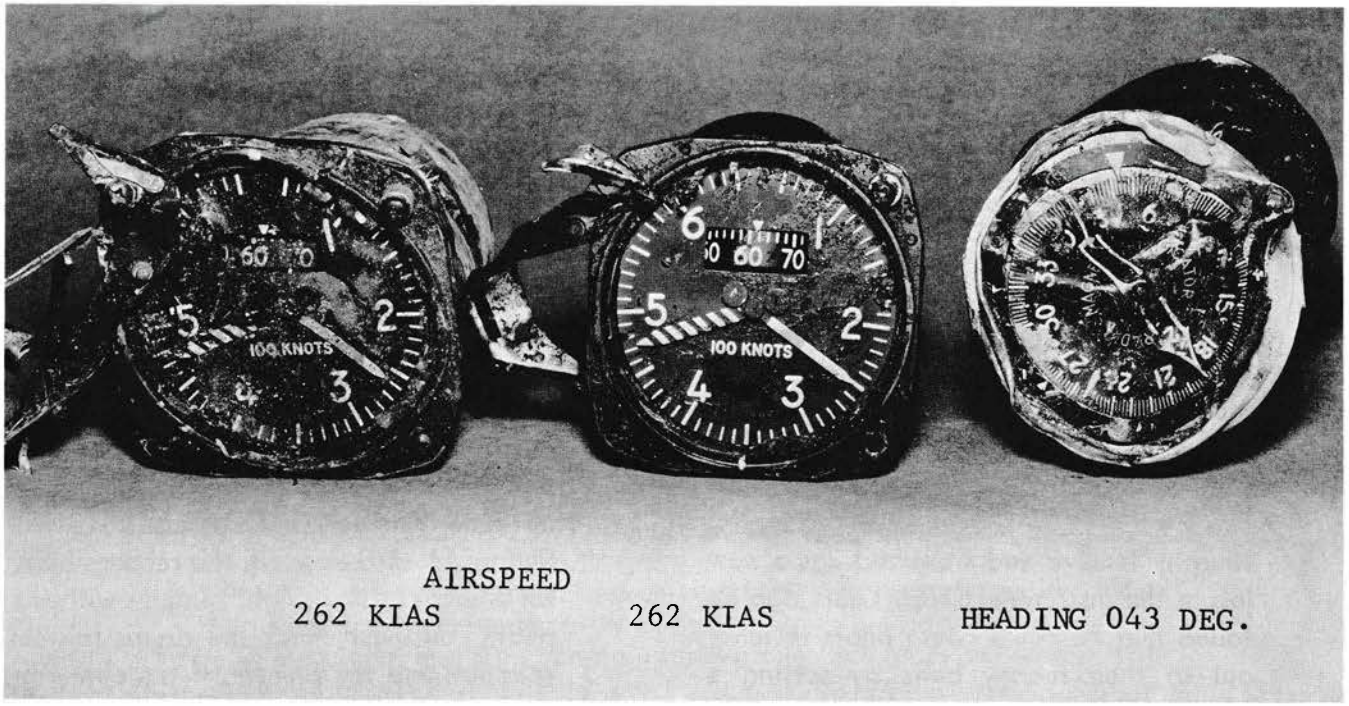
Medical authorities ruled out the possibility of both pilots being incapacitated at the same time. They checked the oxygen cart that had serviced the aircraft before takeoff, and their post-mortem examination eliminated carbon monoxide poisoning. X-rays of the front seat pilot's body indicated that he had been flying the aircraft when it crashed. The absence of foreign organic material in in the cockpit area and the fact that the windshield was found intact ruled out the possibility of a birdstrike.

Investigators examined the possibility of an inadvertent inflation of the life raft in the front cockpit. They found the pilot in the front seat would have had limited control over the aircraft because his head would have been forced down against the instrument panel restrict-

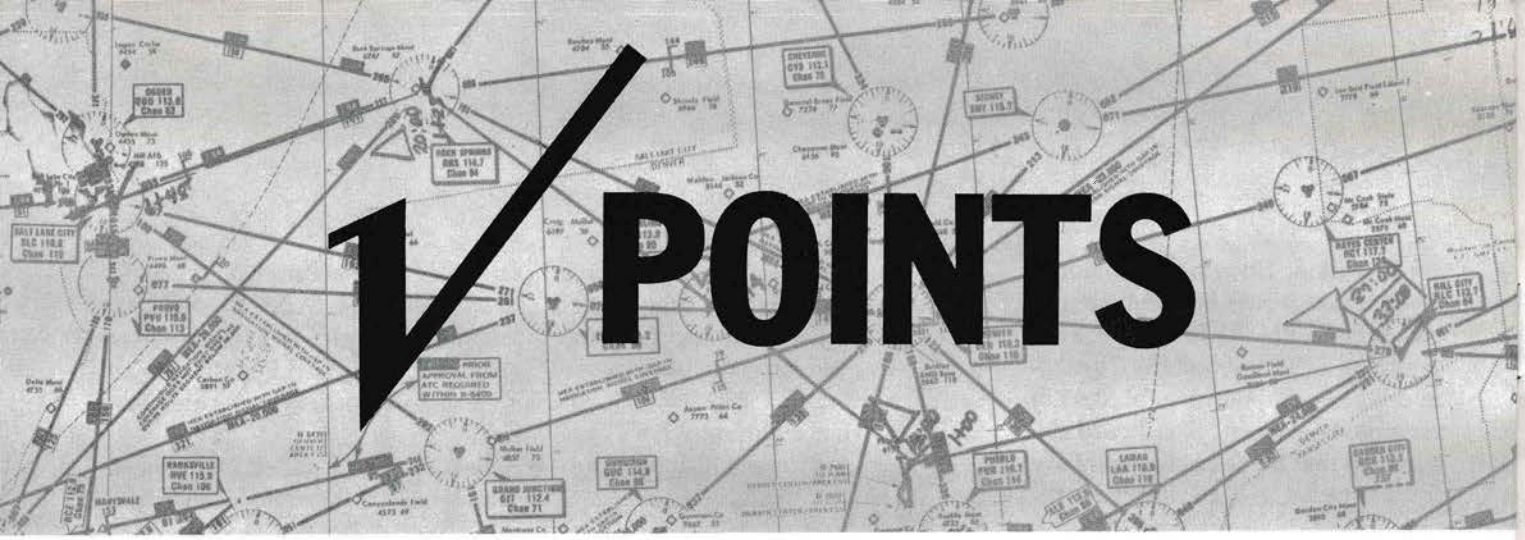
ing his vision. However, the pilot in the rear seat would have full control and vision. The T-33 in the accident had a "Dingy Stabber" installed on the stick, but the pilot had not attempted to use it. The board determined that the impact would have ripped the CO2 bottle from its fitting if the raft was inflated. Investigators found both inflation bottles in their pockets on the rafts. This cause, though possible, also seems improbable.

The accident board then turned, as in many accidents where the cause is undetermined, to the possibility of aircrew error. Since four interceptor pilots had completed passes on the target and the fifth pilot had witnessed the accident, the board had ample testimony to judge the crew's actions that day. They found no evidence of unauthorized maneuvers. Both of the pilots were well qualified and their backgrounds indicated a tendency to be conservative rather than reckless. However the board could not ignore this possibility. A witness on the ground thought he saw the aircraft perform a quick roll shortly before it hit the ground, but a roll from 45° left bank to 45° right bank might give that impression to someone at a distance. The pilots could have been rolling inverted to quickly descend to the final target altitude, but most pilots would shun this maneuver at such a low altitude. While looking back to find the interceptor, the pilot may have become preoccupied and let the nose drop. If he found himself in this position, he might have decided to pull the aircraft straight through. Speculation? Yes. Possible? Yes. Probable? Answer this last question yourself. Would you have been doing acrobatics or maximum performance maneuvers at this low altitude?

In this investigation the board considered 57 possible causes and eliminated all but five: inflight fire/explosion, pilot incapacitation, pilot distraction, inadvertent raft inflation, and pilot factor. Although they considered these five possible, they were not able to substantiate *any* of them with physical evidence or factual data. The board could not list any of these as the "most probable cause." Therefore, the question still remains: What killed two experienced pilots on a routine training mission? The answer: UNDETERMINED.



The T-bird rolled into a steep right turn followed by a split S. It hit the ground in a 60 degree dive at 250 knots. Accident investigators were unable to pinpoint the cause and labeled the accident undetermined. Neither pilot attempted to eject.



POINTS

We would sincerely appreciate your inputs mailed directly to:
The Editor, INTERCEPTOR, Hq ADC (SED), Ent AFB, CO 80912

If you're planning a cross-country trip, you had better spend a little extra time reading the IFR-Supplement. Effective 1 July 1972, the following bases are reducing their operating hours:

England AFB, LA
Holloman AFB, NM
Maxwell AFB, AL (Effective 1 April 1972)
Myrtle Beach AFB, SC
Richards-Gebaur AFB, MO
Shaw AFB, SC
Tyndall AFB, FL
Vandenberg AFB, CA

Many Air Training Command bases have used this system for years, and we can look for many more bases to join them in the future. Operating hours for these airfields are listed in the Aerodrome Remarks of the Enroute Supplement. "Let's see, if I subtract 6 hours from the Zulu time and add my . . . ." Good luck! (SED)

Murphy is alive and well, and has a new job in the instrument shop. Years ago he found that he could cause pilots to jump out of their money belts by setting a 10,000 foot error into altimeters with the turn of a screwdriver. Now, through diligent study, he has found a way to inadvertently crank an error into the new AAU-19/A servo-pneumatic, no-position-error, direct digital readout, "super-accurate" altimeter. Example: An aircraft is sitting at a field elevation of 6,172 feet (Peterson Field), but the 100-foot pointer is out of adjustment. Murphy calibrates (zeros) the pointer, but he turns it the wrong way. The result is a full turn of the dial and, as programmed, a rotation of the 1000-foot digit. The altitude readout is now either 5172 feet or 7172 feet. Then Murph completes the job by dialing in the correct field barometric pressure. Along comes Ol' Fearless Fighterjock with his 5 sec preflight and the accident scene is set. He sets the current altimeter setting into the window, checks to see that the pointer is close to 172 feet, and takes off with a 1000-foot error. Although the maintenance practice of rezeroing these altimeters while on board the aircraft is not recommended (see message 251515Z, Serious Hazard Report), the responsibility for the cockpit preflight remains with the pilot. You must check the drums (digital readout) and the pointer. If the altimeter doesn't read correctly on the ground, it isn't going to correct itself in the air. (SED)

Inflight turbulence can't always be identified by towering cumulus clouds, but it can hurt the unwary. More likely the ones hurt will not be the pilots flying the aircraft, but the trusting souls along for the ride. Within the Command we do a lot of flying that involves moving people from point to point and mission support work that employs the talents of the "boys in the back room" who operate the black boxes. In this regard we are as vulnerable as our domestic commercial airlines to turbulence caused injuries to nonflight crew personnel. The domestic carriers had thirteen nonfatal accidents last year that were caused by unexpected encounters with turbulence. Sixteen people sustained serious injury — none of whom were flying the planes. The aircraft commander is responsible for ensuring that he is as knowledgeable as possible about the weather he may encounter enroute and the conditions that may create these wind storms aloft. He is responsible for ensuring that seat belts are worn when unstable conditions can be expected. When in doubt, turn on the seat belt sign or otherwise direct all personnel to buckle up. The safest practice of course is to have everyone seated with his belt fastened. (AFSC Safety Management Newsletter)

Virtually all of us take drugs of some kind. However, we must always keep in mind the effects of the drugs we take. Some of our everyday drugs — like caffeine in coffee—produce few side effects and can be taken before or during flight. With others, we may have to be a little more careful. An individual doesn't have to be falling-down, knee-walking drunk to be under the influence of alcohol; likewise, you don't have to be glassy-eyed or on a trip to be under the influence of drugs. A little drowsiness, a slowing of physical reaction, a little confusion which produces an error in judgment: one of these at a critical time in flight can be disastrous. The total effect of a combination of drugs usually is more than the sum of their individual effects. A headache tablet, cold remedy, or tranquilizer might not bother you. But if you take them all together, you may easily get much more than you expect. This goes double if you are tired or upset and can be ten times worse if you add some alcohol to the mixture. Most of us take some drugs without a prescription and without a doctor's supervision, normally with no ill effects. But we should always know what we're taking and what it might do! (TIG Brief)

SAGAS SING THEIR SAD SATIRE

WITH SUGAR, PLEASE!

On a recent charter flight, the passengers had just settled back for the trip when the captain's voice, in an intimate tone, came over the intercom, directed to the young attractive stewardess in the galley:

"Hello, lover, how about some of your ever lovin' hot coffee and some of your ever lovin' lovin'?"

Blushing and embarrassed, the stewardess quickly hurried up the aisle to inform him his cute message had been heard by the passengers, when a male passenger observed loudly, "You forgot the coffee!"

an ounce of PREVENTION

THE GOLDEN RULE . . . DO UNTO OTHERS . . . .

Time was, not too long ago, when the only lieutenants you'd ever find in an ADC Fighter Squadron would be a "brown bar" or two over in Maintenance. In some squadrons the experience level was so high that you'd almost have to be a senior captain to get on the schedule. But it's not that way nowadays and maybe in a way it's a good thing. Oh, we still have plenty of experienced pilots in our flying units, but not *everybody* in the the squadron is an "Old Head" anymore. Young ex-GIBs and guys right out of UPT are climbing into our "sixes" and T-birds and flying solo for the first time since pilot training. No one is knocking these young guys' ability. The day we hand them that set of silver wings, we dub them capable (if not then qualified) to fly anything and everything in our inventory. What we are saying is that, until they get some experience under their belts, we can't go around treating them like they are "Old Heads." And we can't run our briefings like everybody in the room has a thousand hours in the bird and two years in the squadron. It means that we really have to delve into the 51-series manuals that cover briefings to insure that we don't skip some important facets of the mission that the new guy doesn't know. "That's the way we've always done it" doesn't mean much to the new guy who never "has."

You flying supervisors are responsible to see that these new pilots get the information they need, properly presented in its proper perspective. From that information they can develop the background to help them gain the experience. When you can, schedule them to fly with your more experienced people so they can see practical applications on how it's done. It is sometimes effective to schedule two new pilots together — it can build confidence. But you have to remember that they *are* new and the mission, weather, and other limiting factors shouldn't be more than they can safely and *confidently* handle. There is nothing you need less than a guy with low time who has lost his confidence because he got in over his head and scared himself. So bring him along slowly and don't ask him to hang it out until it's necessary — and he's ready.

In addition, it's up to all the experienced guys in the squadron who "know the territory" to take the young jock aside and tell him about things peculiar to the local area — things like how the weather is likely to go down in a couple of hours after the wind shifts to the southeast; or that there is often a flock of birds over that dump off the northwest runway.

Remember the time you pressed too long on that last tail chase and felt that you were "lucky" to get back before you ran out of fuel. Maybe a little self-effacing description of that incident might cause the new guy not to have to depend on luck when he is faced with a similar decision. Remember, the young pilot in the squadron looks up to you experienced jocks. Make sure that if he emulates you, he is able to do it within the bounds of judgment and propriety. Every new guy is going to try to prove himself until he is accepted by you experienced pilots. Let him know that the way to do that is with judgment, brains, maturity, and by following the rules.

THE WAY THE BALL Bounces

ACCIDENT RATE

	ADC	ANG
1 Jan – 31 May 1972	3.6	13.6

MAJOR ALL AIRCRAFT

ON TOP OF THE HEAP

MO	ADC	MO	ADC	MO	ANG
56	49 FIS Griffiss	39	4713 DSES Otis	54	158 Ftr Gp Burlington
50	57 FIS Keflavik	38	5 FIS Minot	49	163 Ftr Gp Ontario
45	4650 CSS Richards/ Gebaur	32	2 Fis Wurtsmith	44	115 Ftr Gp Truax
44	552 AEW&C McClellan	28	95 FIS Dover	31	141 Ftr Gp Spokane

ACCIDENT FREE

CUMULATIVE RATE

	ADC	ANG
JET	3.2	14.6
CONV	4.0	0.0

BOX SCORE

ACCIDENTS FOR MAY / CUM TOTAL

UNITS DIRECTLY UNDER HQ ADC

	20 AD	21 AD	23 AD	24 AD	25 AD	26 AD	ADWC	552	4600	4650	4677 4713	ANG
F-101												3
F-102												1
F-106												
T-33							1					1
B-57											1 1	
EC-121												
CONV									1			

RATE = MAJOR ACCIDENTS PER 100,000 FLYING HOURS ALL RATES ESTIMATED

MINOR ACCIDENTS THIS PERIOD — 0
MINOR ACCIDENTS CUMULATIVE — 2

Safety Awards 1971

MISSILE SAFETY PLAQUE

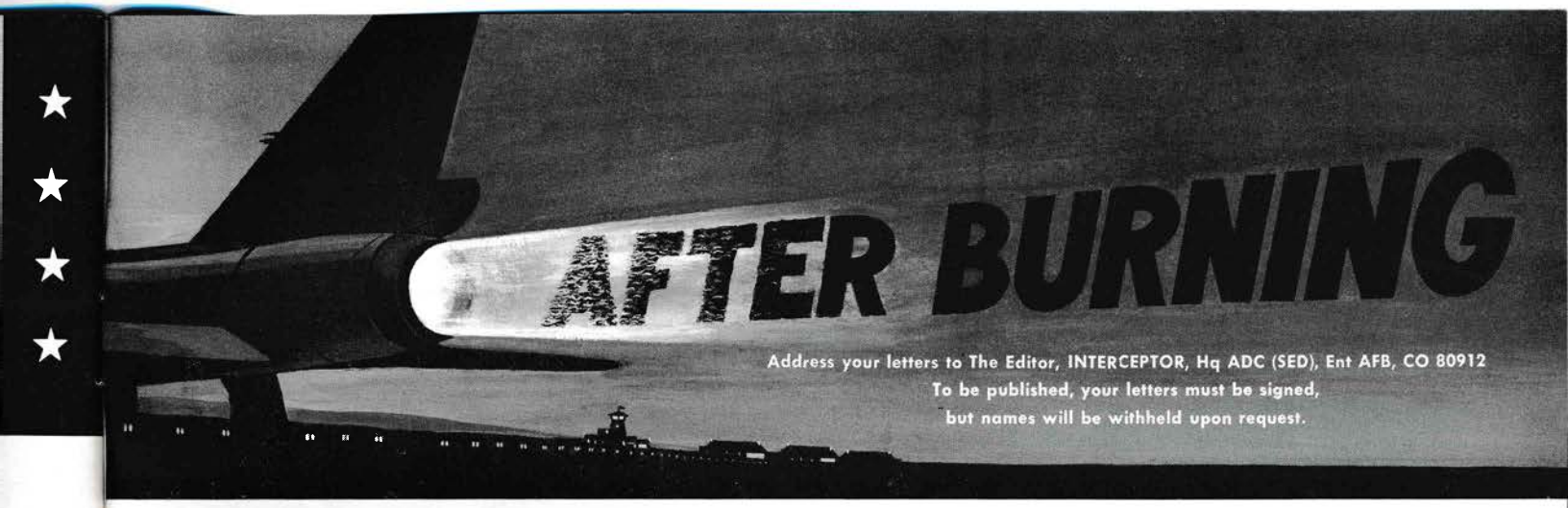
87 Fighter Interceptor Squadron, K. I. Sawyer AFB, MI
22 Air Defense Missile Squadron, Langley AFB, VA
10 Aerospace Defense Squadron, Vandenberg, AFB, CA
119 Fighter Group (ANG), Fargo, ND

NUCLEAR SAFETY PLAQUE

460 Fighter Interceptor Squadron, Grand Forks AFB, ND
87 Fighter Interceptor Squadron, K. I. Sawyer AFB, MI

EXPLOSIVES SAFETY PLAQUE

Air Defense Weapons Center, Tyndall AFB, FL



BLUE ZOO

Those of us who are in a position to read INTERCEPTOR enjoy it from cover to cover.

It is refreshing to read serious, informative articles written in a manner which interjects a bit of humor at times to prevent it from becoming boring reading.

One point in particular I wish to bring up is the "Blue Zoo" which is no longer included. To emphasize that everyone enjoys it, I am attaching a list of names of people who would like to see it back. (100% of everyone I asked!)

Another enjoyable feature is "Spotlight." Don't let anyone take that out.

Eleanor L. Gilbert
3533 West 1300 North
West Point, Utah
(+ list of 44 names)

***We're trying to come up with some new captions for the old Blue Zoo pictures. For starters we'll send you the pictures and let you and the forty four others who signed your letter come up with the humor.**

CLOSE COUNTS IN HORSESHOES

Just finished reading "Throw a Nickel on the Grass" (INTERCEPTOR, May '72) and I think that you could use a nickel yourselves. None of the answers you listed for question #4 is correct. Choice "C" is close (but as we all know, close only counts in horseshoes and hand grenades) but the a/s on final should be 170 KIAS (basic speed is 130 K + 10 K for each flashlight flash). Other than that the article was great. Keep up the good work!

Capt Michael J. Karaffa
FCF Pilot 3650 FMS
Webb AFB, Texas

***Congratulations, Captain Karaffa, you are one of the few who scored a perfect score on our quiz. We followed the example set by THE PROFESSIONAL APPROACH and put in one question to separate the men from the boys. The correct answer to #4 was: "d. None of the above." We also fired our (boy) Research Editor who only scored 90% on the quiz. (See Job Opportunity, May issue.)**

FROM A MAST UNIT

The 54th Medical Detachment has recently been activated here at Fort Lewis, and has been designated as a MAST (Military Assistance to Safety and Traffic) unit.

Utilizing six UH-1H helicopters and fourteen aviators, we have as a primary mission the medical evacuation of civilians involved in accidents and injuries here in western Washington.

Having knowledge of your publication through the Aviation Safety Officer's Course at the University of Southern California, it is requested that our unit be placed on your distribution list for the INTERCEPTOR.

1Lt Peter L. Leonard
Aviation Safety Officer
54 Medical Det (RA)
Fort Lewis, Washington

***We've mustered some extra copies and they should report in next month.**

WRONG BARRIER

While I was in USAFE associated with **Airscoop,** we battered our heads to no avail against the barrier prohibiting printing pictures of pretty girls. More power to your bosses and especially to you who dreamed up a way to convince the Admin wheels that pretty girls can sell safety — that those pictures are pertinent to the text. I'm convinced you've taken one giant step forward for safety.

Major James T. Bales, Jr.
Chief, Flight Safety Br
4500 Air Base Wing
Langley AFB, Virginia

***The INTERCEPTOR always tries to keep pace with contemporary methods of communication. Thanks for your kind words!**

THE 112TH'S RECORD

I would like a copy of the March '72 issue of the INTERCEPTOR to add the article about our 50,000 and 100,000 hour safety record to our Group history. We aircraft maintenance mechs find INTERCEPTOR most informative and Carolyn Moen has made it more so.

I propose that she make a swing around the ADC AF and ANG fighter bases. I think she would be warmly received by the 156th "Keystone Kops" of Greater Pittsburgh Airport.

TSgt Stanley J. Krantz
112 Fighter Group (PAANG)
Greater Pittsburgh Aprt, Pa

***Since we have some extra copies of the INTERCEPTOR, we'll send you two. But, because we only have one Carolyn, we're going to keep her for ourselves.**

AN OSCAR, YET!

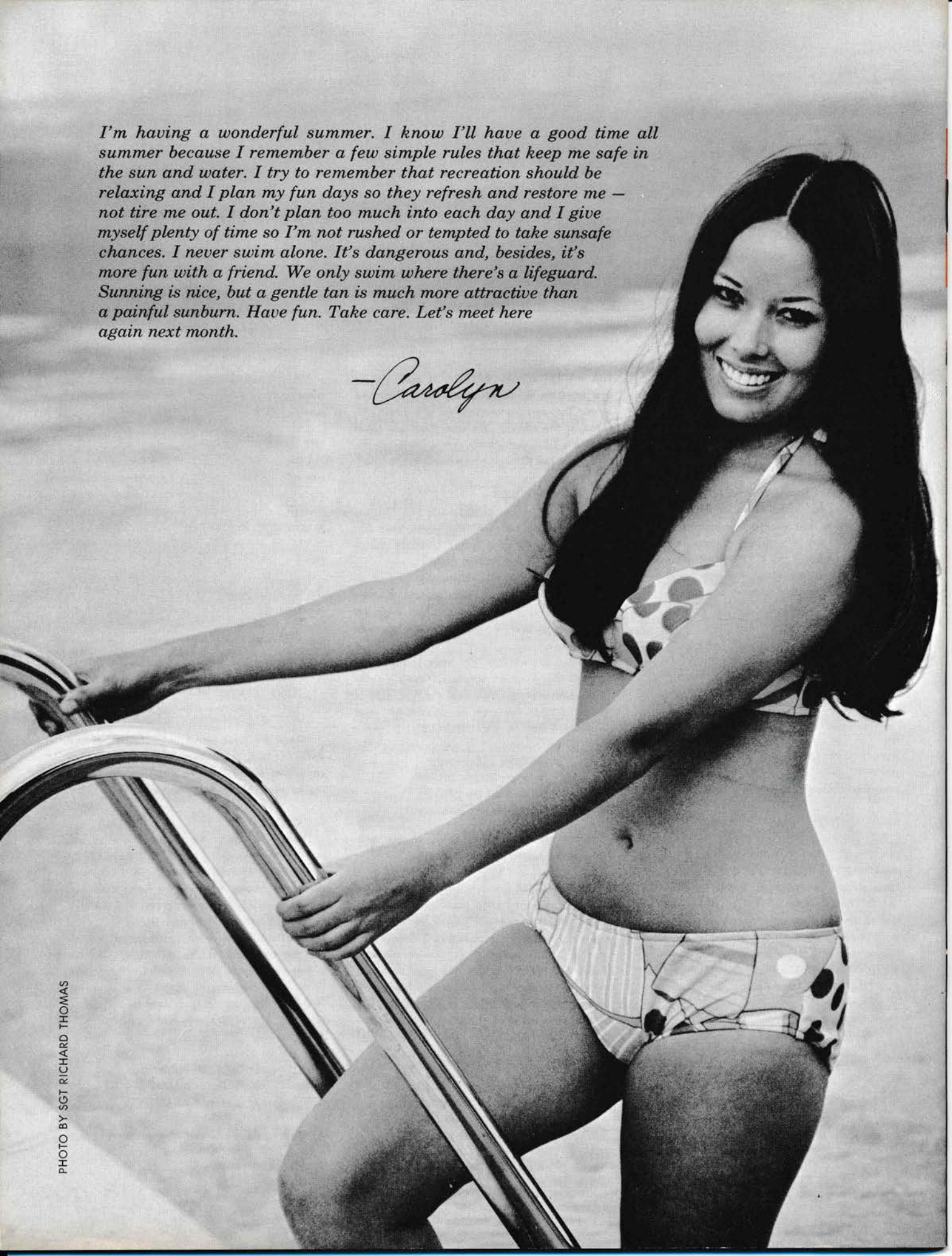
There's no Oscar for safety publications, but if there was, the staff of INTERCEPTOR would win it. Your magazine is head and shoulders above the rest in form, contents, humor, readability, and promotion of the gospel (of safety). Congrats Guys!

Occasionally I'm able to midnight requisition an old copy of the INTERCEPTOR from a dog-eared base OPS collection. Though I'm in the ALO business in USAFE after a career in ADC, I find articles pertinent to the operation too. Please put my office on your subscription list.

Lt Col A. H. Bruder
Hq V Corps (ALO G-3)
APO New York 09079

***How could we refuse after all that!**

*U.S. GOVERNMENT PRINTING OFFICE: 1972-784-035/12



I'm having a wonderful summer. I know I'll have a good time all summer because I remember a few simple rules that keep me safe in the sun and water. I try to remember that recreation should be relaxing and I plan my fun days so they refresh and restore me — not tire me out. I don't plan too much into each day and I give myself plenty of time so I'm not rushed or tempted to take sunsafe chances. I never swim alone. It's dangerous and, besides, it's more fun with a friend. We only swim where there's a lifeguard. Sunning is nice, but a gentle tan is much more attractive than a painful sunburn. Have fun. Take care. Let's meet here again next month.

—Carolyn

PHOTO BY SGT RICHARD THOMAS