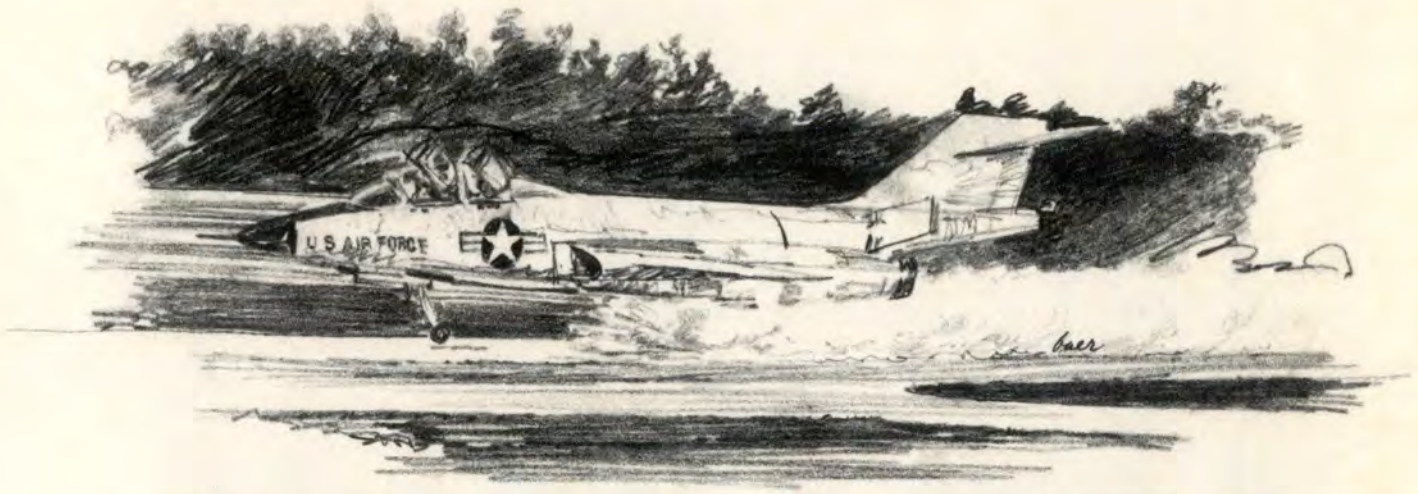
flying

SAFETY

DECEMBER 1988

Enjoy the holidays and have a safe and successful New Year.



THERE I WAS

■ Back in the old days when alert crews were scrambled with "hot birds" to fly training intercepts, strange things sometimes happened. On one such mission, my flight of two F-101Bs was scrambled. We made a formation takeoff and when I raised the gear, it made a different sounding "thunk." There were no warning lights, and everything seemed OK so we continued the mission as briefed.

The flight was normal until we returned for a formation approach and landing. When I dropped the gear on GCA final, I got a red light on the nose gear. I advised the wingman and he moved out. I recycled the gear but the nose gear still indicated unsafe. We then tried the emergency system, but it didn't help.

Since the fuel was approaching "pucker time," we decided to try to jettison the GARS (missiles) and land on the main gear and the nose of the aircraft. When things go bad, they go. The missiles could not be jettisoned with the manual or emergency system or fired off hot. (The gear had dropped down far enough to activate the ground safety switch that prohibited the missiles from being jettisoned or fired.)

After discussing the situation with the RIO (radar intercept officer), operations, and the "man upstairs," we decided to go ahead and land on the main gear and nose. Coming down final, I told "Old Freddie" (RIO) to open the canopy once the nose was on the runway. As soon as the bird stopped, he was to go over the side and get as far away as possible just in case the bird caught fire and the missiles went off.

The fire department had laid down a strip of foam, and we hit it right on the money. The canopy was full open as the bird stopped. Visions of the Air Defense Award for Safety for a job well done were racing through my head.

In the heat of the action, I decided to release the seat pack and go over the side with my chute on. I reached for the emergency seat pack release and things went to pot in a hurry. The emergency canopy release was very close to the seat pack release and must have been spring loaded to the jettison position. I don't even remember touching it when, "bang," the canopy fired.

It went straight up and straight back down and hit the trailing edge of the left wing flap. Since my first plan had failed, I released my chute and helmet and went over the side and ran. Looking back, I saw I wasn't the only one who had problems. The RIO's helmet was hanging over the side by the oxygen hose. Luckily, the hose stretched or he would have been hanging by his head. He was 5 feet, 3 inches or less and his feet wouldn't have touched the ground. So in the heat of excitement, the old adage "Haste makes waste" came true in this case.

The malfunction was caused by the nose gear scissors breaking as the gear was retracted. When the gear was dropped on final, the linkage jammed into the side of the nose wheel well. The gear could not be retracted or lowered. The bird had a tank on it, and those wonderful guys in maintenance were able to patch up the sheet metal and replace the nose cone, pitot tube, tank, and canopy. The bird flew the next day! ■

UNITED STATES AIR FORCE

flying

SAFETY MAGAZINE

AIR FORCE SPECIAL PUBLICATION 127-2 | DECEMBER 1988 | VOLUME 44, NUMBER 12

page 2

page 8

page 12

SPECIAL FEATURES

REGULAR FEATURES

MSgt Dean G. Hoffman
(See page 7)

CONTRIBUTIONS

Contributions are welcome as are comments and criticism. No payments can be made for manuscripts submitted for publication. Address all correspondence to Editor, *Flying Safety* magazine, Air Force Inspection and Safety Center, Norton Air Force Base, California 92409-7001. The Editor reserves the right to make any editorial changes in manuscripts which he believes will improve the material without altering the intended meaning.

DEPARTMENT OF THE AIR FORCE • THE INSPECTOR GENERAL, OSAF

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HOLIDAY DISTRACTIONS

MAJOR PHILLIP T. SIMPSON
Directorate of Aerospace Safety

■ The holiday season means many things to many people. For most of us, the time will be spent celebrating with family and friends either at home or on the road somewhere. Of course, the excitement that is generated at this time of year begins long before you open up that first present. It seems that the stores try to coax us into the Christmas spirit earlier and earlier every year. But that's OK, because Christmas is a time people really enjoy, and they

are generally eager to get into the Christmas spirit.

Of course, being in the Christmas spirit doesn't mean we can't do our job, too, but it does require more and more of our time and energy as the big day draws closer. Shopping for presents, planning for parties, getting the decorations ready, and sending out a zillion Christmas cards are only some of the many distractions aircrew members face this time of year.

Yes, this problem does exist during other holidays throughout the year, but only during Christmas do we find such a lengthy season filled with such personal significance. With all these things going on, it can be tough keeping your mind on work while you're trying to remember your wife's scarf size. After a while, it may seem that Christmas is our full-time job, and flying is the distraction. The problem here, of course, is that a poorly planned shopping sortie doesn't carry the same penalty that a poorly planned flying sortie can.

Being the professional crewmembers that we are, however, we can completely disregard all those distractions and concentrate totally on the job at hand. Well, maybe not completely. Even if we could, we would still be affected by other people who have Christmas on their minds, too. Air traffic controllers, engine specialists, weather forecasters, and the last chance crews are only a few of the people we count on to help us fly safely. They have to buy presents, prepare holiday feasts, deal with in-laws, and find a parking space at the mall just like we do. A mistake on their part can be just as deadly as one on ours.

Even though flying activities are generally at a minimum during the Christmas holidays, there are still sorties to be flown. While many people take Christmas leave, someone has to stay and fly those sorties as well as answer the phones. The distractions are at a fever pitch during the few days before Christmas, and the people left behind to do the work are probably wishing they were someplace else.

Even if there is no scheduled flying, it's a pretty sure bet that a functional check flight will have to be flown "today," and somebody really will be the only one available to fly. Sound familiar? It should, since most of us have been down that road before. This type of no-notice duty can be even more disruptive around Christmas since we are probably busy with our last-minute preparations.

So what's the point here? Well, we just need to recognize that around this time of year, there are lots of things on our minds besides flying. Use the self-discipline and good habit patterns that you have developed throughout your flying career. Follow the rules as usual, and don't let your holiday enthusiasm override your common sense. Understand that Christmas can also be a very stressful and depressing time for some people, and flying may be the last thing on their minds. Think about these things while you are flying this holiday season. Pay attention, fly safely, and have a Merry Christmas! ■

Christmas shopping can be either a joy or a drag. Whether we are excited by the season, or depressed, we can't be distracted. We still have to make sure we complete our tasks safely.

The holiday season is a time when friends gather to celebrate and enjoy the festive mood. This is good as long as we don't let it distract us from our primary task — safe flying.

MSgt Dean G. Hoffman

(See page 7)

GREGG A. MONACO

■ "Beautiful, gorgeous day!" thought Major Steve Canard. It was the type of day you wished you could bottle and use at a later date. The sunlight sparkled off the air itself. Yes, this was a perfect day to fly. The fact that he was single-ship and solo gave Canard a sense of enthusiasm and confidence.

His digital ETE to Big Town AFB showed 1 hour. Beneath his shimmering jet, a meandering river twisted its way among the convoluted hills. Checking his chart, Canard spotted Briar Patch Airport, a civilian airfield, runway 6,000 X 100 and no control tower. Canard was due a visual approach and figured with enough coordination, Big Town approach control would clear him for a visual low approach into Briar Patch, followed by an MLS option into Big Town AFB.

Canard felt pleased with himself on his instinctive planning to maximize his training and yet comply with MAJCOM and local directives. When Canard requested clearance for his flight plan amendment, he got it ASAP. Briar Patch was a scant 45 NM away. At 240 KIAS, that would equate to 12 minutes, including the 8,000-feet altitude loss and speed reduction.

Big Town approach advised him of several targets in the area of Briar Patch Airport, and he was in the see-and-avoid mode. However, unknown to Steve Canard, not a single general aviation aircraft was monitoring Big Town approach. To complicate matters, none of the general aviation aircraft were equipped with UHF radio. Also unknown to Canard was the popularity of Briar Patch Airport. The airport has a superb fly-in restaurant. Civilian pilots fly out of their way to dine here. That added to the air traffic from the fixed based operator and numerous pilots departing Big Town Metro for practice at this uncontrolled field.

The Approach

Canard deployed his speed brakes, dropped the gear, set his flaps, and trimmed for 140 KIAS. "Gosh, it's a beautiful day." The only traffic in sight was on a left closed downwind at Briar Patch. He would do a straight-in low approach to 100 feet AGL and depart on runway heading for the MLS pickup.

Canard called approach with a gear check at about 7 miles from the airport and was recleared for the approach with an advisory of the traf-

20/20 FORESIGHT

fic around Briar Patch. The lack of instrument approaches and VASI would give him a refreshing challenge. Although the sun was above and behind him, Canard verified strobes and landing lights "on" to help identify his position.

All of a sudden, at half a mile on final and at 400 feet AGL, Canard spotted a base leg general aviation aircraft coming at him. No problem. Lateral separation and speed would take care of any midair collision potential. The general aviation pilot did turn base early, but the margin of safety was never in doubt.

Complications

When Canard walked into Big Town AFB Base Ops, he was met by an inquisitive and agitated Lt Colonel Road. The colonel inquired about his activity at Briar Patch Airport earlier that day. Major Canard freely admitted his visual low approach and said it complied with all directives of his organization. Lt Colonel Road then related his concerns based on a telephone call from Ms Amelia Empennage, an FAA accident prevention counselor (APC) doing recreational flying out of Briar Patch.

She was in the base leg aircraft Canard whizzed by. She was irate over not receiving any radio call over VHF common traffic advisory frequency (CTAF). She also expressed her concern over a straight-in approach by a camouflaged, high speed, military jet and the intrusion by the military into a civilian airfield. Just as Major Canard relayed he had all traffic in sight and separated, transient alert called him away for 30 minutes on a fueling question.

Hazardous Air Traffic Report (HATR)

Upon his return to base ops, Lt Colonel Road thrust a HATR into Major Canard's hands detailing the Briar Patch incident. The HATR concluded with a strong recommendation for punitive action. At about this time, Captain C. U. Tallyho, Big Town AFB flight safety officer, walked into Base Ops on his normal rounds. Road and Canard immediately confronted Tallyho. Captain Tallyho couldn't be more pleased. Tallyho lived aviation, both as a military and civilian IP. Moreover, he was also an APC in the civilian flying community. He read the HATR and carefully listened to the colonel and major. He then asked a few questions.

No military or civilian flight rules were violated. In addition, Captain

continued

Tallyho carefully explained that HATRs are not punitive instruments. Rather, HATRs, in keeping with safety philosophy, are for mishap prevention. Captain Tallyho took Ms Empennage's phone number and the HATR form. Captain Tallyho went on to explain what makes the civilian pilot tick.

The Civilian Pilot

The civilian pilot is a motivated individual who receives flight training which meets FAA standards. The civilian pilot works for his or her ratings at an individual pace from a tailored syllabus. Although the civilian pilot's ground school does not have the depth and detail of the military program, it does cover the essential facets of flying.

As for medical factors, the civilian takes a biannual physical and visits the medical examiner at his or her own expense. Other than renewing the medical, the civilian pilot is left to his or her discretion for medical care.

Civilian pilots are concerned about safe flying and air discipline. However, their training and, hence, experience come from their own out-of-pocket cashflows. They do not get the simulators or the number of intense hours in the aircraft itself that their military counterparts do. They also fly aircraft with simple systems. These systems do not have the reliability, redundancy, or accuracy of what we in the military take for granted.

The Civilian/Military Mix

The VHF civilian radios are not compatible with UHF radios, especially in an uncontrolled environment. However, UHF 255.4 is common to every Flight Service Station (FSS) in the CONUS. By planning a visual approach into civilian airfields with an FSS on the field, the FSS radio operator can relay intentions and issue advisories for both the military and civilian aviator. Many uncontrolled fields about Big Town have an FSS on site. These airfields would make better choices than Briar Patch for visual low approach training. Use of an FSS also uses the "system" to keep all pilots in the uncontrolled environment advised and informed so there are minimal surprises on final and so pilots can plan ahead. Captain Tallyho pointed to many such airfields around Big Town.

Solutions

Lt Colonel Road offered to update his local wall charts with FSS information for transient aircrews. Major Canard realized that well-orchestrated plans sometimes have important gaps. Captain Tallyho contacted both Ms Empennage and the safety office at Major Canard's home station.

Everyone was lucky on this one — no fatalities, injuries, or bent aircraft. It also showed that safety is more than following regs and keeping eyeballs outside the cockpit. Safety is a viable, proactive, 20/20 foresight discipline which requires all of us — military and civilian, aviator and non-aviator — working together for a common goal. The mission must be done, but let it be accomplished relative to the whole and not the fractions. ■

Thanks to a typical, omnipotent flight safety officer, an explosive situation was defused. An angry civilian pilot, an angry base operations officer, and an eager fighter pilot were quietly educated and guided to a mutual understanding and peaceful resolution.

The Great "Dumb Caption Contest Thing"
WINNER FROM SEPTEMBER

May we have the envelope please . . . and our very first SUPER FANTASTIC WINNER whose prize winning caption appears above is . . . (trumpets and drum roll):

MSgt Dean G. Hoffman
57 EMS/MAEC
Nellis AFB, Nevada

The judges are still having fist fights over the judging outcome. Here is their list of other captions they think are almost as dumb.

HONORABLE MENTIONS

- **You know the FOD policy — You *lost* it; you *find* it!**
  SSgt James M. DeWitt • 17th MAS • Charleston AFB, SC
  (see his letter at right)
- **A mind is a terrible thing to waste — as FOD.**
  Capt Charles T. Flint, Jr. • AFISC/SEWM • Norton AFB, CA
- **Will I have to file a lost fool, I mean *Tool* report for his head?**
  SrA Shawn Powers • 388 EMS/MAED • Hill AFB, UT
- **Hey Joe, I found your hat!**
  Sgt Geoffrey H. Poole • Det 2, 4444 Ops Sqdn • Cannon AFB, NM
- **Oh Boy! That's going to leave a mark!**
  SSgt Henry R. Harlow • 907 CAMS • Rickenbacker ANGB, OH
- **Don't Worry, TSgt Jones . . . FOD damage is minimal. We had an immediate compressor stall the moment Airman Nealy's head entered the intake, causing a perfect vacuum!!**
  Capt David K. Pelaez • ASD/SXP • Wright-Patterson AFB, OH
- **Geez, Fred. You really meant it when you said you had a head for engines!**
  Terry L. Turner • 185 TFG • Iowa ANG • Sioux City, IA

THANK YOU FOR YOUR SUPPORT!

We received nearly 150 entries for our first contest. We learned many people were able to beat us in writing dumb captions. So many, in fact, that our panel of experts had a very difficult time selecting the winner. Many rounds of voting were necessary before we finally chose the caption on the left side of this page. Congratulations, Sergeant Hoffman. Your cheap little prize is in the mail.

We have printed some of the most popular captions as honorable mentions. One enterprising individual also sent us captions for the front cover. We have included them below along with some of the interesting letters we received.

This contest just shows you can have fun while promoting safety. Keep those entries coming.

LETTERS TO THE DUMB CAPTION EDITOR

Dear Editor,

Here's my "Dumb Caption" entry. I have to admit I was motivated by lust for cheap little prizes and the possibility of seeing my name in print. My dear old mom is still waiting for her boy to make it big in the literary world and this is my (and your) opportunity to make her proud.

James M. DeWitt

Be proud, Mom. See your son's entry under the honorable mentions. Ed

Dear Editor,

Recently, one of the airmen assigned to our armament systems branch, of which I am OIC, decided to have an in-house contest for your caption contest. The winner would receive a one day pass and the fame of having his caption in your magazine. The branch voted on all submitted entries and picked a winner. The three finalists were:

(1) You could lose your head over a little FOD.
(2) Will I have to file a lost fool, I mean *Tool* report for his head?
(3) OK, you guys push and I'll go tell the pilot when to pop the clutch.

Paul R. Wood, 2Lt, USAF

What a great idea! Thanks for your interest and for sharing your unit's contest with us. Ed

Dear Editor,

OK, guys, you asked for it, so here it is. Just for kicks, I've added your front cover as well. Now I've got you covered! (More dumb humor.)

Have fun with your Dumb Caption Contest . . . I did!

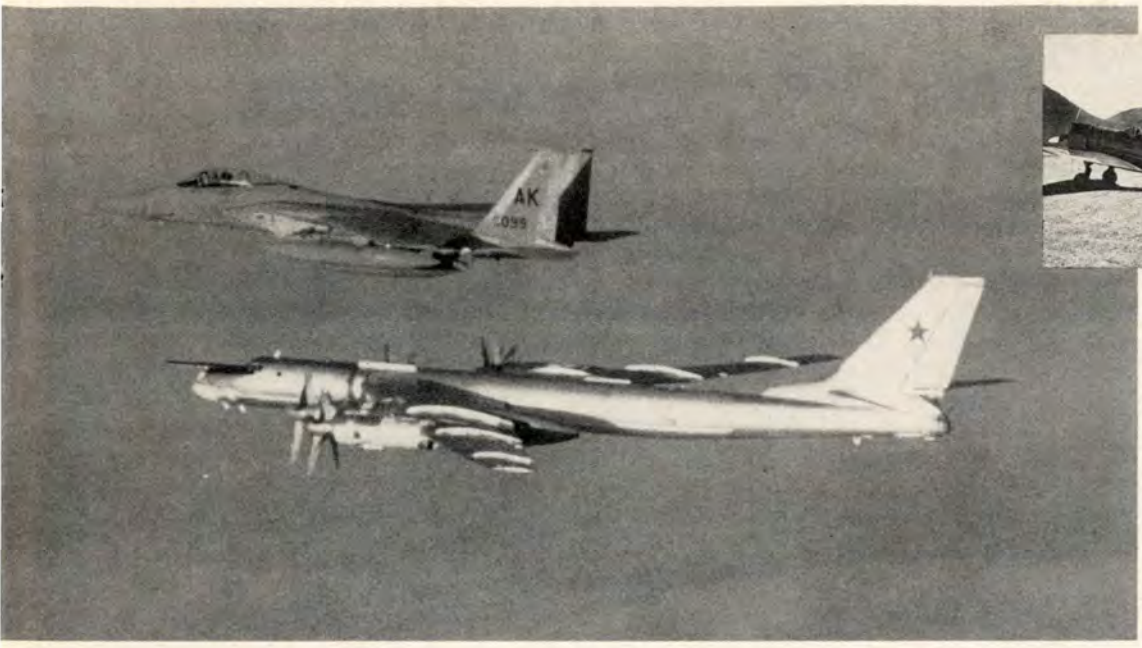
Dorothy A. Maher

Thanks for your full coverage of the subject. Sorry you didn't win our cheap little prize, but we're including your front cover captions for all to enjoy. Now you're at least famous, if not rich. Ed

AAC IS ON TOP!

The availability of up to 15 KC-135 tankers is an important new element on top. These aircraft provide aerial refueling support that is critical to AAC's operations.

The "Davis Building," named for Col Everett S. Davis, Father of AAC, houses many headquarters staff members.



Our Alaskan forces were ready in 1941 with the P-36A Hawk. It was flown by the first operational fighter group — the 18th Pursuit Squadron. And, AAC is ready now to meet a growing Soviet threat with modern, longer range F-15s, flown by the 21st Tactical Fighter Wing.

"Alaska is the most strategic place in the world for aircraft . . . I believe that in the future, he who holds Alaska will hold the world . . ." — Aviation Pioneer General Billy Mitchell

PEGGY E. HODGE
Assistant Editor

■ Alaska's military significance and strategic location have been recognized for many years. It is a key player in the defense of the U.S. Alaska's importance has grown over the last 3 years as the Soviet Union places greater emphasis on long-range bombers. Our military forces in Alaska hold the first line of defense against this threat.

Let's take a close look at this problem of Soviet buildup. And then at the solution — the Alaskan Air Command (AAC), which, this month, commemorates 47 years in Alaska and is, indeed, on top of protecting our resources and meeting this critical challenge.

The Problem

Soviet Buildup Overall Soviet production of military equipment has remained at a high level since 1980. The Soviet Union accounts for nearly one-half of the world's output of military materiel. They commit 15 to 17 percent of their gross national product to supporting a military buildup.

In particular, current Soviet doctrine places emphasis on new long-range bombers, primarily the BEAR H and BLACKJACK aircraft. These bombers are capable of flying over the Arctic and launching cruise missile attacks against Canada and the U.S. The current Soviet intercontinental bomber force is more flexible and survivable than it has ever been.

Prior to the recent introduction of long-range cruise missiles, Soviet bombers would have had to penetrate Canadian or U.S. airspace to launch their attacks. Now the BEAR H can launch its long-range missiles from well offshore and still hit targets in North America.

The BLACKJACK, when operational, can be expected to engage in similar operations as the BEAR bomber. It is the world's largest and heaviest bomber. It is designed to carry bombs and air-launched cruise missiles. The BLACKJACK can cruise subsonically over long ranges, perform high-altitude supersonic dash, and attack using low-altitude, high subsonic penetration maneuvers.

Soviet Activity As well as an increase in Soviet military strength, we have also seen an increase in Soviet bomber activity very near Alaska. AAC fighters intercepted more than 30 Soviet aircraft near Alaskan airspace in 1985. These interceptions marked the first time Soviet BEAR G and H bombers (cruise missile carriers) were intercepted by U.S. aircraft off the coast of Alaska.

AAC's F-15 intercepts of Soviet bombers have dramatically increased in the last couple of years. In 1986, 34 aircraft were intercepted; 56 aircraft in 1987, and as of 21 September 1988, 41 aircraft.

Most of these Soviet launches are designed to train their aircrews, test our defenses, and assert their power in this region. These missions may approach as close as 50 miles off the Alaska coast without violating U.S. airspace.

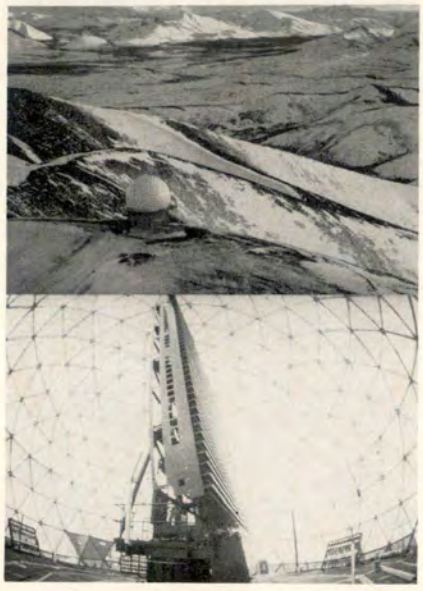
It is this buildup, activity, and proximity that is AAC's reason for existence. Let's look now at AAC — our solution to this threat.

The Solution

During the early 1980s, modernization of AAC's air defense system was a top goal. This involved the in-

continued

The E-3A AWACS' extensive radar surveillance capability, combined with minimally attended ground-based radars, provide Alaska a highly automated air defense system.



Maintaining aircraft in extreme cold weather conditions is always tough — it's tough on the aircraft, equipment, and especially, the people. One of the many hazards is the cold, wet, slippery flight line that demands special attention from everyone.

AAC IS ON TOP!

continued

The Alaskan Region Operations Control Center consolidates radar data and provides nearly instantaneous transfer of information to the North American Aerospace Defense Command.

stallation of the Alaskan Region Operations Control Center (ROCC), the AN/FPS-117 Minimally Attended Radar, and an increase in various fighter aircraft which have marked our necessary growing defense.

ROCC and New Radar Construction of the Alaskan ROCC was begun in 1980. It achieved full operational capability on 15 September 1983. All radar data is transmitted to the ROCC from 13 long-range radar sites via a commercially owned satellite communications system.

When radar detects an unknown aircraft, the ROCC contacts the Federal Aviation Administration to determine if a flight plan has been filed. If the FAA cannot account for the aircraft, the ROCC decides whether to scramble F-15s to intercept the unidentified aircraft.

New Aircraft Along with the radar program, AAC also obtained newer aircraft — the F-15, the A-10, and the E-3A.*

Since 1982, AAC has been equipped with the F-15 Eagle. In 1987, the "A" model F-15s were traded for the even more modern and sophisticated F-15C. This state-of-the-art fighter is based at Elmendorf AFB. The F-15s are on constant alert at two forward operating bases

* Although the E-3A services AAC, the Tactical Air Command owns and operates the aircraft.

MSgt Dean G. Hoffman
(See page 7)

Despite the alien creature look, proper protection from the demanding environment is critical to maintenance mission success.

Protection of the face, hands, feet, and body presents special problems on the flight line. To prevent heat loss, it's obvious that added insulation is required. However, this may conflict with dexterity and may make it even more difficult to perform maintenance.

in Alaska. They provide air defense and strategic air superiority capabilities.

AAC has also been equipped with the A-10 since 1982. It is based at Eielson AFB and is unmatched in its ability to deliver concentrated firepower in support of ground forces. Its primary mission is air-to-surface operations. It can stay and move with the forward operating ground forces, as needed.

Finally, making a stragetic difference at AAC is the E-3A air warning and control aircraft. The ability to detect Soviet bombers approaching Alaska is aided by the Command's two E-3As that were assigned in June 1986. Before the arrival of the E-3A aircraft, AAC could not send F-15s beyond the radar and communications coverage provided by the ground-based antennas along the Alaska coast.

The Challenge

Our defense against any enemy threat is a challenge for us all. To do this, we must protect our resources and focus on performing our mission in a smart, effective manner. An effective flight safety program is a significant element in protecting our vital national resources.

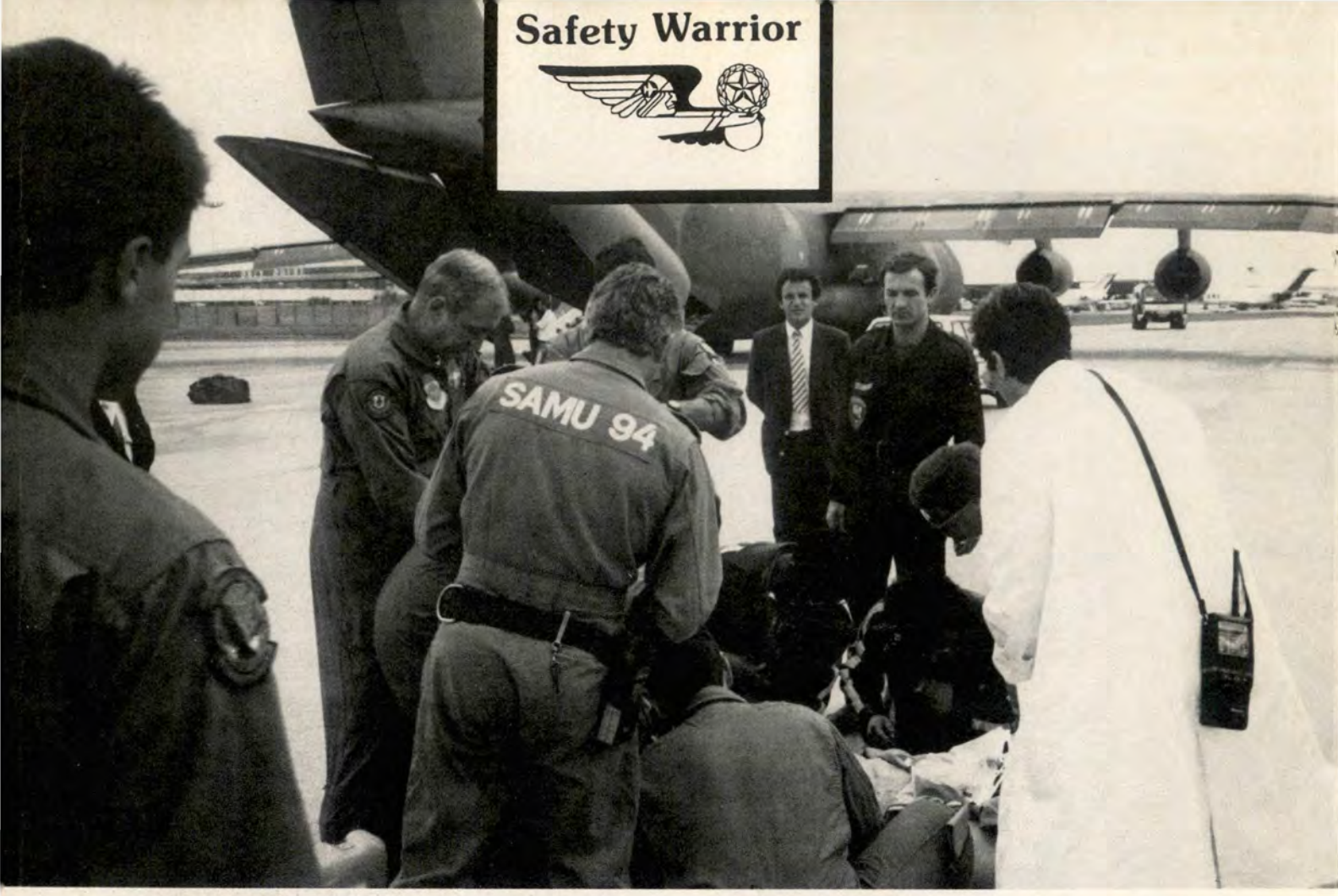
Col David W. Thomson, AAC's Inspector General, explains. "We have limited resources to conduct our complex and often demanding missions. Our commanders integrate safety into their overall scheme of things to help us use our resources wisely.

"AAC's flight safety program is part of that overall plan. The aircraft and people assigned to AAC are critical and valuable resources. AAC focuses on preserving these resources while effectively accomplishing the mission."

Alaska's strategic importance can only increase in the future. It is AAC's challenge to remain on top! — On top ensuring our Nation's safety against a potential Soviet threat and protecting our northernmost resources. ■

Because of the severe winter weather and hazardous terrain, coordinated and expeditious search and rescue is an important activity in Alaska. The Rescue Coordination Center at Elmendorf AFB participates in approximately 150 search and rescue missions each year.

Safety Warrior



Mercy Flight

LT COLONEL ARTHUR "SAM" IRWIN
Commander
53d Military Airlift Squadron
Norton AFB, California

The following is an account of a routine overseas training flight on 4 September 1988 that suddenly became an emergency aeromedical evacuation flight. It is an excellent example of thorough training and effective crew coordination working together for the safe resolution of an unexpected, serious emergency. — Ed.

■ We were on an overseas trainer mission. I had two aircraft commander upgrade candidates. The two flight engineer instructors had two second engineers, one fresh out of training at Altus AFB, Oklahoma, and the other well on the way to upgrade to first engineer. The crew also included an instructor, a basic and a student loadmaster, as well as a noncurrent loadmaster regaining his currency after an extended DNIF.

Finally, we had my first sergeant on board, who was along for an orientation flight. We were a crew of 12, and every man had plenty to do as a result of what happened on what was supposed to be our last day out in the system.

Change of Plans

We alerted as an augmented crew at 0330 zulu, 4 September, to allow a crew duty day to get home from Lajes Field, Azores, through Dover AFB, Delaware, to Norton AFB, California. When we arrived at the command post, we were told we were needed for an emergency aeroevacuation to Rhein Main Air Base, Germany

Apparently, a Navy female was a passenger in an automobile when the driver, who had been drinking heavily, ran off the road and hit a pile of 3-inch galvanized pipe lying near a bridge abutment. One of the 25-foot sections of pipe was driven through the front end of the car, into the passenger's upper leg, out her back, through her seat, and out the rear of the car.

The young woman suffered a broken leg, a shattered pelvis, and was bleeding internally. Rescue workers cut the pipe at the points where it entered and exited her body and

Many questions arose, but they all revolved around, "How are we going to keep the patient alive until we get her to a hospital!"

moved her to the base hospital. They were unable to perform the surgery required to remove the pipe at the Lajes hospital due to the limited staff and facilities. So, the hospital's medical team prepared her for emergency medical evacuation to the hospital at Wiesbaden, Germany, via a flight to Rhein Main.

The Flight Begins

The patient's condition was stable, and she was conscious when we left Lajes at 0920 zulu. She was accompanied by a Navy master chief petty officer escort and a medical team consisting of one Navy flight surgeon, two Air Force Reservists, a second lieutenant flight nurse, and a senior master sergeant medical technician.

The total planned flight time was 4 hours and 30 minutes, but we never made our 1350 zulu block time at Rhein Main.

About 1½ hours after takeoff, the patient's condition worsened. Her pulse rate was high, and she was losing a lot of blood. The flight nurse asked how much longer the flight would be and expressed concern about her limited blood supply. When informed that we had more than 2½ hours to go, she said she had only about 90 minutes worth of blood at the patient's current consumption rate and asked if there was an intermediate stop we could make to pick up more blood.

The Questions

It was like an Aircrew Coordination training exercise in the simulator. Suddenly, we had a bunch of questions and no time for one person to find all the answers.

- What was the closest field to our present position?
- Was it capable of accepting a C-141?
- Could we get the diplomatic clearances required to land?
- Could we get the blood we needed at that field?
- If we landed and the patient's condition worsened, were there facilities available to perform the surgery she needed?
- How much time would we buy by diverting?
- Could we do all the coordinating and accomplish the diversion before the blood ran out?
- Was there any way we could avoid a diversion?
- How were we going to keep the patient alive until we could get her to a hospital?

A Job for Everyone

We divided the workload, and every one of the crewmembers on board had his hands full with a job to do. Of the three pilots, one was flying the airplane and talking to French air traffic controllers, giving them an unofficial heads-up that we had a patient whose condition was worsening, and a request for a landing in France might be forthcoming.

The second pilot was researching runway and approach information on airfields along our route of flight — getting coordinates to determine the closest available fields and possible times of arrival. The third was coordinating communications with various command and control agencies and trying to get advice as to the best course of action.

The flight engineers were busy responding to the various courses of action being considered. We had approach and landing data being computed for at least three different locations at the same time. They were also computing fuel consumption for the fastest acceptable cruise speed for each of these locations and determining the power settings required to maintain those speeds. Additionally, one of the engineers had O positive blood (universal donor) and was pursuing the option of donating blood via transfusion.

The loadmasters and the first sergeant were all assisting the medical crew. As the patient's condition worsened, her ability to accept blood and vital fluids diminished. Three loadmasters and the first sergeant were employed squeezing the plastic pouches of blood and saline solution to force feed the patient intravenously.

continued

The versatile C-141 has been called upon to fly many different types of missions under varying conditions. In this case, a routine flight home suddenly became a very critical medical evacuation mission.

SAFETY WARRIOR: Mercy Flight continued

After the C-141 landed at Paris Orly, the French medical team quickly went to work on the critically injured patient. The Galaxy crewmembers assisted until they were no longer needed. It took 30 minutes of intensive care before the patient was stabilized for transfer to the hospital and the waiting team of surgeons who would perform the needed surgery.

We were all very intent on keeping this young girl alive and getting her on the ground somewhere with the proper facilities to help her.

Control Agency Coordination

We contacted the Military Airlift Command Center to notify them of our situation and request suitable diversion fields in France. They quickly referred us to the 2d Aeromedical Evacuation Wing (2 AME) at Rhein Main, the primary controlling agency for our mission.

They were responsible for all medical evacuations in the European theater and the correct agency to recommend medical facilities in France and determine the appropriateness of an emergency diversion, given the patient's condition. They could also do a major portion of the coordination with the medical agencies on the ground to prepare for us if we did divert.

The Navy flight surgeon conferred with the experts at 2 AME, and they concluded that the patient could not make it to Rhein Main, and we should divert. The one pilot's research and the other's informal conversations with the French controllers resulted in the conclusion that Paris Orly was the best field for us to land.

The patient now required more than just additional blood. She needed immediate surgery. The French and 2 AME agreed that Paris had the best facilities, and Orly was the best field for a C-141 along our route of flight.

The Diversion

Once the decision to divert had been made, and we declared a medical emergency, a spirit of international cooperation became immediately apparent and was a beauty to behold. We were cleared direct to Orly and to descend at our discretion. When we informed the controllers that we had no approach plates for the airport, which had a solid overcast cloud layer at 600 feet above the ground, a Belgique airliner crew volunteered to help. They joined us on a discrete radio frequency and read us all the pertinent

The tired, but satisfied, crew. During the flight, each person's contribution was critical in saving the patient's life. Their training and crew coordination were severely tested, but these men were up to the task. The patient was lucky to be in such good hands.

information we needed to fly the two most likely approaches into the airfield.

The French opened the runway most conveniently aligned with our route of flight for our use only. In response to our request for blood and an ambulance to take our patient to the closest capable hospital, we were informed that a hospital had been notified, the operating room was ready, and a team of surgeons was standing by. A helicopter with a rescue team on board would meet us at the end of the runway on our landing roll out.

Everyone working together made everything fall into place. All we had to do was get our patient on the ground in the quickest way possible. We did not exceed any of the operating limits of the aircraft, but we did press hard, knowing the woman's life depended on our expediency.

We touched down and had the doors open when we cleared the runway. We shut down the engines and lowered the ramp to the concrete as we came to a stop. The girl was out the back of the aircraft as the helicopter landed behind us. As we talked via phone patch to 2 AME and the 322d Airlift Division (322 ALD) Command Post, the French medical team began working to stabilize the patient. After 30 minutes of work, the situation was under enough control to place the woman on the helicopter and transport her to the team of French surgeons who awaited her.

Back to Normal

Once she was gone, we were all rather quiet. After some deliberation, we decided, with 322 ALD's blessing, to take our Reservist medical team and their equipment back to Lajes rather than going on to Rhein Main.

When we got to Lajes, we found out she had made it through surgery, but was still in very bad shape. We took on more fuel and pressed on to Dover where we all went to bed very tired from our 21-hour crew duty day. We were exhausted physically and emotionally. We knew we had done something exceptional and were rather proud, but we all hungered to know the ultimate outcome of our efforts.

Doctors said it was a miracle that the young woman survived the flight. She required 77 pints of blood during the ordeal. She is not out of the woods, but is expected to survive although she may lose her leg. The commander, U.S. Forces Azores, has credited the crew with saving her life.

The 53 MAS crewmembers were Lt Col Arthur Irwin, instructor aircraft commander; first pilots 1Lts David K. Anderson and Eric G. Moran; flight engineers SMSgt David Garcia, MSgt Anthony V. Gascon, TSgt David B. Jewett, and Sgt Tony M. Williams; loadmasters MSgt James E. Coughlin, SSgt Paul C. Zukoski, SrA Thomas J. English, and A1C Michael S. Parker. Also accompanying the crew was the first sergeant of the 53 MAS, MSgt David B. Robertson. ■

IFC APPROACH
By the USAF Instrument Flight Center, Randolph AFB, TX 78150-5001

FLIP Improvement Teams

CAPTAIN DAVID RUBALCABA
USAF IFC
Randolph AFB, Texas

■ In 1929, First Lieutenant James H. "Jimmy" Doolittle conducted the first "blind" flight at Mitchell Field, Long Island, New York. Flying with a hood over his consolidated NY-2 cockpit, Doolittle courageously set out to prove that visual flight restrictions could be overcome. He proved to a skeptical flying community that all-weather flight was an idea whose time had come. In so doing, he raised many questions about flying, in general, and "fog flying," in particular. How best could the fledgling nationwide network of airways, landing fields, and this new concept in weather flight be served? The answer to that question lay in the dissemination of flight information.

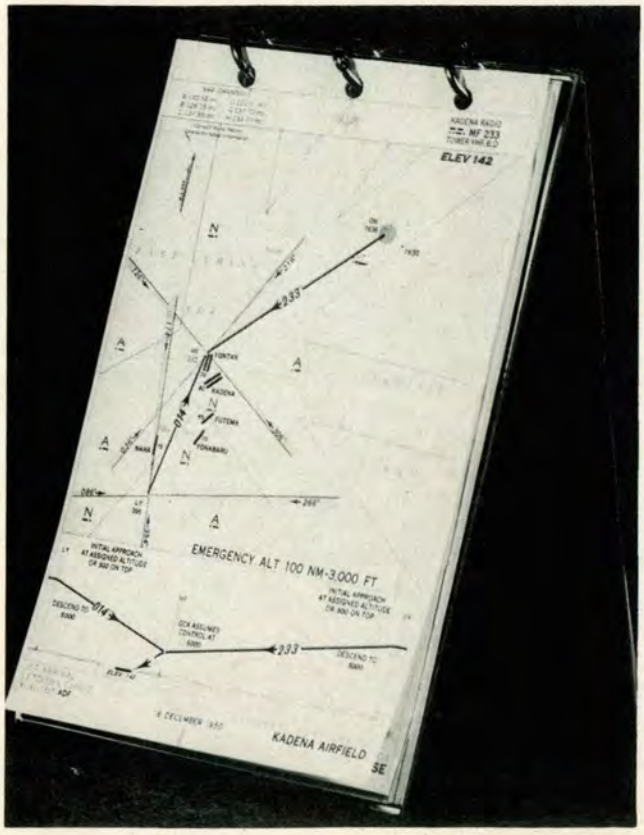
Flight Information Publications

Flight information had a humble beginning. The first aeronautical map produced in the United States was one of Western Long Island, New York, prepared by the Aero Club of America in 1911. From their efforts, eventually, came the DOD's Flight Information Publications (FLIP) program. This extensive program is divided into three separate phases of flight: Flight planning, en route operations, and terminal operations.

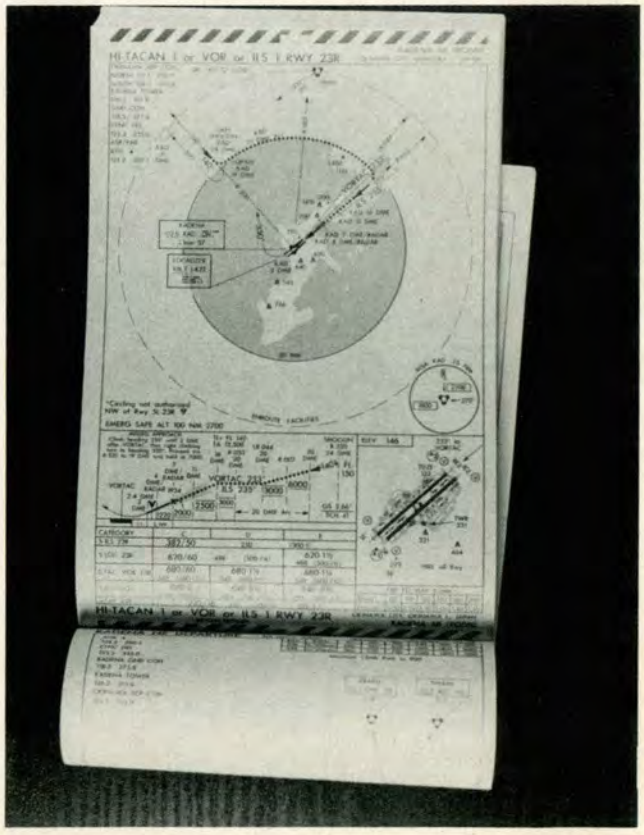
Flight information has evolved from a single private publication, which depicted the location of various aerodromes and the best flying courses, to detailed coverage of the entire free world. Doolittle would probably be astonished at the cost and care that goes into the production of today's DOD FLIP.

This guidance, however, requires input from all services for proper

This ADF approach chart for Kadena Airfield in 1950 reflects a simpler time when the airspace was far less crowded than today.



This modern approach chart for Kadena Air Base dramatically shows the increased complexity of our approaches and the FLIP documents.



maintenance because of constant changes. DOD is the primary user of FLIP products, and Army, Navy, and Air Force fliers use the same publications. What if a flier decided that his or her job would be much easier if a particular chart's format was changed? Additionally, wouldn't it be great if we could identify all FLIP theater points of contact in Chapter 11 of the FLIP General Planning? These questions, and others, are routinely answered by the FLIP Coordinating Committee (FCC) and the FLIP Maintenance Working Groups (FMWG), two very important FLIP maintenance improvement teams, along with the Defense Mapping Agency Aerospace Center (DMAAC) and the Military Departments (MILDEP).

FLIP Coordinating Committee

First, we will look at the FCC as a FLIP improvement team. The FCC represents the MILDEPs and ensures their requirements fall within the FLIP functional area. Once this is done, the FCC then develops a DOD position on FLIP matters which considers both operational needs and impact. The FCC is, therefore, the central body for controlling the ultimate design of, and requirements for, FLIP products.

How do those requirements get to the FCC in the first place? If an item is identified as a "need-to-have" item, it is added to an agenda list prepared by the FCC executive officer, a Defense Mapping Agency representative. The FCC then meets twice a year to review, discuss, and approve agenda items submitted by the services, DA, and FMWG.

Once the FCC membership is in complete agreement on an item, the FCC directs DMAAC to implement a change. If the change is costly, DMAAC is required to offer alternatives. If the FCC determines that a particular change, although expensive, is absolutely essential, then DMAAC will make every effort to comply with the FCC request.

FLIP Maintenance Working Groups

The FMWG represents the concerns of the theater CINCs and unified commands. FMWG representation is primarily that of the theater via designated representatives. For example, the USAF representative for EUCOM is USAFE.

The FMWG is the forum used to check and validate all data entries pertinent to theater operations. Theater representatives check and validate all data entries pertinent to their theater's operations for which a specific OPR was designated. Theater-unique items requiring tri-service concurrence are also staffed at this level. This is usually done before the FCC meets.

All requests for new products, data, and/or format changes are discussed with the nonvoting DMA representative and forwarded to the chairman of the FMWG where they are reviewed and discussed during a central FMWG meeting. During the meeting, the coordinated theater concerns are reviewed. This is where the "need-to-have" items are separated from the "nice-to-have" items. "Need-to-have" items are then elevated to the FCC where the impact on standardization and utility for all DOD users is evaluated.

As time went on, FLIP documents were used more and more in flight planning. This 1958 photo shows their design was basically the same as it is now. However, the content has been greatly expanded and improved many times through the years and continues to improve.

Defense Mapping Agency Aerospace Center

Maintaining FLIP products does not fall under the purview of the MILDEPs alone. DMAAC's charter is to publish FLIP at the request of the DOD, but it also helps maintain FLIP through two basic functions. The first is to process specific host national data, as published by a country's Aeronautical Information Publication (AIP), Notices to Air-

continued

MSgt Dean G. Hoffman
(See page 7)

The various FLIP improvement teams discussed in this article have come a long way in making the various FLIP documents usable. But the most important element is you, the flier — do they meet your needs?

men (NOTAM), or official USAF/Navy/Army Flight Information Lists (FIL) and properly approved terminal radar procedures (TERPS) packages. The second is to process new requirements approved by the FCC, such as the ones discussed above.

One of DMAAC's recent maintenance changes involved switching the printing ink from blue to black on DOD terminal publications. After testing several prototypes under natural, red, and blue-green cockpit lighting configurations, the triservices agreed that black ink provided greater contrast. Additionally, in an effort to control individual book thickness and reduce the number of DOD terminal volumes, a lighter weight paper was proposed by DMAAC and is going to be implemented soon.

Small Changes

While the larger-than-life battles are being fought up front, who handles the smaller battles, like simple information changes? Updates or revisions to FLIPs can be made by individual OPRs without triservice concurrence if the subject is exclusively theirs. An example may be a pilot-to-dispatcher frequency change submitted by Airfield Management at Randolph AFB, Texas, to the USAF Instrument Flight Center (IFC). Now the IFC becomes an improvement team by submitting changes via the Flight Information List (FIL). The FIL is a compilation of basic changes, excluding procedural data on terminal instrument procedures, that is transmitted from the IFC to DMAAC on a daily basis.

You won't find FLIPs this old in mission planning, but you must check the date. Out-of-date pubs can ruin your whole day.

Foundation of Success

Today's FLIPs, and the teams which maintain them, allow us to plan our missions easier and safer than ever before. But with safety and convenience has come dependence. We have come to depend on FLIP products so much that we would be hard-pressed to perform any mission without them. And with dependence, it has become an absolute necessity that our FLIP products be accurate.

So, what is the absolute, bottom line in maintaining accurate FLIP products? Improvement teams? Yes, we have discussed how they help, but the "real" key factor is the individual. We can form teams from every corner of the world and meet many times a year, but for complete success, we rely on just one individual — you. Your participation is critical, so if you have a neat idea to improve FLIPs, bring it on! ■

Need Help?

Do you have an instrument-flying related question you can't find an answer for? The Instrument Flight Center (IFC) at Randolph AFB can help you. Jot down your question on the attached form and drop it in the mail. They will give you a personal answer either by telephone (if you give them your number), or by letter. If you can't wait for the mail and need an immediate response to a burning question, use their 24-hour hotline — AUTOVON 487-3077.

If the questions received indicate a general misunderstanding of a particular area or procedure, IFC will write an article for *Flying Safety* addressing that subject. So let IFC know where you're having problems. They will at least explain the subject to you. If needed, they will work on making changes.

MY INSTRUMENT QUESTION IS:

USAF IFC/FOT

Fold

USAF IFC/FOT
RANDOLPH AFB, TX 78150-5001

USAF IFC/FOT
RANDOLPH AFB, TX 78150-5001

Fold

Sure Looked Like It...

LT COLONEL JIMMIE D. MARTIN
Editor

■ Consider, if you will, two highly trained young pilots in a sleek, white jet aircraft speeding through the sky. Lieutenant North and Lieutenant Talon think they are on a routine cross-country flight. But, their journey is not only one of time and space, but also of mind. The time is the present. The place?

Everything has gone smoothly for them as they approach their destination, Good Times AFB. They begin the en route descent for a TACAN approach and landing, unaware their next stop is — "The runway Misidentification Zone!" (Background music — DeeDee, DeeDee, DeeDee, DeeDee, etc.)

The weather is 4,000 feet scattered, visibility 7 to 8 miles with intermittent rain showers. The lieutenants receive vectors to TACAN final for runway 27 after several delaying turns for traffic sequencing. Lieutenant North, who is flying the aircraft from the front seat, rolls out on final, and looking ahead, sees the runway.

He reports the field in sight and tower clears him to land. He quickly lowers the gear and flaps and begins a descent. He abandons the TACAN approach and aligns the aircraft visually with the runway. The final approach is slightly steep, but otherwise, normal.

After touchdown, both lieutenants suddenly realize they are *not* on a normal runway suitable for their white rocket. Their first impulse is to firewall the throttles and take off. However, they notice tall trees and buildings close off the departure end of the runway and realize they might not make it. They're trapped on this strange runway!

Lieutenant North quickly applies maximum braking, but it isn't enough. The end of the runway is coming up fast as the lieutenants ride it out, scarcely daring to breathe. Passing the end of the runway, Lieutenant North shuts off both engines. Finally, the aircraft grinds to a stop more than 200 feet off the end of the runway on a hard-packed shell overrun. The right tire is flat. Well, so much for "optimum braking."

It is not until the two thoroughly shaken fliers get out of their crippled craft that they see the sign — "Bad News Municipal Airport." *This is not Good Times! Is this a dream? How did we get here?*

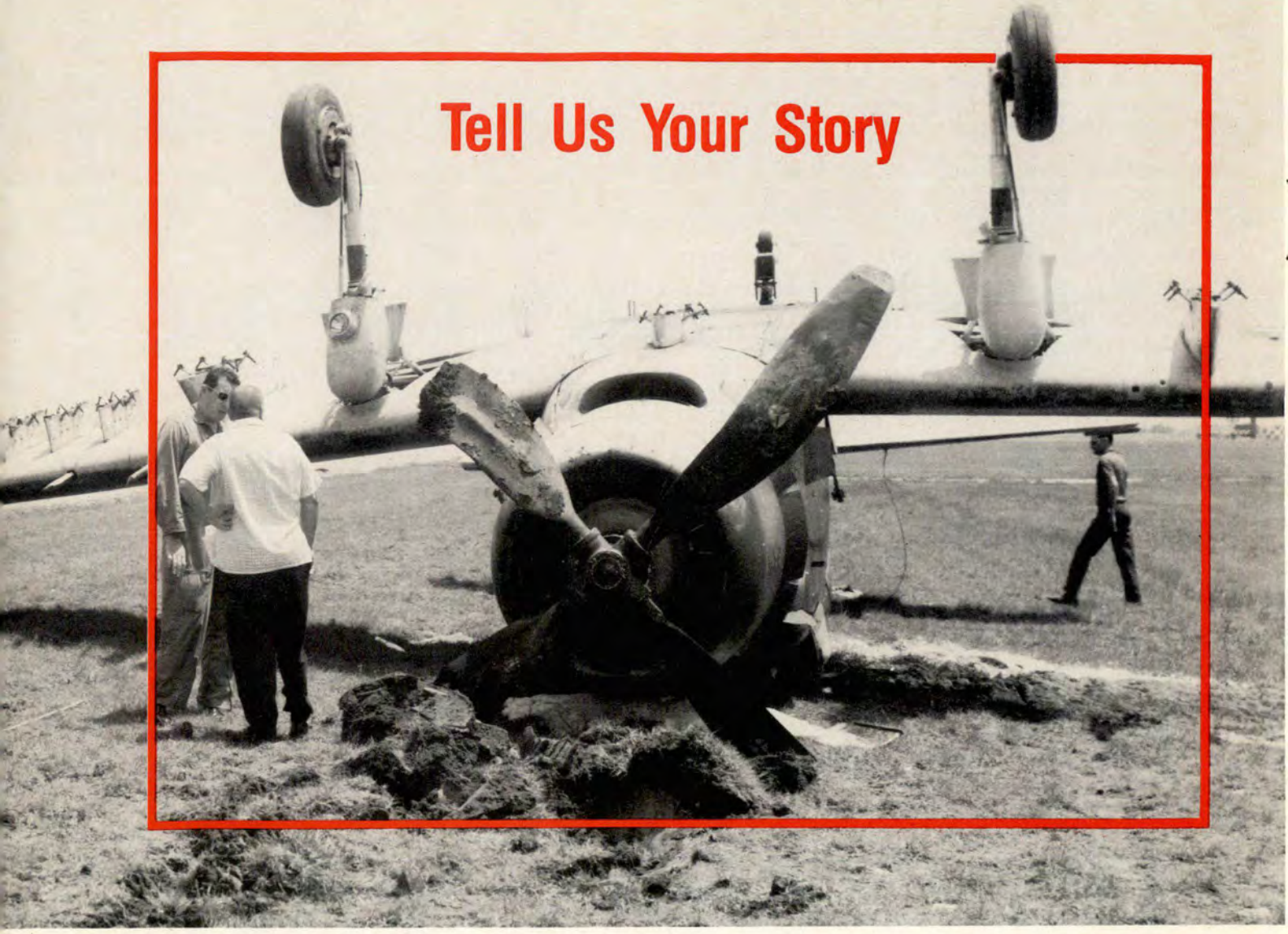
To find out, we only have to look at the approach plate for the TACAN approach to Runway 27 at Good Times. In their mission planning and their in-flight review of the approach plate, both pilots missed an important feature. The approach plate clearly shows Bad News Muni on TACAN center line about 6 miles prior to the approach end of Runway 27 at Good Times. Although the runways are shorter, the airfield layout is very similar to Good Times.

At 6 miles, Bad News looked about like Good Times would have looked at 12 miles. However, because of the weather, Good Times was not in sight when they saw Bad News. Once they spotted the runway on final, they fixated on it and never realized it was too short to be Good Times.

Had they realized the airport was there, they would have been mentally prepared for the sudden appearance of the runway as they rolled out on final. Had Lieutenant North continued to fly the TACAN approach, he would not have been able to transition to the wrong airfield. Had Lieutenant Talon followed through on the planning and execution of the approach, he would not have allowed Lieutenant North to land at the wrong airfield.

A few words to the wise. When planning and flying missions to strange fields, be sure you use all the aids you have available and practice good crew coordination. Otherwise,you may find yourself in — "The Runway Misidentification Zone!" DeeDee, DeeDee, DeeDee, DeeDee, etc. Fade to black. ■

Tell Us Your Story



■ We are looking for first person articles for *Flying Safety* magazine. Have you ever bailed out of an aircraft? Experienced a potentially serious emergency? Had a near miss with another aircraft? Discovered a potential hazard? If so, write and tell us about it.

Our mission is to help prevent mishaps through education. Nothing beats hangar flying. By sharing your experiences with other fliers, maintenance people, air traffic controllers, life support people, etc., they can learn from what happened to you. Your feelings, thought processes, and actions, along with the results of those actions, can be invaluable in helping someone else be prepared for the same, or a similar, experience.

Send us your story in a double-spaced, typed or neatly printed manuscript. Don't worry if you don't think you can produce award winning writing. Give it your best shot, and our editors will be happy to put the finishing touches on it.

The story can be any length, but we prefer to limit our articles to no more than 4 magazine pages, about 2,500 words. Keep the writing simple and direct. Be specific, use as few words as possible, and make those words simple, short, and familiar. Don't "utilize" something when you can "use" it. In short, we don't want to try to impress someone, just get the safety message across as effectively as possible.

If you have photos to support your story, we would appreciate receiving them also. They can be color, black and white, or slides. If you want them returned, let us know and we will be sure to send them back.

If you don't want your name used in the magazine, tell us and we will print your story anonymously. The message will still get to those who can profit from it, and you will have the satisfaction of knowing you did your part in reducing mishaps. If it's OK to use your name, please include a picture of yourself and a short biography.

So, do your part for safety, and see your story in print. Send it in now, while you're thinking about it. Include your name and AUTOVON number so we can contact you to let you know when it will be published and also answer any questions you, or we, may have. ■

Take A Minute, Man!

CMSGT AUGUST W. HARTUNG
Technical Editor

■ Take a minute, man! Prevent foreign object damage (FOD). This was the theme at the September 1988 FOD conference for 200 military and aerospace attendees who met to discuss FOD prevention.

Just as the Minutemen of years ago were prepared to battle their foe, this group of men and women meets twice a year to discuss ways to battle another formidable opponent that can cripple an aircraft and kill its crew.

The 2-day forum, held in the spring and fall, is hosted by various aerospace organizations on a rotating basis. The primary objective is to keep the FOD communications link open so the aerospace industry, airlines, and military services will continue to learn and benefit from each other.

Highlights of Previous Forum

Nowhere was this objective more true than at the last forum. The Aeronautical Systems Division safety office at Wright-Patterson AFB, Ohio, hosted the fall conference, the eighth of its kind, at the Holiday Inn in Fairborn, Ohio, 14-16 September 1988. Unlike the previous gatherings, primarily attended by those from the aerospace industry, this one had many Air Force and Navy people present.

Brigadier General Michael Butchko, C-17 Program Director, Aeronautical Systems Division, Wright-Patterson AFB, Ohio, presented the keynote address. He showed what FOD is costing the Air Force, explained FOD-control measures used in the C-17 program, and asked everyone in the aerospace industry to make a stronger commitment to providing products that are free of foreign objects.

"What we want and demand are FO-free aircraft," said the general. "Our aircrews deserve the best!"

Master Sergeant Harold Buck, F-15 FOD monitor for the 405th Tactical Training Wing, Luke AFB, Arizona, and a first-time attendee, said he was thoroughly impressed with the sharing of information, partic-

continued

MSgt Dean G. Hoffman
(See page 7)

ularly by a new video on FOD prevention produced by the Navy.

"I never realized so many people throughout the aerospace industry are dedicated to the elimination of foreign objects, from production lines to military and airline flight lines," said the sergeant. "I picked up some great information on new FOD prevention products."

Technology Expansion

New Technology A major tool manufacturer was one of the many vendors displaying a variety of such products, ranging from tools that glow with bright colors to those with tethering devices. The company spokesman briefed the audience on a laser etching program, designed to simplify the marking of any size tool, including small apexes.

A California-based company impressed many attendees with their state-of-the-art tool detection system. MSgt Ted Skinner, FOD Monitor for an array of different aircraft at Davis-Monthan AFB, scheduled a demonstration for his base.

"The benefits of this electronic detection system are enormous in reducing the time spent locating misplaced and dropped handtools," said Sergeant Skinner. "This probe can quickly detect tools lodged in critical areas where visual inspection isn't possible."

Many of the military members present were also interested in a mechanical sweeper that can be towed behind any vehicle having a pintle hook. A video by one manufacturer demonstrated his device whisking around quietly sweeping up FOD sources — rocks, metal parts, wire, etc.

Literature on a second sweeper was also displayed. Since these sweepers have no motors, there is no pollution, no noise, and no costly maintenance.

Other attendees greatly appreciated the efforts of an aerospace manufacturer in compiling a list of films and videos dealing with FOD prevention.

Foreign object damage (FOD) prevention posters and stickers such as those shown here, are just a sample of the free visual aids that were available at the last FOD conference.

MSgt Ted Skinner, FOD prevention monitor at Davis-Monthan AFB, Arizona, displays the T-shirt he designed for people in his unit.

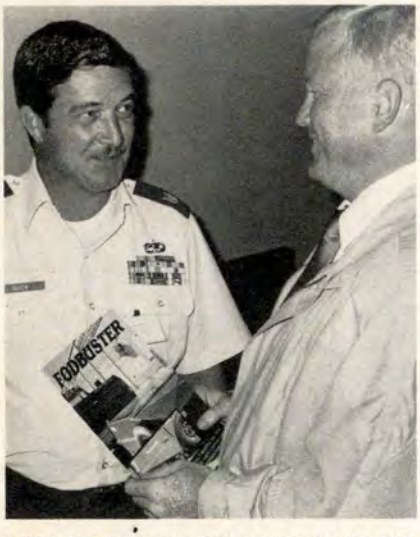
Conference attendees were briefed on the tool control program used by the maintenance people at Wright-Patterson AFB.

New Views Captain Chris Smith, Deputy Program Manager for Logistics, Aero Propulsion Laboratory, Wright-Patterson AFB, also attending his first conference, said the information presented was superb. "Since I interface with other aerospace engineers in the design of future engines, I'm very interested in reliability and maintainability. This forum has given me a better understanding of what I, as an engineer, can do to incorporate FOD-prevention measures into new designs."

He went on to explain how the design and location of engines and their inlets, in relation to other areas on the aircraft, can be a critical factor in reducing the potential for FOD mishaps.

"FOD-prevention measures are like the chicken farmer who, when faced with dwindling profits as the price of chickenfeed increased, decided to slowly incorporate sawdust into the protein he fed the chickens," explained Mr Verne Crisp, FOD Control Representative with

Since the first 1-day meeting with eight people was held in the fall of 1985, the aerospace industry FOD conference has grown to 2½ day meetings held twice a year. The most recent conference in Fairborn, Ohio, had almost 200 people attend.



MSgt Harold Buck, FOD monitor for the 405 TTW, Luke AFB, Arizona, listens as a salesman explains the benefits of his product.

Many manufacturers had elaborate displays, such as that of a tool company shown here, depicting methods of preventing FOD.

Piedmont Airlines. "Pretty soon, the farmer was so excited at the chickens accepting the increased dosages of sawdust, that he completely eliminated the protein. His profits skyrocketed — or so he thought. When the first batch of chickens hatched from the strictly sawdust diet, the farmer was shocked at the outcome. What he got were 12 chicks — 11 woodpeckers and 1 chicken with a wooden leg!"

The Piedmont representative went on to say that those who put sawdust into their FOD-prevention programs will get only sawdust out. "It takes protein, in the form of commitment and involvement, by everyone in an organization."

MSgt Ray Preffer, a quality assurance specialist with the Air National Guard, is a regular attendee of this event. Because Sergeant Preffer feels so strongly about the benefits of this conference, he paid all of his own expenses to be able to attend this year.

"I always get so many wonderful, fresh ideas, there was no way I was going to pass this conference up," said the sergeant. "After seeing the Piedmont Airlines 'FOD Busters' video (a takeoff from the Ghostbusters movie showing the importance of everyone's involvement in FOD prevention), I'm anxious to obtain a copy for showing in my guard unit."

Involvement Is Key To Success

"I was extremely pleased to have seen so many military members of all grades — from junior NCOs to general officers," said Gayle McCormick, conference chairman and FOD Prevention Administrator for Textron Aerostructures, Nashville, Tennessee. "In addition to the regular list of attendees from the aerospace industry, it's also gratifying to see representatives from foreign countries, such as Canada and Argentina, at these forums. I'm amazed at how far so many organizations have come in their FOD-prevention programs since we started meeting 3 years ago. We've got some exciting events planned for the next conference, so be sure to mark your calendars."

Ninth Aerospace FOD Conference

In case you missed the fall conference, don't worry. If you truly want to know what others are doing about FOD prevention, plan to attend the next exciting conference in the spring of 1989.

The National Aeronautics and Space Administration (NASA) will host the Ninth Aerospace FOD Conference at the Howard Johnson Plaza Hotel in Cocoa Beach, Florida. Everyone associated with FOD prevention, especially military representatives from both base-level units and major commands, should attend.

Those interested should contact either Bill Eldred, NASA, M/C-RQ — SAO, Kennedy Space Center, Florida 32899 (Commercial 407/867-3163) or Gayle McCormick, Textron Aerostructures, Department 421, P.O. Box 210, Nashville, Tennessee, 37202 (Commercial 615/361-2008).

For any FOD product information, contact Gayle McCormick. ■

MSgt Dean G. Hoffman
(See page 7)

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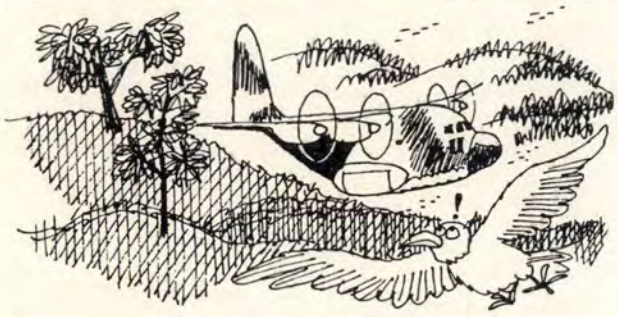


A Word to the Wise

■ A C-130 was being flown on a low level at 500 feet by the copilot when a bird hit his upper windshield. The copilot just had time to duck before the impact. Small pieces of glass and pieces of bird entered the cockpit.

The AC took control of the aircraft, declared an emergency, and made an uneventful recovery. The copilot and navigator both received minor facial cuts, scratches, and bruises.

The significant fact from this mishap is that the copilot's sunglasses were credited with preventing injury to his eyes. A word to the wise — protect your eyes; especially when flying at low altitudes.

Cool Controls

During ground operations and climb, the C-12 was subjected to steady rain. During the climb, the aircrew noted the autopilot trim operating in short, barely noticeable bursts. However, they thought it was a minor glitch in the system.

After cruising at FL 250 in subfreezing temperatures for about 45 minutes, they started a shallow descent. Passing FL 180 in IMC, the autopilot trim fail light illuminated. The aircrew saw the trim was in the full nose down position and disengaged the autopilot.

The copilot, who was flying the aircraft, noticed the elevator felt like it was stuck. He applied nose down pressure to break the elevator loose. He was then able to make a normal landing.

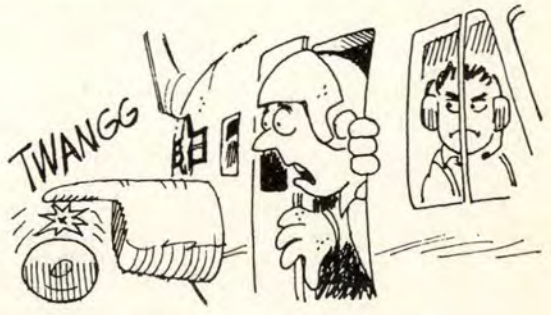
Postflight inspection revealed a 2- by 8-inch accumulation of ice in the aft avionics bay as a result of the rain. The ice covered the lower elevator control cable and caused the binding.

From Atta Boy to Aw Shucks

On final to park, the HH-53 pilot noticed an F-4 near his assigned parking spot. The pilot requested another parking spot to avoid creating a FOD hazard for the F-4. (Atta Boy!)

Tower cleared the pilot to park on the other side of the taxiway gate where Marine marshalers were waiting. The pilot had to climb to 50 feet to cross over the taxiway security gate because it wasn't wide enough to allow a normal hover taxi at 3 feet.

The pilot descended from 50 feet to 3 feet at the new parking spot as directed by the marshalers. The pilot didn't notice the guard shack 75 feet away. During the descent, the rotor wash blew the guard shack over, breaking eight bolts and severing live electrical cables. (Aw Shucks!)



Dropped Drop Tank

When the HH-3 crew chief pulled the safety pin from the left external fuel tank shackle, the tank fell to the ground. Fortunately, the tank remained intact and no fuel spilled.

There was no system failure. The loss of the tank was most likely the result of life support

TOPICS

MSgt Dean G. Hoffman
(See page 7)

equipment stowed under the cabin seats. The equipment apparently contacted the manual external fuel tank release cable for the left tank and moved it enough to release the shackle.

Stowing necessary items in aircraft cockpits has always been a problem. It seems there never is enough space. Take a good look at where you're stashing things and what problems could arise. There may be a trap just waiting for you.

Canopy Check

Just before takeoff, the F-111 pilot pulled on the left canopy handle as part of his checklist-directed "jiggle" check. The handle opened even though the lock tab was in the proper flush, locked position.

He tried several times to lock the handle but could not. So the crew ground aborted.

The handle was out of adjustment. If the aircraft had taken off, the canopy would probably have been lost in flight.

This is a good example of why you should physically touch or check handles and switches when running checklists. Just because they look right doesn't mean they are.

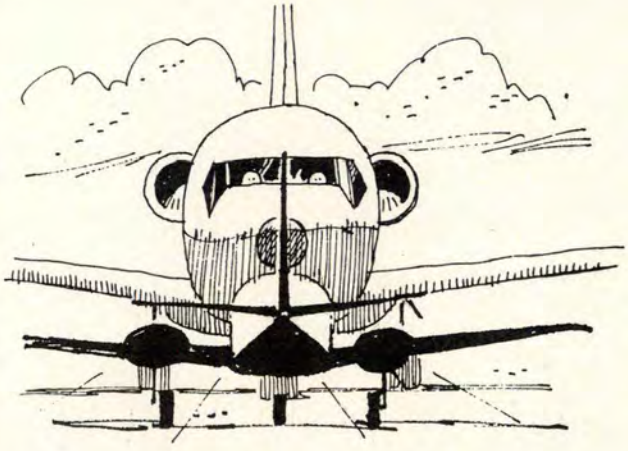
New Gloves

About 30 minutes after level off at FL 250 in an OA-37, the left seat pilot noticed some discomfort in his hands and arms. When he removed his gloves, his fingernails were blue. At first, he attributed this to new gloves which were very tight.

However, when he began to feel nauseous, he told the right seat pilot he might be experiencing hypoxia. The right seat pilot had no symptoms, and the left seat pilot began to feel better once below 10,000 feet.

Maintenance found the left seat oxygen regulator had low flow at both normal and 100-percent settings. The result was a slow onset of hypoxia which clouded the pilot's judgment.

Remember, hypoxia can slip up on you. Make regular oxygen checks and be alert for symptoms.



Crowded Runways

As the C-9 aircraft commander lowered the nose of his aircraft to the runway on landing roll, he noticed a civilian PA-28 aircraft taxiing off the side of the runway onto the grass about 6,000 feet down. The PA-28 had just landed opposite direction on the same runway without talking to the tower or getting clearance.

The tower controller noticed the PA-28 about the same time as the aircraft commander and advised him of the traffic.

As soon as the C-9 passed his position, the PA-28 pilot taxied back onto the runway and took off. He then departed the airfield at a very low altitude without ever contacting the tower.

This potential disaster just emphasizes the need to be alert at all times. See and avoid applies all the way to the chocks. ■

UNITED STATES AIR FORCE

Well Done Award

Presented for outstanding airmanship and professional performance during a hazardous situation and for a significant contribution to the United States Air Force Mishap Prevention Program.

LIEUTENANT COLONEL

Donald M. Krempel

422d Test Evaluation Squadron
Nellis AFB, Nevada

MAJOR

Chester A. Wood

312th Tactical Fighter Training Squadron
Luke AFB, Arizona

■ On 4 December 1987, Major Wood and Lt Colonel Krempel were flying as one and two in an F-16 four-ship formation. Colonel Krempel was flying an F-16C conversion course sortie. Approximately 12 miles after departure while level at 5,000 feet MSL, Colonel Krempel heard a loud bang and experienced a loss of engine thrust. Scanning his engine instruments, he immediately discovered his engine had failed. He informed Major Wood of that fact as he zoomed his aircraft to trade airspeed for altitude.

Major Wood directed Colonel Krempel to turn his powerless aircraft toward a civilian field, approximately 5 miles away, while he assumed the chase position and began informing Colonel Krempel of the runway that was available.

Colonel Krempel acquired the airfield and set up a glide for a straight-in flameout landing since his altitude was insufficient for an airstart. As they approached the runway, the pilots saw a civilian aircraft on the same runway. They had three options: Continuing the approach and attempting to avoid the civilian aircraft, attempting a landing on a parallel taxiway which was also occupied by a civilian aircraft, or ejecting and allowing the aircraft to crash on the airport complex. They quickly weighed the options and decided a landing beyond the civilian aircraft was possible.

Colonel Krempel expertly maneuvered his aircraft around and above the civilian aircraft for a perfect touchdown approximately 2,000 feet down the runway. He then applied maximum braking to bring the aircraft to a full stop since no arrestment barriers were available.

Colonel Krempel and Major Wood exhibited superior flying skills, judgment, and coordination in handling this serious emergency under very complicated conditions. As a result, they saved a valuable combat aircraft while minimizing risk to others. WELL DONE! ■

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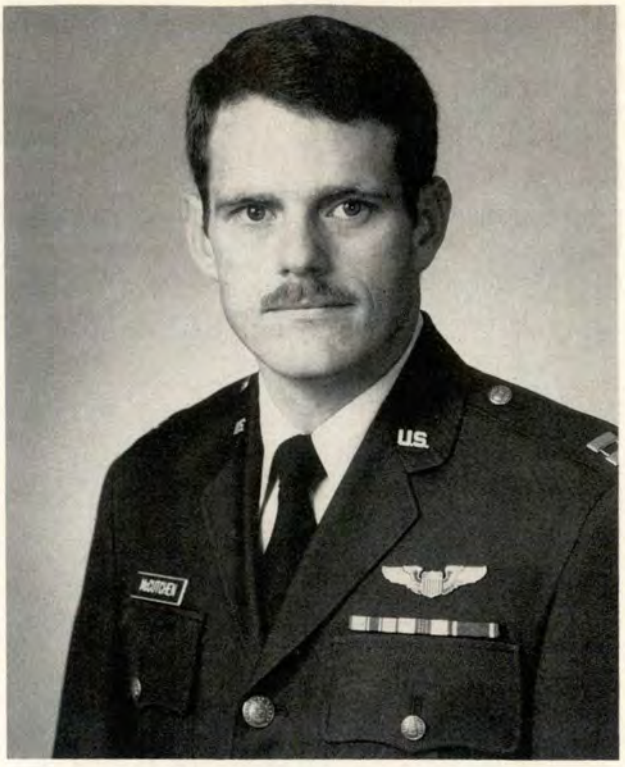

CAPTAIN

Robert K. McCutchen

17th Tactical Fighter Squadron
Shaw AFB, South Carolina

■ On 23 November 1987, Captain McCutchen was leading a flight of four F-16s on a low-level route at 300 feet when a large bird hit his aircraft and was ingested by the engine. Shortly after the impact, he heard an audible bang and the cockpit filled with smoke. Despite the smoke-filled cockpit, he initiated a climb, found the emergency stores jettison button, and jettisoned his stores.

Captain McCutchen relayed the situation to his flight members and one of his wingmen informed him of his attitude, altitude, and airspeed as he tried to clear his vision. Although his eyes were burning from the smoke blurring his vision, Captain McCutchen managed to select RAM to clear the smoke in the cockpit. When the smoke thinned out, he was finally able to read the engine instruments and discovered the oil pressure was zero. Leaving the throttle at mid-range, he continued climbing to 16,500 feet MSL while proceeding towards the nearest suitable recovery airfield and avoiding populated areas.

Captain McCutchen selected the most advantageous runway to set up for the impending flameout approach. After he reached high key over the field and began the descent, the engine vibrated abnormally and rolled back to an RPM far below idle. At this point, Captain McCutchen placed the throttle to idle to preserve system hydraulics, activated the EPU, and put the gear down while continuing the approach. Due to the possibility of an engine seizure, he decided not to activate the JFS so he could preserve accumulator pressure for braking. He completed a smooth approach, landed at the desired touchdown point, and brought the aircraft to a stop.

Captain McCutchen demonstrated exceptional judgment, flying skill, and situational awareness during a critical emergency. His actions prevented the loss of a valuable aircraft. WELL DONE! ■

MSgt Dean G. Hoffman
(See page 7)

Write A Dumb Caption Contest Thing

Once again we give you the opportunity to beat our dumb caption. If you send us the best one, we'll send you our cheap little prize and also feature your caption in our March magazine. How's that for a big deal? Wow!!!

Write your caption on a slip of paper and tape it on a photocopy of this page. DO NOT SEND US THE MAGAZINE PAGE. Use a "balloon" caption or use a caption under the entire page. You may also submit your caption on a plain piece of paper. Entries will be judged by a panel of experts on dumb humor on 20 January 1989. All decisions are relatively final.

Send your entries to: **"Dumb Caption Contest Thing" • *Flying Safety* Magazine • HQ AFISC/SEPP • Norton AFB CA 92409-7001**