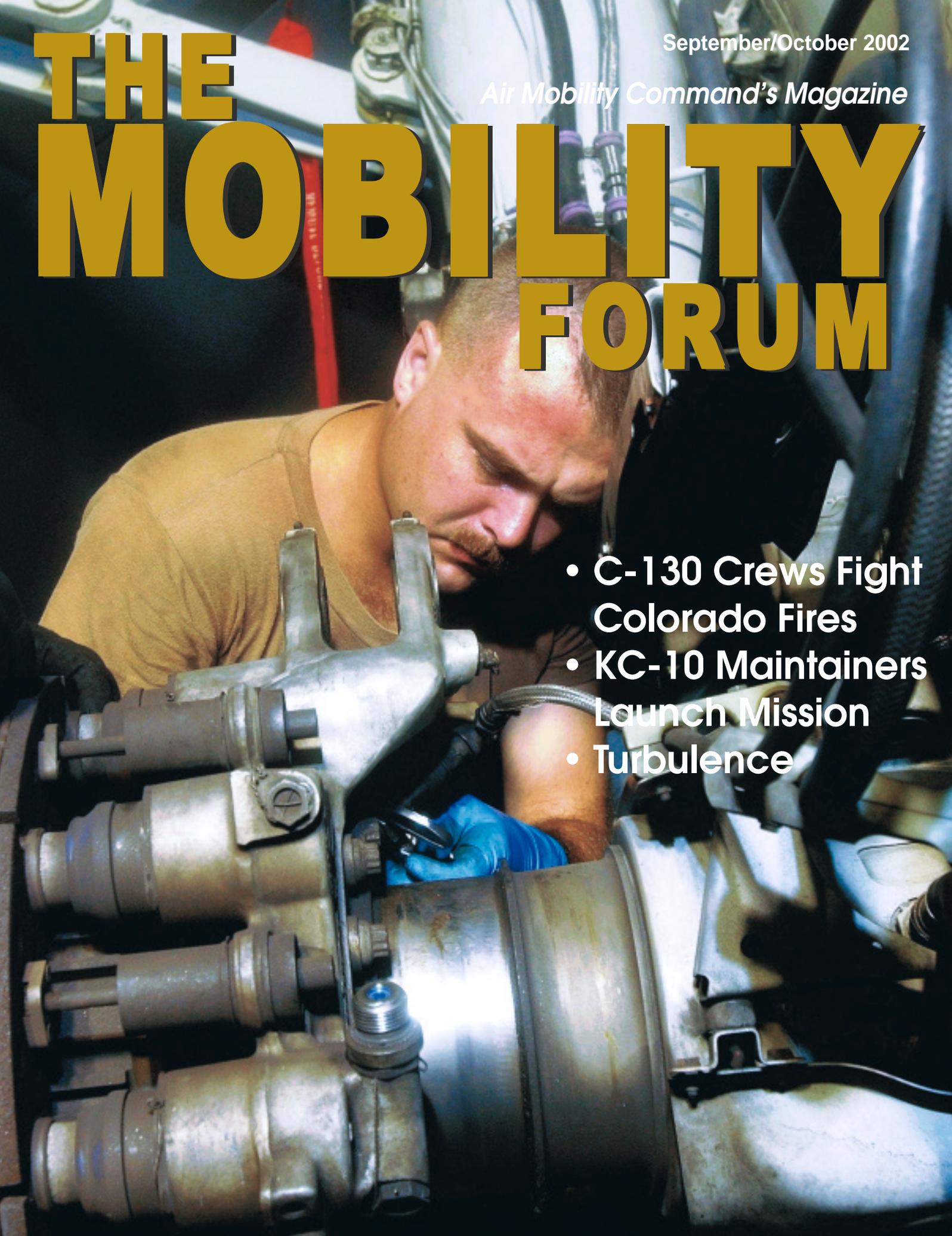


September/October 2002

Air Mobility Command's Magazine

THE MOBILITY FORUM

- C-130 Crews Fight Colorado Fires
- KC-10 Maintainers Launch Mission
- Turbulence



MOBILITY FORUM

September/October 2002

Volume 11 No. 5

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About The Cover...



Diego Garcia, Indian Ocean (AFIE), an Air Force crewchief replaces the brakes on a KC-10A Extender in support of Operation Enduring Freedom.

(U.S. Air Force Photo by Staff Sgt. Larry A. Simmons)

The Mobility Forum is available on the web at <https://www.amc.af.mil/se/Mobility%20Forum/Mobility%20Home.htm>

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“The New Guy”

ello. I'm the new guy. My name is Ron Bean. I've thoroughly enjoyed my 27 Air Force years in a variety of professions: flying (C-141, 26%), supporting (en route, TALCE, and LG, 20%), teaching (USAFA, 16%), and a myriad of staff/school assignments. One interesting point is what's missing: This current job is my first formal safety assignment. At first I was concerned that my background did not prepare me to be the AMC Director of Safety. But over the years, both the card-carrying safety professionals and good supervisors/trainers laid a solid foundation of safety consciousness.

Let me explain.

In the flying community, some issues are so time critical that improper or incomplete completion can and usually does result in aircraft loss and other serious consequences. You flyers all recognized Bold Face requirements, drilled into us before we are allowed to fly any aircraft. Our training emphasized these actions until they were second nature. In the maintenance community, no action is accomplished without following the technical orders. In the teaching community, lesson plans are carefully validated and followed. All these communities instill an appreciation and foundation of rules.

A common thread of mishap reports is failure to follow the rules, whether the rules are the laws of physics or some more mundane rule, usually instituted after a previous mishap to reduce the risk of reoccurrence. So rules and risk management are key foundation stones for a solid safety program, whether at Headquarters Air Mobility Command or your unit. The flying community has a cliché: “Flying is hours of boredom, punctuated by moments of stark terror.” I don't believe the flyers have exclusive rights to this sentiment—other communities have the same feelings regularly. Just ask the ____ (you add the rank) after a GOV backing accident, or the staff officer/NCO with the first “Come see me” from the boss. We've all had the butterflies, and learned the value of better preparation/job performance. Said another way, we all learn the value of following the rules. Good rules produce good safety.

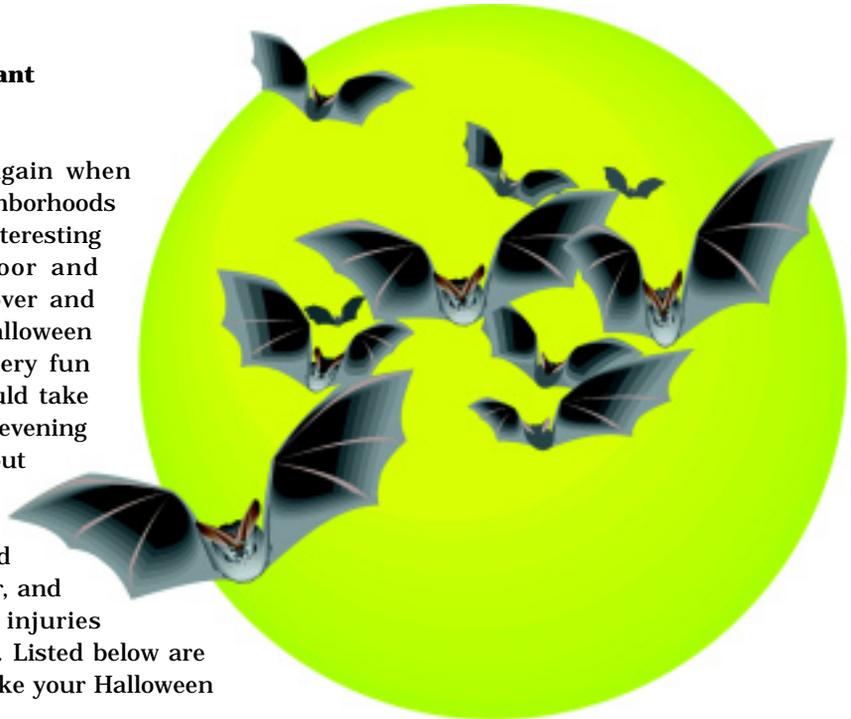
I'm also a fan of old television programs. The Hill Street Blues' sergeant ended every shift briefing with, “Let's be careful out there.” I think all of us can benefit from that sentiment as we continue to accomplish the tough, worldwide mobility mission, so I'll close with let's be careful out there. Godspeed.

- Col Ron Bean

Make Halloween a Little Less Scary

By John Schatz
Safety Management Consultant

It's that time of year again when children set out into their neighborhoods dressed in an assortment of interesting costumes, going door to door and repeating the same phrase over and over, "Trick or Treat"! It's Halloween again and although it is a very fun holiday for kids, parents should take precautions to make sure the evening ends up as safe as it began. About 4 times as many children aged 5-14 are killed while walking on Halloween evening compared with other evenings of the year, and falls are a leading cause of injuries among children on Halloween. Listed below are some things you can do to make your Halloween a safer one.



Before the trick and treat festivities begin, make sure that you:

-  Plan and discuss the route trick- or-treaters intend to follow.
-  Instruct your children to travel only in familiar areas and along an established route.
-  Teach your children to stop only at houses or apartment buildings that are well lit and never to enter a stranger's home.
-  Establish a return time.
-  Tell your youngsters not to eat any treat until they return home.
-  Review all appropriate trick-or-treat safety precautions, including pedestrian/traffic safety rules.
-  Pin a slip of paper with the child's name, address and phone number inside a pocket in case the youngster gets separated from the group. If available, let them carry a cell phone.
-  Provide flashlights to help them see better and be seen more clearly.





Make sure your youngster's costume is made of fire-retardant materials. Costumes should be loose so clothes can be worn underneath. Costumes should not be so long that they become a tripping hazard. (Remember, falls are the leading cause of unintentional injuries on Halloween.) If children are allowed out after dark, outfits should be made with light colored materials. Strips of reflective tape should be used to make children visible. If possible, avoid masks as they obstruct the child's view. Instead, use facial makeup. Look for makeup packages containing ingredients that are labeled "Made with U.S. Approved Color Additives," "Laboratory Tested," "Meets Federal Standards for Cosmetics," or "Non-Toxic," then follow manufacturer's instructions for application.

If masks are worn, they should have nose and mouth openings and large eyeholes. Make sure that the sacks they put their treats in are light-colored or trimmed with reflective tape if children are allowed out after dark.

When the children get home with their treats, check for signs of tampering, such as small pinholes in wrappers and torn or loose packages. Parents of young children should get rid of choking hazards such as gum, peanuts, hard candies or small toys.

Have a safe and happy Halloween!

Mobility Forum

2002

Photo Contest



HOW TO SUBMIT:

1. Cover letter indicating full name, grade, unit, and home address, DSN, and Fax numbers.
2. Minimum/maximum size limitations: 5x7 inches/16x20 inches.
3. Print your name, the title of submission, category entered, and DSN phone number on the back of each submission.
4. Entries must be postmarked not later than 31 October.
5. Submit to:
2002 TMF Photo Contest
Schatz Publishing
11950 W. Highland Ave.
Blackwell, OK 74631
580-628-4607

RULES:

Note: These rules are different from and take precedence over those posted in AMCI 36-2805, *AMC Safety Awards*.

1. Entries must be original work. Photographs may be previously published elsewhere, as long as the photographer includes a signed statement confirming that no copyright will be infringed through the use of the photo by *The Mobility Forum*.
2. Entries incorrectly identified, or failing to conform to the size limits, will not be considered.
3. Entries submitted to this contest will be considered property of AMC Safety and won't be returned.
4. *The Mobility Forum* reserves the right to deny consideration for entries unsuitable for publication.

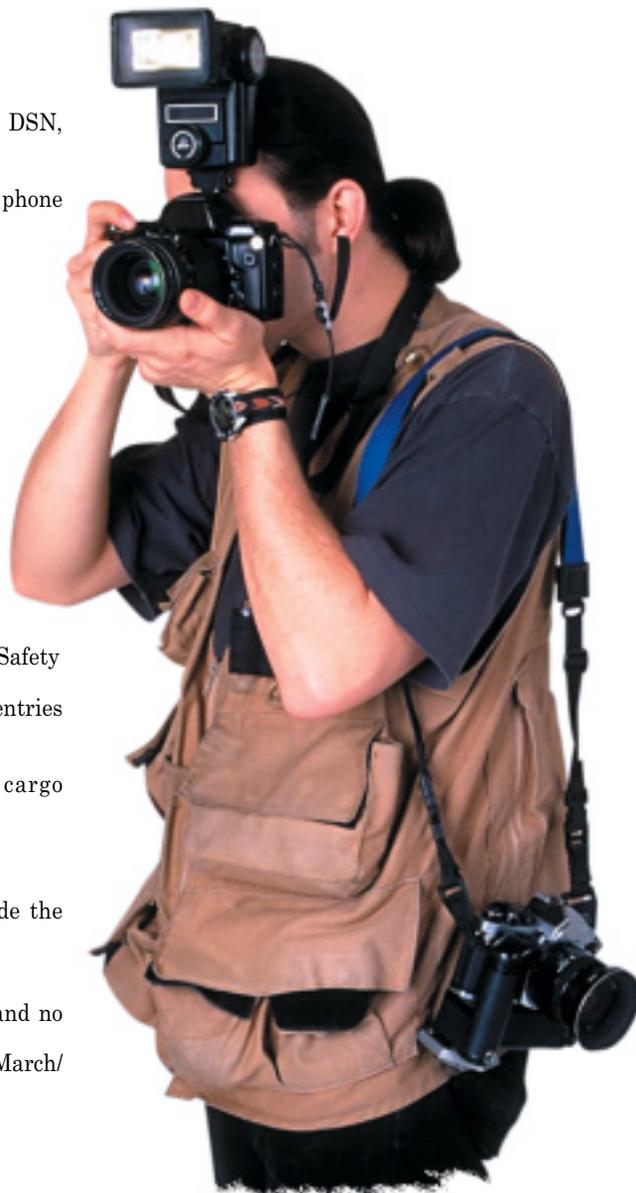
CATEGORIES:

1. Aircraft: air refueling, airdrop, maintenance, marshalling, cargo loading, etc.
2. Military Life: Experiences reflecting the military environment.
3. Recreational: Off-duty activities.
4. Entries may be Black & White or Color.
If we receive sufficient nominations in both media, we will divide the categories into Black & White and Color subcategories.

Note: A maximum of three entries per category.

AWARDS:

1. Contestants will receive a maximum of one award per category, and no more than two awards per contest.
2. Winning entries will be published in the January/ February and March/ April issues





Fire: Friend or Foe?

by **John Schatz,**
Safety Management Consultant

Fire and mankind go way back, so to speak. Fire has kept us warm, provided light to see by, cooked our food and entertained us for many millenniums. But fire has another side. Poets and philosophers have referred to fire as an “all consuming entity”. And they are right. Fire does much damage in this country. Looking at the statistics on home fires (that’s where 85% of fire deaths occur) in calendar year 2000, there were 368,000 home fires, which resulted in 3,420 deaths, 16, 975 injuries and \$5.5 billion in direct property damage. But as alarming as those statistics are, fire deaths are actually down 34% from just 20 years ago! Why? One reason is credited to the preventative educational measurers that National Fire Protection Association (NFPA) and local fire departments have promoted to communities across the nation, as well as technological advances in fire detection and fire suppression equipment.

This October will mark the 80th year of the NFPA’s official sponsorship of Fire Prevention Week. The history of Fire Prevention Week has its roots in the Great Chicago Fire, which began on October 8, 1871, but continued into and did most damage on October 9. In just 27 hours, this tragic conflagration killed more than 250 people, left 100,000 homeless, destroyed more than 17,400 structures and burned more than 2,000 acres. As a result of this tragedy, President Woodrow Wilson issued the first National Fire Prevention Day proclamation in 1920, and since 1922, National Fire Prevention Week has been observed on the Sunday-through-Saturday period in which October 9 falls. In addition, a Presidential Proclamation was issued, pronouncing a national observance during that week every year since 1925. This year’s theme for the Fire Prevention week is Smoke Alarms.

Smoke Alarms

Smoke Alarms are easy and affordable devices and provide an excellent way to alert you and your family to a fire. The NFPA estimates that one-half of home fire deaths occur in the 6% of homes with no smoke alarms. But remember: the protection is good only if your smoke alarm



is working. In a recent study it was reported that for every 10 houses with alarms, 3 were found to be not functioning, with the most common cause being missing, disconnected or dead batteries.

When you go out shopping for a smoke alarm, make sure it carries the label of an independent testing laboratory. Once you purchase your alarms, make sure you properly install the alarm at a minimum of one for every floor and one outside each sleeping area. In new housing, alarms are required in all sleeping rooms. Remember that smoke rises, so alarms should be mounted high on walls or ceilings. If mounted on walls, the alarm should be positioned about 4- 12 inches from the ceiling. Ceiling mounted alarms should be positioned 4 inches away from the nearest wall. According to the NFPA 72 *National Fire Alarm Code*, you should test your smoke alarm monthly by using the manufactured installed “test button” or by using an approved smoke substitute.

Remember to replace the batteries in your smoke alarms once a year, or as soon as the alarm “chirps,” warning that the battery is low. Helpful hint: schedule battery replacements for the same day you change your clock from daylight to standard time in the fall. Regularly vacuuming or dusting your smoke alarm per the manufacturer’s instructions can help keep it working properly. Replace your smoke alarms once every 10 years.

Fire Extinguishers

Another life and property saving safety device is the portable fire extinguisher. It helps by extinguishing small fires or containing them until the fire department can arrive. However, remember that fires grow and spread rapidly. Your first priority is to get you and loved ones out of home quickly.

There are several classes of extinguishers:

Class A Extinguishers will put out fires of ordinary combustibles, such as wood and paper. The numerical rating for this class of fire extinguisher refers to the amount of water the fire extinguisher holds and the amount of fire it will extinguish.

Class B Extinguishers should be used on fires involving flammable liquids, such as grease, gasoline, oil, etc. The numerical rating for this class

of fire extinguisher states the approximate number of square feet of a flammable liquid fire that a non-expert person can expect to extinguish.

Class C Extinguishers are suitable for use on electrically energized fires. This class of fire extinguishers does not have a numerical rating. The presence of the letter “C” indicates that the extinguishing agent is non-conductive.

Class D Extinguishers are designed for use on flammable metals and are often specific for the type of metal in question. There is no picture designator for Class D extinguishers. These extinguishers generally have no rating nor are they given a multi-purpose rating for use on other types of fires.

Many of the extinguishers available today can be used on different types of fires and will be labeled with more than one designator, e.g., A-B, B-C, or A-B-C. Make sure that if you have a multi-purpose extinguisher it is properly labeled.

To use an extinguisher, remember the acronym PASS:

Pull the Pin. Hold the extinguisher nozzle pointing away from you and release the locking mechanism.

Aim low. Point the extinguisher at the base of the fire.

Squeeze the lever slowly and evenly.

Sweep the nozzle for side to side.

Install fire extinguishers close to an exit and keep your back to a clear exit when you use the device so you can make an easy escape if the fire cannot be controlled. If the room fills with smoke, leave immediately. Again, when using an extinguisher one of the more important things to remember is knowing when to leave. So, make sure you develop a good escape plan for you and your family.

Escape Plan

One of the best defenses in keeping your family safe in regard to a fire is developing and practicing a home fire escape plan. Make sure it is something that everyone understands and that you practice it on a regular basis. The plan should contain at least two escape routes that are remote

from each other. The plan should also include the emergency phone number of the fire department. It is best to have each family member memorize the fire departments number. Draw the floor plan of your house showing the exits and where smoke alarms and extinguishers are located. When practicing the drill, have your family members crawl low to the ground where there will be less smoke and heat in a real situation.

Prevention

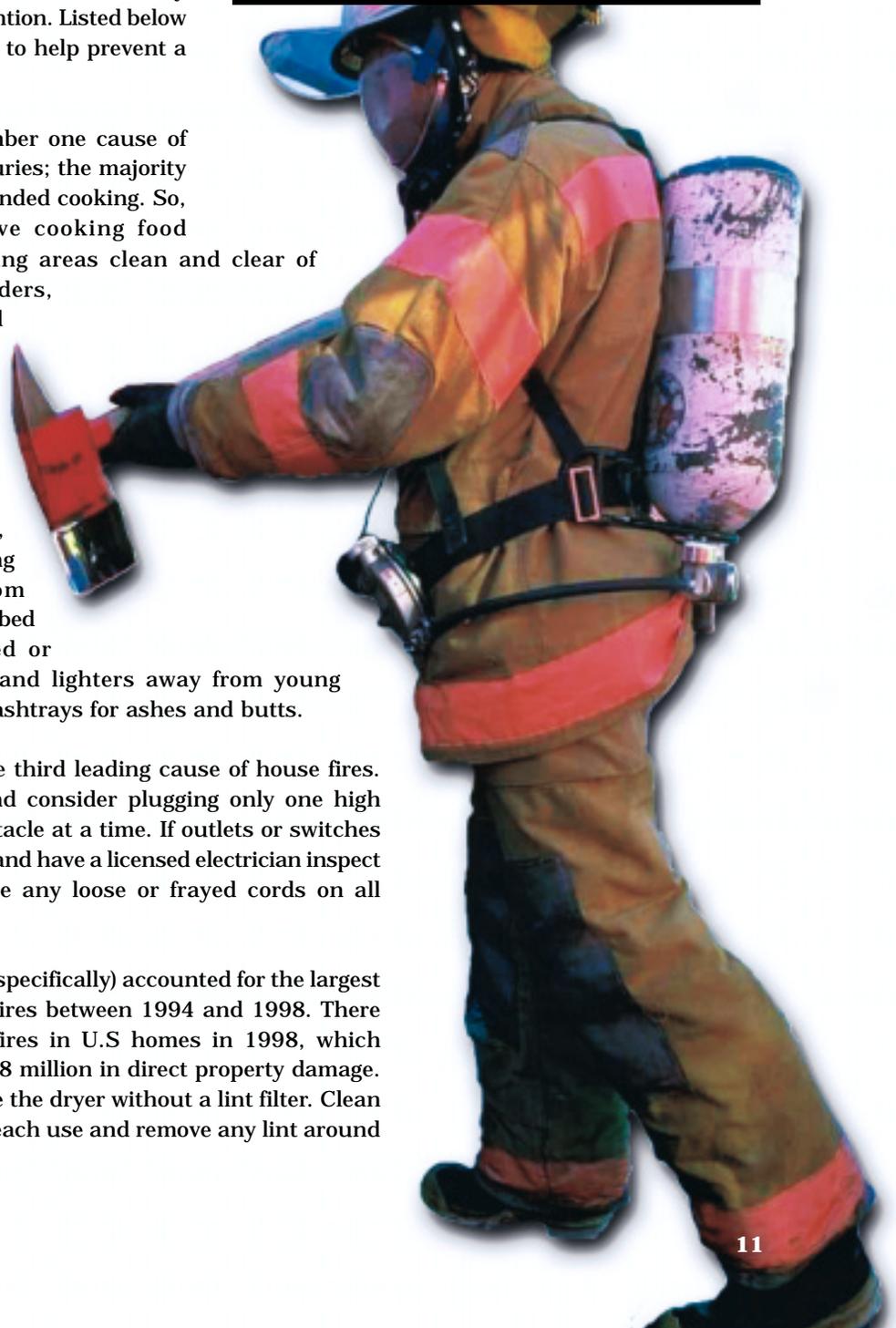
Thus far we have looked at what to do when a fire occurs and detection of it. There is another really important topic and that is prevention. Listed below are just a few things you can do to help prevent a house fire.

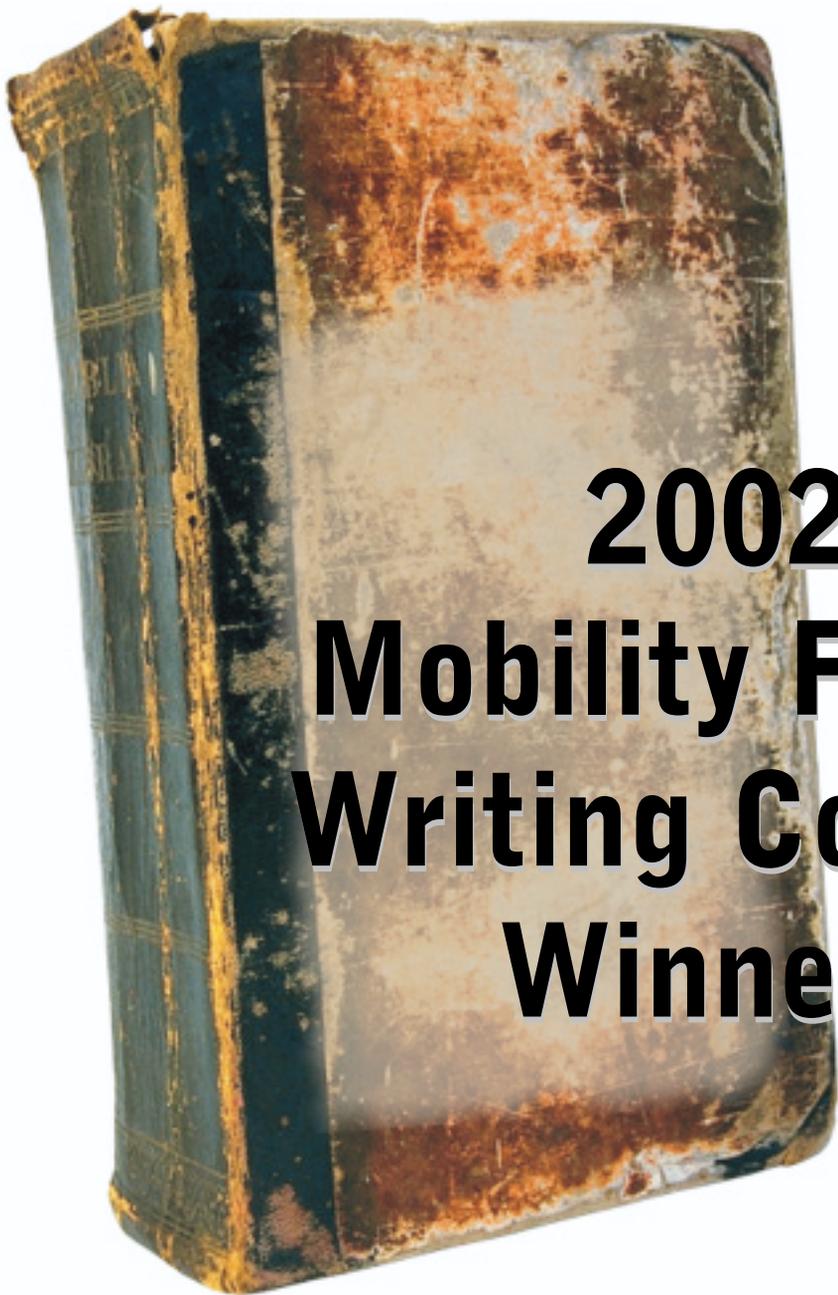
- Cooking fires are the number one cause of home fires and home fire injuries; the majority of these fires are from unattended cooking. So, make sure you never leave cooking food unattended and keep cooking areas clean and clear of combustibles, e.g., pot holders, towels, rags, drapes and food packaging.
- Smoking materials are the leading cause of fire deaths; roughly one out of every four deaths can be attributed to smoking materials. Therefore, make sure you keep smoking materials away from combustibles. Never smoke in bed or when drowsy, medicated or intoxicated. Keep matches and lighters away from young children and use large deep ashtrays for ashes and butts.
- Electrical problems are the third leading cause of house fires. Avoid overloading outlets and consider plugging only one high wattage item into each receptacle at a time. If outlets or switches feel warm, shut off the circuit and have a licensed electrician inspect the suspected part. Replace any loose or frayed cords on all electrical devices.
- Appliances (clothes dryers specifically) accounted for the largest share of appliance and tool fires between 1994 and 1998. There were 14,300 clothes dryer fires in U.S homes in 1998, which resulted in 312 deaths and 68 million in direct property damage. Make sure you do not operate the dryer without a lint filter. Clean the lint filters before or after each use and remove any lint around

the drum. Always turn the dryer off when leaving the home and have the dryer installed by a professional.

Fire can be a warm and useful friend as well as a very deadly foe. Hopefully by applying some preventative measures, good planning, detection measures and extinguishment methods we can thwart many of the disasters that fire causes.

**National Fire Prevention Week
October 6-12, 2002**





2002 Mobility Forum Writing Contest Winners

First place — *Look Before You're Lost*

Lt Col (ret'd) J. Norman Komich
55 Middlebury Lane Beverly, MA 01915-1373

Second place — *Can We Be Friends?*

SMSgt Gary W. Babcock
182nd Operations Group/169th Airlift Squadron, Peoria ANGB, IL 61607-5023

Third place — *Now, It's My Turn*

Maj (Lt Col Sel) Bill Nelson
USAFR 97th Airlift Squadron, 1205 12th Str NE Ste 102 West, McChord AFB, WA 98438

Honorable Mention — *Proud To Be Gray*

Capt Costas Leonidou
PSC 7 Box 988, APO, AE 09104

Can We Be Friends?

2nd Place Writing Contest Winner

by SMSgt Gary W. Babcock

It has come to my attention that we are not so unlike children. I may get a chuckle from some of you, but let me tell you a story of my son, which I'm sure all of you will enjoy, then follow with a story about me. Exciting, huh? Anyway, my son, years wise then, is a great kid. Every since he was a toddler we were receiving compliments on his behavior. Smart as a whip. Good looking, just like his father. One day he came home from school asking to stay the night with a friend. We had let him stay there a few times before, and he had always done well. So even though he was going to be camping out in the backyard of his buddy's house, we felt it would be O.K.

It was O.K. until about 4 a.m., when I received a phone call from the police department. Apparently my son Seth and Charlie decided to go hiking in the middle of the night. Charlie does live in a rural area and while the potential dangers of the night are there, they do not compare to the dangers of this particular scenario. They decided that they would hike into town. Town was about 8 miles away, on a typical Illinois 2-lane highway. I think you know the kind. Of course, upon picking him up at the police station, I immediately interrogated him regarding this act of stupidity. I had always set ground rules and he had always obeyed.

"What was the purpose in putting yourself at risk from child molesters, kidnappers, being hit by a car, etc., etc?" I asked. "How could you ever do that when you know full well it goes against my rules, and more importantly, against the rules of survival?"

His answer: "Because Charlie asked me to go." What?! What in heaven's name does that mean? After giving it some consideration, I realized what

he was really saying was that he was under "peer pressure". When we were all younger, we underwent some pressures at different times, didn't we? It's just harder to understand, now that we are all older. We don't allow ourselves to succumb to these pressures anymore, do we?

As I think about this question I find myself answering opposite from the way that I would want to be thought of. In fact, I might go so far as to say that there is more pressure now than before, but for different things. Probably not nearly as dangerous as when we were younger. Well, maybe even that isn't true. When we were younger we were tempted with drugs. That's surely got to be more dangerous than current temptations! As I put this into perspective I realized the impact of our (specifically the aviators') temptations of today: violating policy and regulation (P&R) to "have some fun". I realized that this "Violation of P&R" usually goes hand in hand with "Hazardous Attitudes", "Lack of Assertiveness", "Faulty judgment/decision making", and with a small stretch, at times, "Supervisory error". I recall CRM case studies involving these factors. There are too many to list, both military and civilian. In retrospect I remember allowing myself to be put in that position. My story:

I had been flying fairly regularly with a pilot and knew his skill at handling the airplane. In fact, he was the first person to take me "under their wing" when I was stationed at Alaska. He had shown me where and how to fish for salmon. Told me where to go and where to stay away from for sightseeing. In some respect, I was indebted to him. More influential than that, I now considered him a friend. To get to the point: We had a mission taking us out to an island in the Aleutian chain that the Japanese



had inhabited during WW II. He wanted to do a couple low flyovers. I must admit, he did ask if anyone had a problem with that, but his influence with the crew was obvious because no one verbalized a problem with it. We flew over the island

about 200-300' AGL.

It was a strange island, no knowledge of what was there for sure, and as the saying goes, "give 'em an inch and they'll take a mile". Soon we were exceeding max bank angles at low altitudes. The



hair on the back of my neck was standing, you know—"the pinch". Just then the loadmaster said something to the effect that "he wasn't feeling good about doing this stuff so low", so the pilot, after 1 or 2 more maneuvers, elected to head home. I had

mixed feelings at this point: 1) I felt secure in the fact that he knew how to handle the plane. 2) His air discipline was lacking, and in turn, so was mine. As evidence has shown, it is this attitude that has proven equally, if not more, fatal than lack of skill.

At this point, I'd love to tell you that I felt guilty enough to go to my friend and let him know that this wasn't the smartest thing to do and express my concern. I would like to tell you that I approached him and expressed my desire to stay alive, as a friend. But would you believe I didn't? I still felt compelled to stay silent because of a dual fear; 1) the fear of losing a friend and 2) the fear of looking like a wimp. Why would I go against the rules of survival and not say anything? I think more than likely the atmosphere and peer pressure. Could it kill me? Absolutely! You don't need to look too far to see this invulnerability attitude, lack of assertiveness, bad judgement, and violation of P&R, as causal in aviation accidents, and I was an accomplice to all of them. Still, as of today, left out of the causal category in accident reports is the culprit called "Friendship", which in my opinion was the driving force in this situation, and quite possibly many more.

Awareness is the key here. It is my hope that this will be a warning. First, try to be cognizant enough not to place a crew in this position, and secondly, if you hear the "friendly" approach asking for something they wouldn't ask Stan/Eval to do, put the warning flag up. Lastly, it is my hope that we create an environment in which you can speak up without the feeling that you might lose a friend. In fact, it would be my hope that you might realize that it is he who speaks up at these times, that has your true friendship in mind.

I wonder how many of you have found yourselves in this situation? Any? All? Let me finish by interjecting one of the core values of the USAF to think about: Integrity First- the willingness to do what is right even when no one is looking....inner voice: the voice of self-control....A person of integrity can control impulses and appetites.



Tech. Sgt. Walter Radziszewski, from the 379th Expeditionary Aircraft Maintenance Squadron at Al Udeid Air Base, Qatar, installs a new flap position indicator rig pin

on a KC-10 Extender. Radziszewski is deployed to Al Udeid from McGuire Air Force Base, N.J. (Photo by Staff Sgt. Danielle Upton)

KC-10 Maintainers Beat Elements, Launch Mission

by 1st Lt. Johnny Rea
379th Air Expeditionary Wing Public Affairs

The relentless effort by a team of aircraft maintainers in scorching temperatures at Al Udeid Air Base, Qatar, ensured a KC-10 Extender was available on July 17 to refuel aircraft in the skies over Afghanistan supporting the war on terrorism.

The KC-10, assigned to the 44th Expeditionary Air Refueling Squadron, had already taxied out for an Operation Enduring Freedom mission when the copilot, Capt. Tait Stamp, noticed a problem with the aircraft's flap indicator.

The tanker returned to the parking area so the flap indicator transmitters could be adjusted, said Lt. Col. Thomas Wells, 44th EARS commander and one of the crewmembers on board.

"We then encountered several problems — a broken compass system, malfunctioning air speed indicator and an overheated inertial navigator unit," he said. "Maintenance was incredible, moving quickly to get a mission-ready jet airborne and gas to the warfighters." As temperatures inside the aircraft reached 122 degrees Fahrenheit and even higher on the flightline, the Al Udeid maintainers went to work on the aircraft's problems. The team worked for nearly three hours. "It was extremely hot and they

never slowed their pace at fixing the jet," Wells added.

With the maintainers and aircrew soaked in sweat — and the KC-10 ready to go — the crew started the jet's engines.

Just before unplugging the aircraft and allowing it to taxi, Tech. Sgt. Walter Radziszewski, a 379th Expeditionary Aircraft Maintenance Squadron guidance and control technician, took one last look around and found a flashlight on the ground just 20

yards in front of the aircraft.

"We surely would have crushed it and cut a tire or even ingested it into an engine," said Wells. "After hours in the heat and busting a hump to get us going, he didn't just glance around, he did a thorough safety check." "We're the eyes on the ground for the aircrew because they can't see everything around them," said Radziszewski, deployed to Al Udeid from McGuire Air Force Base, N.J.

The avionics maintainer realizes the vital role he and his coworkers play in the success of OEF. "We've got to do everything we can to safely get them in the air because other aircraft out there are relying on them for

fuel," he added. "It's a domino effect; if we can't make our mission, they can't make theirs."

"Maintenance was incredible, moving quickly to get a mission-ready jet airborne and gas to the warfighters."

"We surely would have crushed it and cut a tire or even ingested it into an engine," said Wells.

C-130 Crews Fight Largest Wildfires in Colorado History

PETERSON AIR FORCE BASE, Colorado - By the end of the day June 19, members of the Air Force Reserve Command and Air National Guard had flown 82 sorties and dropped 216,000 gallons of fire retardant on the nation's largest wildfire near Colorado Springs, Colorado.

C-130 Hercules crews from the Reserve's 302nd Airlift Wing here and the North Carolina Air National Guard's 145th AW from Charlotte began helping the U.S. Forest Service June 14. They are flying two Peterson C-130s and four Charlotte C-130s equipped with Modular Airborne Fire Fighting Systems. A seventh spare MAFFS is available if needed.

The wildfires are the largest in Colorado's history, forcing 7,100 people to evacuate their homes. The Hayman Fire, which was 40 percent contained as of June 19, has charred more than 136,000 acres across central Colorado since erupting June 8, according to the National Agency Fire Center. Initially, 25 residences, one commercial property and 13 outbuildings were reported lost.

A C-130 military transport aircraft can be fitted with a MAFFS and ready to fly within 24 hours. Each system can drop 3,000 gallons or 28,000 pounds of "slurry" or "sky jello" fire retardant in five seconds, covering an area one-quarter mile long and 60 feet wide. Slurry is composed of 80 percent to 85 percent water and a 10 percent to 15 percent solution of ammonium sulfate, which is a jelling agent with red coloring.

The Forest Service calls on the Air Force's



MAFFS resources when all civilian contract carriers have been used, said Col. Richard Moss, 302nd AW commander.

"We are the last line of defense," Moss said. "We augment other efforts."

This is the first time the Air Force's MAFFS-equipped C-130s have been staged out of Peterson AFB since the mission began in the early 1970s.

Heat, smoke and debris produce challenging flight conditions for the crews, said Master Sgt. David Carey, a 302nd AW flight engineer. The C-130s, which are flown 150 feet from the surface, have been experiencing turbulence as a result of the intense heat. In addition, smoke from the fires also limits the aircrew's visibility and can stall



engines.

“The Air Force and the Forest Service work in cooperation during the MAFFS operation,” said Dale Aslter, MAFFS airtanker base manager. “The Air National Guard and Air Force Reserve provide the aircraft, and the Forest Service provides the units that slip into the aircraft. It is a cooperative effort between both agencies, the Department of Defense and the Department of Agriculture.”

The Forest Service and the U.S. Department of Agriculture are grateful for the assistance the Air Force provides, said Mike Miller, the Forest Service’s military liaison officer for the MAFFS teams.

“I would like to add an appreciation to the military for all of the support they have shown in this effort,” Miller said. “It has been outstanding.”

Carey said the Air Force Reserve and Air National Guard people involved in the MAFFS mission are proud to be able to help the Forest Service.

“This is the most rewarding thing you can do with an airplane,” Carey said. “You’re doing something for your country in your country. I love this, I love helping.”

(AFRC News Service)

Now It's My Turn

Third place winner
2002 Mobility Forum Writing Contest



by Maj (Lt Col Sel) Bill Nelson

Lt Col Phil Wilson quickly turned off the alarm and checked the time on the bedside alarm clock. Even though he'd been doing this for over 20 years he'd never gotten used to these "Oh-dark-thirty" alerts. He quietly got out of bed trying very hard not

to wake his wife or children. Getting up several minutes before scheduled alerts had been a habit since he first started flying. The early start gave him time to relax a bit before getting ready for these long TDYs. He grabbed the phone downstairs and called the squadron before alert so the ringing phone

wouldn't wake up his family. Besides, he didn't like surprises so he made his standard call to confirm the show time and ensure everything was going as planned for this two-week mission.

This would be his first mission flying support in OPERATION ENDURING FREEDOM. He'd been involved in every conflict since the invasion of Panama, but this would be different. The biggest change was he was no longer doing this active duty. Getting out had been a long and difficult decision. His family had supported him through five moves over 14 years with little grumbling. They had lived in two countries and five states. His oldest was now a teenager and in high school. He was starting to find his niche in the world and develop what he hoped were long lasting friendships; at least for a teenager. Flying opportunities for Phil were becoming increasingly scarce and desk time more plentiful. The final decision to get out had taken over a year of family discussion and weighing the availability of outside work. The active duty Air Force had been good to him, but the needs of the family came first; so he separated.

Fortune had smiled on him since then. He got the dream-flying job he'd always wanted. Flying a Boeing 767 point A to point B wasn't quite as exciting as low-level or midair refueling, but it certainly was a lot less stressful. He also was able to join the local reserve unit and was soon on his way to C-17 school. The new C-17 was an airlift pilot's dream come true. It was a big airplane, but very responsive with fly-by-wire controls and plenty of thrust. Everything was



computer driven so the reliability was outstanding. If the crew showed up at the plane it almost always took off on time. The "Moose", as C-17 crews were fond of calling the plane, carried a huge load over enormous distances into tiny, out-of-the-way airfields, and then stopped on a dime. Its self-defense systems were the best in the business. Finally, it was much more comfortable than the old "Star Lizard" he'd flown for the past 13 years. The plane even had a refrigerator and a freezer, and sleeping in the bunk wasn't like falling asleep in the Sahara Desert. The C-17 was incredible at low-level and air refueling to boot so in his mind he had the best of both worlds.

The other big change was that for the first time in his Air Force career he felt he was doing something to defend his country and way of life. Flying in Panama, Desert Shield, and Bosnia had been exciting and challenging but that was helping defend someone else. All those other situations, while potentially dangerous, never seemed a real threat to his family and friends. This new situation was much closer to home. He remembered very well where he was and what he was doing on September 11, 2001. As he watched the terrorist attack unfold on that terrible day his feelings of rage and sorrow were almost overwhelming. It was difficult to understand how someone could hate another's way of life so much they would be willing to murder thousands of innocent people and commit suicide to do it.

As a civilian airline pilot he flew the type of plane that was hijacked and knew aircrew employed by the affected airlines. He also had former Air Force colleagues who worked in the Pentagon. It had been an agonizing few days before he found none of his friends had been killed or hurt, but he still felt keenly the sorrow for others whose lives were directly affected by the loss of a loved one. Things for them would never be the same. Perhaps what made him the angriest were some reporters in the media calling the terrorists brave for taking their own lives for their cause. Destroying the lives of thousands of innocent people and then not being around to face the devastation, Phil thought, made them the worst of cowards.

It was wonderful to see, however, how the country and his neighborhood came together after the attack. Flags were flying everywhere. There was a newfound respect for those who serve the country. He hadn't seen such overt displays of patriotism

since the Persian Gulf War. Sure, there were the protestors, there always have been and always will be, that was one of the benefits of living in a free society. His mother-in-law had shocked him by saying there had even been anti-war protestors during WWII as well. His family and friends were constantly asking him how he would be involved or if he even would be involved. He wasn't sure exactly how to answer that question, he just knew he wanted to be part of it. He may not be the person to fire the gun, shoot the missile, or drop the bomb, but he was going to do all he could to support those who did.

His father and father-in-law were both veterans of WWII, Korea, and Viet Nam. Both had been pilots. His father-in-law had been an airlift pilot in WW II and Korea; his father had been a Navy carrier pilot in Viet Nam. He had always been fascinated listening to their exploits, but now what they did in these previous wars took on a completely new meaning. His father-in-law had been involved in the Burma-China Theater flying over the infamous "Hump". The stories he told were enough to curl your hair and gave a completely new meaning to the word sacrifice. While the standard strat airlift pilot joke described a rough TDY if there was no remote for the hotel room TV, his father-in-law described an existence about being lucky if they even had a decent room, much less something to do in the way of entertainment. He described literally being able to find your way across that part of Burma by the trail of aluminum from crashed aircraft. There was no such thing as an organized Search and Rescue force to come after you if you were so unlucky as to go down in the jungle. Some of the locals may help you out or just as likely turn you in to the enemy for a reward.

When his father-in-law completed flight training and went overseas he'd only been married a few short years. He had a two-year old son and his wife was expecting their second child. Little did he know the oldest wouldn't even know him when he saw him again and the new "baby" would be almost two years old. He told the story of arriving at the airfield on his first day. It was a totally overwhelming experience. There was hardly a soul in sight and those hanging around looked like they'd been to hell and back.

The temperature was stifling; it had to have been over 100 degrees in the shade with the humidity oppressive. Within a few minutes of

stepping off the plane he was sweating like he'd just run 20 miles. Flies were everywhere and he thought he'd go nuts trying to get away from them. The shape the aircraft were in reflected the condition of the airfield environs and the attitude of the people working on them. He had a hard time blaming the maintenance troops, though, for the condition of the aircraft. The Hump was at the end of the supply line and got the last pick of pretty much everything. All items had to be flown in so the availability of personnel, spare parts, and anything for that matter that made life a little more livable, was pretty slim. It was very difficult to keep morale up when you felt like you were a participant in the part of the war no one at home seemed to care about.

Most people on the home front knew nothing of this little contingent of the Army Air Corp. They never made the weekly movie news reels. Their importance to the overall war effort couldn't be overestimated though because they were the sole supply link to that part of the war that was keeping hundreds of thousands of enemy troops from other fronts. This was the time before General Tunner, the "Godfather of Airlift", had arrived and the whole situation was pretty grim. His father-in-law said General Tunner shook things up a bit and the situation improved tremendously.

Phil remembered complaining about all the TDYs he did during DESERT STORM and DESERT SHIELD. One TDY even lasted a whole month. Heck, airlift aircrews weren't happy unless they were complaining anyway. He did have an air conditioned tent with a wooden floor and a bed with clean sheets even if he did have to share it with the rest of the crew. There was decent food to eat and plenty of it 24 hours a day, a movie tent, a video game tent, and a work out tent. Towards the end there was even a BX shopping mall complete with a pizza and ice cream parlor. After listening to his father-in-law talk about their living conditions he now realized why he didn't shed too many tears about his living conditions when he described them after returning home.

They also talked about the pride they felt being involved in a cause greater than themselves. This cause overshadowed everything they did and made whatever sacrifice required worthwhile. They were defending their country and way of life against an enemy that constituted a direct threat to everything his father-in-law's generation believed in. This new enemy was the same yet very different. They wore

no uniforms, showed no inclination to follow the rules of war in accordance with the Geneva Convention. To them everything was a target and there were no front lines. It made no difference if you were male or female, military or civilian, young or old, all were targets. They had stated as much and had proven it very publicly by their actions. Anything or anyone for that matter that did not agree with or approve of them or what they did needed to be destroyed.

All these thoughts, and more Phil mulled over as he got his crew together and they went out to the plane. They stopped off at the appropriate places to get everything they needed for this type of mission. He made sure everyone had weapons, chemical survival gear, survival vests and all the other bags of equipment they would need to go to war. As the back of the bus filled up with more and more gear each person would need to survive and function in a potentially hostile environment the reality of the situation began to sink in. This was no exercise; he was really going to war.

The crew arrived at the aircraft they were flying and went through the long and involved process getting everything ready for a home station departure. Most everyone associated with airlift knew leaving home station usually involved the biggest hassles so Phil was extra careful to keep the sequence of events flowing as smoothly as he could. The support he was getting on missions like this had been great. Even the home station ground crews seemed to realize the seriousness of this mission and were anxious to do their part. The folks he was flying with were all very experienced and among all of them were probably over 40,000 hours of flight in every part of the world. They, too, realized the importance of what they were about to participate in.

As expected, the preflight went smoothly. Engine start and taxi out went without a hitch as well and Phil taxied the big airlifter out for takeoff. Clearance for takeoff was requested and received in due order and Phil ran the throttles up watching the engines respond. He released the brakes and started the takeoff roll like he'd done thousands of times before. The plane lifted off slowly and began the long flight to Germany. After Phil made his last call to home station tower he thought briefly of all those who had gone on before him doing this exact same thing. The one thought uppermost in mind was, "Now it's my turn".



The Facts About Turbulence

A

ll pilots are taught to be aware of wake turbulence. However, recent incidents indicate that pilots need to keep in mind how severe wake turbulence can be. In any event, wake turbulence is still out there and it can put a pilot and the aircraft

at risk. This page was prepared as a reminder to pilots, to make them aware of wake turbulence and how to best avoid it.

Remember, the best defense against wake turbulence is to know and avoid areas where it occurs.

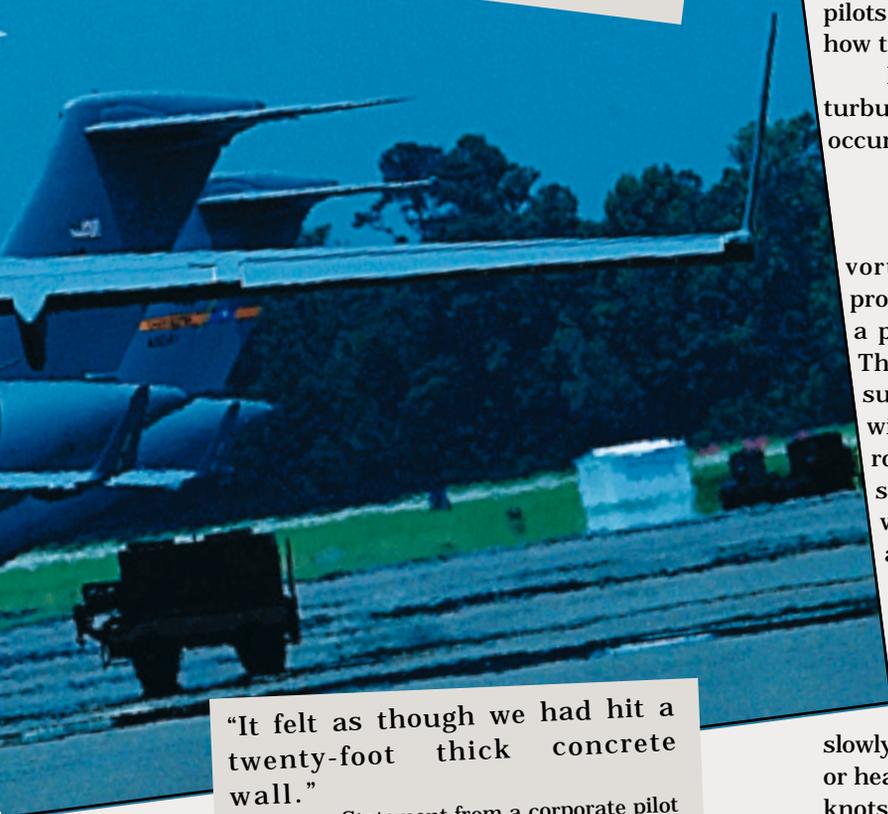
What is Wake Turbulence

All aircraft produce wake turbulence. Wake vortices are formed any time an airfoil is producing lift. Lift is generated by the creation of a pressure differential over the wing surfaces. The lowest pressure occurs over the upper surface and the highest pressure under the wing. This pressure differential triggers the rollup of the airflow aft of the wing resulting in swirling air masses trailing downstream of the wingtips. Viewed from behind the generating aircraft, the left vortex rotates clockwise and the right vortex rotates counterclockwise.

The intensity or strength of the vortex is primarily a function of aircraft weight and configuration (flap setting etc.). The strongest vortices are produced by heavy aircraft, flying slowly, in a clean configuration. For example, a large or heavy aircraft that must reduce its speed to 250 knots below 10,000 feet and is flying in a clean configuration while descending, produces very strong wake. Extra caution is needed when flying below and behind such aircraft.

“While holding for an IFR release, a large military transport was cleared for a low approach and to remain in the pattern. Approximately 2 to 3 minutes later, I was cleared for takeoff. After takeoff, I cleaned the aircraft up and climbed about 20 knots faster than normal. Going through 1,200 feet MSL, I lowered the nose slightly because I thought I had cleared the crosswind path of the military transport. About that time, the aircraft began a smooth roll to the left and felt like it was trying to pitch up. I applied nose down pressure and then heard the engines cavitate and we pitched down rather abruptly. The aircraft then felt solid, so I throttled back and gradually pulled up and resumed the climb. The incident shook up some of the passengers, so I explained to them what I thought had happened and that I was going to return to the airport. In all my years of flying, this is the first time I have encountered the wake from a large aircraft.”

Statement from a light transport pilot. The above are actual excerpts from reports to the Aviation Safety Report System (ASRS).



“It felt as though we had hit a twenty-foot thick concrete wall.”

Statement from a corporate pilot after hitting the wake from a large aircraft in a slow descent across his flight path.

Induced Roll - The Greatest Hazard

While there have been rare instances where wake turbulence caused structural damage, the greatest hazard is induced roll and yaw. This is especially dangerous during takeoff and landing when there is little altitude for recovery. Short wing span aircraft are most susceptible to wake turbulence. The wake turbulence-induced roll rates can be extreme. Countering roll rates may be difficult or impossible even in a high performance aircraft with excellent roll control authority.

Parallel or crossing Runways

Stay Heads Up for the Wake During takeoff and landing, the vortices sink toward the ground and move laterally away from the runway when the wind is calm. A 3 to 5 knot crosswind will tend to keep the upwind vortex in the runway area and may cause the downwind vortex to drift toward another runway. At altitude, vortices sink at a rate of 300 to 500 feet per minute and stabilize about 500 to 900 feet below the flight level of the generating aircraft.

Helicopter Wake

Helicopters also produce wake turbulence. Helicopter wakes may be of significantly greater strength than those from a fixed wing aircraft of the same weight. The strongest wake can occur when the helicopter is operating at lower speeds (20 - 50 knots). Some mid-size or executive class helicopters produce wake as strong as that of heavier helicopters. This is because two blade main rotor systems, typical of lighter helicopters, produce stronger wake than rotor systems with more blades.

Stay On or Above Leader's Glide Path

Incident data shows that the greatest potential for a wake vortex incident occurs when a light aircraft is turning from base to final behind a heavy aircraft flying a straight-in approach. Use extreme caution to intercept final above or well behind the heavier aircraft. When a visual approach is issued

and accepted to visually follow a preceding aircraft, the pilot is required to establish a safe landing interval behind the aircraft s/he was instructed to follow. The pilot is responsible for wake turbulence separation. Pilots must not decrease the separation that existed when the visual approach was issued unless they can remain on or above the flight path of the preceding aircraft.

Warning Signs

Any uncommanded aircraft movements (i.e., wing rocking) may be caused by wake. This is why maintaining situational awareness is so critical. Ordinary turbulence is not unusual, particularly in the approach phase. A pilot who suspects wake turbulence is affecting his or her aircraft should get away from the wake, execute a missed approach or go-around and be prepared for a stronger wake encounter. The onset of wake can be insidious and even surprisingly gentle. There have been serious accidents where pilots have attempted to salvage a landing after encountering moderate wake only to encounter severe wake vortices. Pilots should not depend on any aerodynamic warning, but if the onset of wake is occurring, immediate evasive action is a MUST!

How to Avoid Wake Turbulence Takeoff

If you think wake turbulence from the preceding aircraft may be a factor, wait at least 2 or 3 minutes before taking off. (See AIM para. 7-58 b & c). Before taking the runway, tell the tower that you want to wait. Plan your takeoff to liftoff before the rotation point of the preceding aircraft.

Climb

If you can, climb above the preceding aircraft's flight path. If you can't out climb it, deviate slightly upwind, and climb parallel to the preceding aircraft's course. Avoid headings that cause you to cross behind and below the preceding aircraft.

Crossing

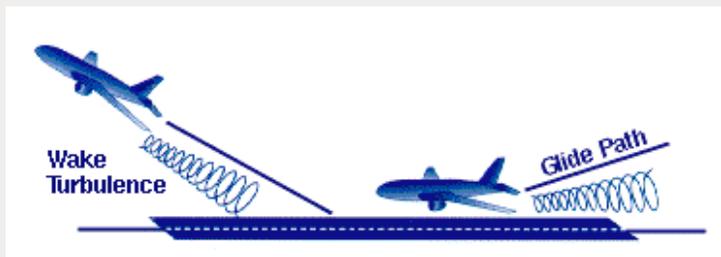
If you must cross behind the preceding aircraft, try to cross above its flight path or (terrain permitting) at least 1,000 feet below.

Following

Stay either on or above the preceding aircraft's flight path, upwind, or at least 1,000 feet below.

Approach

Maintain a position on or above the preceding aircraft's flight path with adequate lateral separation.





Landing

Ensure that your touchdown point is beyond the preceding aircraft's touchdown point, or land well before a departing aircraft's rotation point.

Crossing Approaches

When landing behind another aircraft on crossing approaches, cross above the other aircraft's flight path.

Crosswinds

Remember crosswinds may affect the position of the vortices. Adjust takeoff and landing points accordingly.

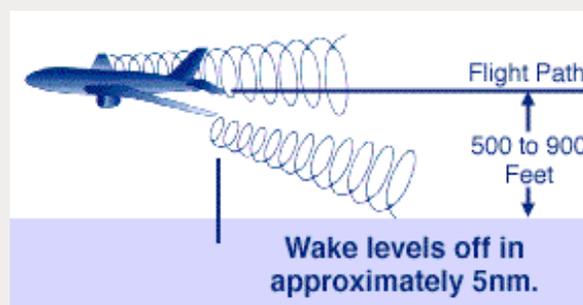
Helicopters

Helicopter wake vortices may be of significantly greater strength than fixed wing aircraft of the same weight. Avoid flying beneath the flight paths of helicopters.

"It felt as though we had hit a twenty-foot thick concrete wall." Statement from a corporate pilot after hitting the wake from a large aircraft in a slow descent across his flight path. "We were cleared for a visual approach to the right runway and to maintain visual separation on a wide-body cleared to land on the left. Our yaw damper was MEL'ed inoperative and the aircraft kind of wallowed in the landing configuration. At 2,200 feet MSL, on about a 7 mile final, the aircraft began an abrupt roll to the left and the nose pitched down. Full scale deflection of the yoke to the right did not arrest the left roll and for a moment, it appeared the aircraft was going to roll over onto its back. Suddenly, the aircraft began to recover as the ailerons regained effectiveness. The rest of the approach and landing were normal. The winds were from the left and must have caused the wake vortices from the wide-body to drift toward the right runway final." Statement from pilot flying a regional turboprop. "While holding for an IFR release, a large military transport was cleared for a low approach and to remain in the pattern. Approximately 2 to 3 minutes later, I was cleared for takeoff. After takeoff, I cleaned the aircraft up and climbed about 20 knots faster than normal. Going through 1,200 feet MSL, I lowered the nose slightly because I thought I had cleared

the crosswind path of the military transport. About that time, the aircraft began a smooth roll to the left and felt like it was trying to pitch up. I applied nose down pressure and then heard the engines cavitate and we pitched down rather abruptly. The aircraft then felt solid, so I throttled back and gradually pulled up and resumed the climb. The incident shook up some of the passengers, so I explained to them what I thought had happened and that I was going to return to the airport. In all my years of flying, this is the first time I have encountered the wake from a large aircraft." Statement from a light transport pilot.

The above are actual excerpts from reports to the Aviation Safety Report System (ASRS).



For Additional Information Order the free Advisory Circular, AC-90-23E from: DOT, M-443.2 General Services Section Washington, D.C. 20590 A self addressed mailing label will speed processing and delivery A wake turbulence Training Aid has been developed by the FAA and industry. The training aid includes a report, a videotape, and a CD-ROM. Copies of the training aid are available for a fee from: National Technical Information Service U.S. Department of Commerce 5285 Port Royal Road Springfield, VA 22161 or call: 703.487.4650. Request the following NTIS Accession Numbers:

Report PB95780136

Videotape AVA19661-VNB1

CD-ROM PB95502613 Also, there is a section on wake turbulence in the current Aeronautical Information Manual (AIM). To receive a printed copy of publication No: ASY-20 95/003 "CAUTION Wake Turbulence" brochure from which these pages are based, write: FAA/ASY-20 400 7th Street, S.W. Washington, D.C. 20590

You may also leave your request with an automated telephone answering service by dialing: (202) 267-7770



Flying Hour Milestones

12,500 HOURS

433 AW/SE, Lackland AFB, TX
CMSgt Harold G. Tilton

8,500 HOURS

6 AS, McGuire AFB, NJ
TSgt Kirk D. Sweger

433 AW/SE, Lackland AFB, TX
SMSgt Tom Fuentes Jr.
SMSgt Lethaniel N. Martin
MSgt Clyde P. Ellis

7,500 HOURS

2 ARS/SE, McGuire AFB, NJ
TSgt Angelo Correa Jr.

6 ARS/SE, Travis AFB, CA
TSgt David York

6 AS, McGuire AFB, NJ
TSgt John E. Billings

32 ARS/SE, McGuire AFB, NJ
TSgt David M. Pelton

433 AW/SE, Lackland AFB, TX
SMSgt Victor R. Abundis

6,500 HOURS

6 ARS/SE, Travis AFB, CA
MSgt Kieron Reeves

6 AS, McGuire AFB, NJ
TSgt Karl R. Eckberg

22 ARW/SE, McConnell AFB, KS
MSgt Chee Kheong Teo

32 ARS/SE, McGuire AFB, NJ
MSgt Eric D. Thomas
TSgt Scott F. Dawe

166 AW/SE, New Castle, DE
Lt Col Michael W. Silverman

182 AW, Peoria, IL
Lt Col Theodore H. Palmer

5,000 HOURS

2 ARS/SE, McGuire AFB, NJ
Maj Robert Hock
TSgt Joseph J. Duarte
TSgt Clark R. Neitzel
SSgt Thomas R. Breheny

6 ARS/SE, Travis AFB, CA
Lt Col Francis Curran III
Maj Daryl Brondum
TSgt James Kremko
SSgt Jack Munson
SSgt Abel Saenz

6 AS, McGuire AFB, NJ
Lt Col Thomas J. Ross
Maj Perry J. Shepler
TSgt Dennis D. Engle
TSgt Daniel P. Talbot
TSgt Daniel S. Webster
TSgt John C. Woods
SSgt Adam M. Paul

14 AS/CC, Charleston AFB, SC
SMSgt Patrick R. Farley

22 ARW/SE, McConnell AFB, KS
Lt Col David M. Callis
Lt Col Peter Cantwell

32 ARS/SE, McGuire AFB, NJ
MSgt Larry W. Holdredge
MSgt Paul A. Snemyr
TSgt James P. Gately
TSgt Michael J. Haslage
TSgt Daniel R. Reyome
SSgt Leo Brown Jr.
SSgt Thomas R. Glosser
SSgt Allen J. McNamee

39 AS/CC, Dyess AFB, TX

TSgt David A. Puerner

40 AS, Dyess AFB, TX

Lt Col Richard J. Dieringer

Lt Col Jon A. Duresky

Maj Victor Fiorentini

Maj Brandt K. Tibbitts

92 ARS/CC, Fairchild AFB, WA

TSgt Dominic R. Peterson

93 ARS/CC, Fairchild AFB, WA

TSgt Larry A. Westwood

SSgt Michael P. McPhee

152 AW, Reno, NV

Lt Col Chris Ultsch

182 AW, Peoria, IL

Lt Col Scott A. Swanson

CMSgt Richard A. Barnick

375 AW, Scott AFB, IL

TSgt Kevin Dreesman

433 AW/SE, Lackland AFB, TX

SMSgt Victor Mena

MSgt Charles D. Cardenas

MSgt Luis Cardenas

MSgt Randall Christian

MSgt Denise L. Lynch

MSgt Scott Lynch

MSgt Albert A. Moreno

TSgt Kevin D. Forester

KC135 CES/SEF Fairchild AFB, WA

TSgt Gerald V. Swanson Jr.

3,500 HOURS

2 ARS/SE, McGuire AFB, NJ

Maj Craig D. Cady

Maj Mark L. Kaiser

Maj Vahan Nokhoudian

MSgt Randall G. Crittendon

MSgt Jon P. Deal

TSgt Emilio M. Figueira

TSgt James E. McMillen

TSgt Carl A. Toppin

SSgt Mark W. Hohn

SSgt Richard A. Pennington

SSgt Glenn M. Yawn

6 ARS/SE, Travis AFB, CA

Maj Brian Bernett

Maj David Carter

Maj Mark Caudill

Maj Chris Fuller

Maj Thomas Nelson

TSgt Gerald Barnett

TSgt William Edwards

SSgt Dennis Johnson

SSgt Richard Simms

6 AS, McGuire AFB, NJ

Maj James A. Jacobson

TSgt David P. Galenbeck

SSgt Christopher L. Anthony

11 AS, Scott AFB, IL

Maj Jonathan A. Cerie

Capt Steven K. Neaville

14 AS/CC, Charleston AFB, SC

Lt Col Paul E. Dorcey

Maj Stephen R. Weishuhn

Capt Jay D. Washington

TSgt Paul J. Harvell

SSgt Rodney W. Nuckoles

22 ARW/SE, McConnell AFB, KS

Lt Col Jacqueline D. Van Ovost

Lt Col Richard Stone

Maj David Hammack

Maj Doug Patterson

SMSgt Kevin Hershey

MSgt Richard Brack

TSgt Troy B. Doane

TSgt Christopher Rieger

32 ARS/SE, McGuire AFB, NJ

Lt Col Guillermo Balmaseda

Maj William E. Harkins

Maj John D. Newberry

Maj Timothy H. Robinson

Capt Rick E. Wilson

SSgt Robert J. Reynolds

39 AS/CC, Dyess AFB, TX

Maj Glen B. Swift

TSgt Eric R. Wilkins

Milestones

40 AS, Dyess AFB, TX

Lt Col Terry L. Johnson
Maj John J. McDonough
Maj John R. Romero
Maj James B. Williams
TSgt William T. Goddard

92 ARS/CC, Fairchild AFB, WA

Col Randal D. Fullhart
Col Frank R. Sizemore
Maj Eldra D. Carson
Maj Gerald Eves
Maj James Guzzwell
Maj Rockford B. Wright
Maj Robin N. Whybrow
Capt Richard J. Brown
CMSgt Oliver M. Winter
SMSgt Daniel J. Repp
TSgt Mark D. Reuter
SSgt Theodore W. Buit

93 ARS/CC, Fairchild AFB, WA

Lt Col Edward M. Minahan
Maj Timothy J. Fallon
Maj Bart W. Weiss
TSgt John D. Curry

96 ARS/CC, Fairchild AFB, WA

Lt Col Kurt a. Tempel
Lt Col Curtis E. Henry
Lt Col Lowell J. Stockman
Maj Marcus P. Smith
Maj Herbert H. Henderson
Maj Frank S. Pechin
TSgt Shaun A. Lewis

182 AW, Peoria, IL

Col Barry W. Beard
Col William P. Robertson
Lt Col Jerome J. Goodin
Lt Col Jesse L. Pippins
Maj Douglas W. Applegren
Maj Christopher O. Caine
Maj Terry E. Feather
Maj David A. Peiffer
Maj Troy A. Roberts
Maj Richard L. Wainman
SMSgt Gary W. Babcock
SMSgt Kelly G. Delaney

375 AW, Scott AFB, IL

Col John L. Strube

458 AS, Scott AFB, IL

Maj Larry Gowen

2,500 HOURS

2 ARS/SE, McGuire AFB, NJ

Capt Michael Schlotterback
SSgt Chris T. Berry
SSgt Daniel Cykewick
SSgt Nathan S. Tilton

6 ARS/SE, Travis AFB, CA

Maj Donald Andersen
Maj Charles Melnik
Capt James Bookhart
Capt John Distefano
Capt David Gerhardt
Capt Brent Mesquit
Capt David Morisey
Capt Dane Nielson
Capt Bobby Petty
Capt Tyler Prevett
Capt Christopher Rogowski
Capt Christopher Thompson
SSgt Rafael Galvez
SSgt Brian Lane
SSgt Nicholas Slahor

6 AS, McGuire AFB, NJ

TSgt Raymond A. Ratajczak
SSgt Michael L. Hohizon
SSgt Lewis J. Holston
SSgt Patrick J. Kelly
SSgt Rick G. Marston
SrA Charles W. Brinser

11 AS, Scott AFB, IL

Capt David R. Glauner

12 ALF, Scott AFB, IL

Capt Steven E. Adams

14 AS/CC, Charleston AFB, SC

Lt Col Gary P. Goldstone
Maj Kimberly Szathmary
Maj Thomas S. Szvetez
Maj Scott D. Tabor
TSgt Charles D. Irwin
TSgt Terry Topouzoglou
SSgt Michael R. Gordon
SSgt Kevin A. Riley
SSgt Paul C. Spear
SSgt Donny M. Washam

22 ARW/SE, McConnell AFB, KS

Lt Col John Quinn

Lt Col Dean Wolford
Maj George A. Fritts
Maj Sushil Ramrakha
Capt Christine Clausnitzer
Capt Chun Guan Seng
Capt Emmit Wingfield
Capt Garrett R. Woolley
TSgt Mary J. Kuiken

32 ARS/SE, McGuire AFB, NJ

Maj Timothy B. MacGregor
Capt Joel S. Dickinson
Capt Stephen J. Fowler
Capt John A. Hopper
Capt Daniel A. Neff
Capt Julie L. Stamp
SSgt Darryl K. Smith

39 AS/CC, Dyess AFB, TX

Lt Col Charles K. Hyde
Maj Angel A. Diaz
Maj Kenneth C. Wray
Capt Paul M. Trujillo
TSgt Dennis D. Fordyce
TSgt Scott A. Showalter
TSgt John M. Tetreault
SSgt Kevin T. Murray
SSgt Jonathan D. Zahn

40 AS, Dyess AFB, TX

Capt Donald S. Allison
MSgt Steven A. Brauch

92 ARS/CC, Fairchild AFB, WA

Col Susan C. Ross
Maj Thomas J. Thibault
Maj James C. Tallman
Maj Seth Beaubien
Maj Timothy A. Burns
Maj Lesley D. Spraker
Maj Robert S. Lippert
Maj Niele H. Musekamp
Capt Robert R. Gates
Capt David M. Lenderman
Capt Joel Higley

93 ARS/CC, Fairchild AFB, WA

Lt Col Michael V. Krueger
Maj Francis A. Ducharme
Maj August S. Hein
Maj Timothy J. Matson
Capt Thanoon J. Agha
Capt Herbert L. Clayton
Capt Andrew M. Simmons
Capt Jennifer E. Swain

96 ARS/CC, Fairchild AFB, WA

Lt Col Donald J. Comi
Lt Col David B. Horton
Capt Nathan A. Toole
SSgt Alecia L. Judd

117 ARW/ANG, Birmingham, AL

Lt Col Clifford James
MSgt Caroline M. Bearden
MSgt Phillip E. Lee
MSgt Raymond L. Naugher

182 AW, Peoria, IL

Lt Col Scot O. Decker
Lt Col Steven J. Konie
Lt Col Daniel M. Mini
Maj Michael D. Bollwitt
Maj Stewart P. Holloway
Maj Scott D. Livermore
Maj Daniel R. McDonough
Maj Matthew J. Miggins
Maj Peter A. Sensenbrenner
Maj Scott A. Wientjes
Capt Colin P. Reilly
Capt Jeffrey S. Teuscher
MSgt Aaron D. Jones
MSgt Terry L. Jones
MSgt Michael J. Killen
MSgt Joseph B. Tucker
TSgt Tony L. Frederking

433 AW/SE, Lackland AFB, TX

MSgt Edward A. Ramirez
TSgt Dustin Z. Burlison
TSgt Edward Campos
TSgt Gabino Castillo
TSgt Sherry R. Castro
TSgt Alfonso Cervantes
TSgt Edward J. Ingle
TSgt Gerardo J. Zuniga
SrA Hector Chapa

457 AS, Scott AFB, IL

Maj Richard J. Terrell
Capt Anthony D. Rosello

1,500 HOURS

2 ARS/SE, McGuire AFB, NJ

Capt Raymond A. Chehy

Milestones

Capt Jason S. Fromm
Capt Patrick W. Greenleaf
Capt Christopher V. Maddox
Capt Anibal "Matt" Medina
MSgt Jason P. Tuttle
TSgt James J. Van
SSgt Bryan J. Dohlman
SSgt David H. Megill
SSgt Shawn E. White
SrA Ryan A. Aspen
SrA Garrett A. Rayno
SrA Sean Wall

6 ARS/SE, Travis AFB, CA

Capt Eric Delwiche
Capt Rebecca Hendrix
Capt John Millard
Capt Randall Sealy
Capt Sam Smith
Capt Shad Vinson
SSgt Thomas Barger
SSgt Justin Barrett
SSgt Timothy McCallum
SSgt Charles Schmied
SrA Jason Brady

6 AS, McGuire AFB, NJ

Maj Miller Cunningham
Capt Jeffrey T. Forhand
MSgt Rick Ross
TSgt Michael A. Cox
TSgt Charles E. Hale
SSgt Tina Bergeron
SSgt Enrique Moeller
SSgt Tibor R. Puskas
SSgt Sean Smith
SSgt Lori E. Tascione
SrA Barret C. Daniels

14 AS/CC, Charleston AFB, SC

Capt Andrew J. Blaho
Capt Mark D. Chagaris
Capt Roger Efraimsen
Capt Eric W. Von Trotha
MSgt Keith M. Brown
SSgt Norman D. Hurley
SSgt Brett A. Newman
SSgt William E. Pace
SrA Adam L. Koerner

22 ARW/SE, McConnell AFB, KS

Capt Brant C. Abraham
Capt Thomas A. Beatie
Capt Thomas Clancy
Capt Pete Fravel
Capt Brian D. Gilpatrick
Capt Justin A. Hansen

Capt Wendell E. Hertzelle
Capt Corbett Peterson
Capt Douglas B. Shaffer
Capt William M. Stowe
Capt Korey Vaughn
TSgt David E. Coggin
SSgt Kwong Yong Ho
SSgt Justin A. Johansen
SSgt Christopher S. Murphy
SSgt Darin Talsma
SrA Mark Johnson

32 ARS/SE, McGuire AFB, NJ

Capt Jason M. Matyas
Capt Grant C. Miller
TSgt Jose V. Figueroa
TSgt Sidney C. Smith
SSgt Arthur A. Hunnel
SSgt Jeremiah K. Love
SrA Todd W. Dallmann

39 AS/CC, Dyess AFB, TX

Maj Greg P. Haynes
Capt Scott R. Bowen
Capt Justin D. Demarco
Capt Shawn D. Fisher
Capt Ommid J. Ghaemmaghami
Capt Antonio D. Jeserun
Capt Marcus L. Lewis
Capt Alfred C. Schmutzer
Capt Mitchell R. Spillers
Capt Kevin C. Thompson
Capt Scott J. Volk
MSgt Raymond D. Eveland
MSgt Timothy M. Lewis
SSgt Timothy L. Carson
SSgt Lee M. Plekker

40 AS, Dyess AFB, TX

Maj Samuel T. Skaggs
Capt Daniel R. Abshere
Capt Andrew J. Belanger
Capt William K. Bosch
Capt Ronald A. Bottoms
Capt Adam M. Faulkner
Capt Daniel J. Fielder
Capt David C. Flynn
Capt Sean K. Gradney
Capt Shannon D. Hailes
Capt James M. Hawley
Capt George C. Lugo
Capt Carlos V. Salinas
Capt Jason B. Terry
MSgt Brian A. Humecki
MSgt William E. Wardell
TSgt David B. Montgomery
SSgt Mark J. Blinn

SSgt Norman O. Bowie
SSgt John F. Carew
SSgt William Hughes
SSgt Jason A. Main
SSgt Vicente Romero III
SrA Jonathon Pierce

84 ALF, Scott AFB, IL
Capt Matthew T. Vann

92 ARS/CC, Fairchild AFB, WA
Capt Lou Hisel
Capt Stephen A. Polomsky
Capt Andrew Rowe
SSgt Shane Cassily
SSgt Michael A. Armstrong

93 ARS/CC, Fairchild AFB, WA
Lt Col Hugh G. Severs
Maj Kennis R. Nichols
Capt Julia C. Anderson
Capt Mark A. Hickman
Capt Douglas F. Kaupa
Capt Christopher E. Lantagne
Capt Scott C. Zippwald
TSgt Charles H. Armstong
SSgt John E. Baughman
SSgt Tom E. Long
SSgt Christopher E. Sprague
SSgt James B. Stracener
SrA Willaim S. Perdew

96 ARS/CC, Fairchild AFB, WA
Maj Sean P. Callahan
Maj CHARLES M. Howard
Maj Wayne A. McCaskill
Maj Timothy J. Soderholm
Capt Matthew C. Brennan
Capt Christopher S. Brockman
Capt Bryan J. Cahill
Capt Darin C. Driggers
Capt Jeffrey P. Jacques
Capt Brett A. King
Capt Matthew W. Petro
Capt Benjamin L. Wyborney
TSgt Patrick A. Bennett
SSgt Jeffrey M. Gaston
SSgt Jamie L. Smith

117 ARW/ANG, Birmingham, AL
Col Paul D. Brown, Jr.
Col Fred D. Covington
Col Robert F. Reinhardt, Jr.
Lt Col Anne L. Johnston
Lt Col Paul A. Pocopanni
Lt Col James S. Tevis
Maj Frank W. Weaver, Jr.

MSgt Steven K. Hay
MSgt Scott A. Naden

166 AW/SE, New Castle, DE
CMSgt Deborah J. Kamermans
TSgt Robert C. Mebane

182 AW, Peoria, IL
Lt Col Mark D. Auer
Lt Col George W. OBryan
Lt Col James N. Roles
Lt Col Barton W. Welker
Maj Marc A. Augustave
Maj Dennis E. Baker
Maj William K. Berry
Maj Bruce C. Briney
Maj John C. Graybeal
Maj Rex W. Langham
Maj Frank J. Melchiorri
Maj Dean A. Meucci
Maj Keith E. Rigdon
Capt Jeffrey A. Goodale
Capt Jeffrey S. Herrmann
Capt Patrick J. Ober
Capt Tracy N. Speck
2Lt Eric H. Dolan
SMSgt Steven J. Pyszka
MSgt Laura C. Nieman
MSgt Frank Ochoa
MSgt Jeffrey A. Rennick
MSgt Cyrus D. Snider
MSgt Matthew H. Stone
MSgt Todd M. White
MSgt Matthew J. Weghorst
TSgt Jeffrey J. Lemaire
TSgt Joseph G. Rudebeck

375 AES, Scott AFB, IL
TSgt Charles R. Stewart

433 AW/SE, Lackland AFB, TX
MSgt Matthew A. Tabler
TSgt Charles E. Campa
TSgt Sherry R. Castro
TSgt Santiago M. Garcia
TSgt William R. Newhard
TSgt Arthur Reyes Jr.
TSgt Thomas J. Veilleux
TSgt Garcia Verdeja
SSgt Guillermo Jalomo

458 AS, Scott AFB, IL
Capt Kevin Koenig



C.R. TERROR

The Dauntless Driver Discovers His Dash-One

That completes the predeparture crew brief...crew bus is waiting out back," announced the Able Aeronaut. "Time to drag bags; of course, I'll personally carry my precious hand-tooled baby-blue B-4 bag." "Boss, don't you think you ought to take those Dash-One safety supplements, the ops supplement, and the IMC out of your V-file?" inquired Capt. L.S. Sam. "You did sign for them." "Nonsense, m'boy I can't waste my valuable time on namby-pamby stuff like pen and ink changes. Have no fear my faithful followers, Maj. MacZammer is confined to his cubicle in the brick house, what with the demise of novice checkrides. If those changes are really as important as you think, they'll reprint the entire chapter for quick easy filing. Our hefty Starlifter will fly better without the excess weight of those changes. Let's be off and get going," finished C.R. Flight planning, weather, and command post briefing behind them, C.R. and crew were ready to start engines and write a new chapter in airlift history. As usual, C.R.'s fury had taken a toll on the ramps and taxiways of the state's finest MAC base. Construction barricades were standing up all over. Mounds of dirt along the taxiways made it appear as though monster moles had infested the area. As the Starlifter pulled out of the temporary alternate hot cargo spot, Sammy could tell it was going to be an arduous journey simply to reach the runway.

"Boss it looks like we'll be taxiing five miles to reach the runway today with taxiway 'Zulu' closed. The only taxiway fully open is the parallel," stated Sammy.

"Tut, tut, Samuel m'boy. We'll have no problem getting to the active. Our only concern is taking off before our delay start time, which will be easy," boasted the Ace of Aerospace.

"Easy if we don't make a wrong turn and wind up backing up on one of the closed taxiways," came an unidentified voice over interphone.

"Sammy, call for takeoff clearance. My Rolex Oyster Perpetual Chronometer indicates we are now five minutes from our scheduled takeoff time."

Despite being a good 4,000 feet from the approach end of the runway, Tower cleared the Starlifter for takeoff, hoping to get MAC 1313

airborne so normal airfield operations could be resumed. Colonel Fang had instituted a policy of no airfield movements whenever C.R. was taxiing an aircraft. It prevented innocent bystanders from becoming involved with the Ambient Aeronaut's often hazardous taxi techniques. In any case, Colonel Fang's ulcer was now responding to treatment and damage to airfield construction equipment was on the decline.

The Starlifter bounced along the taxiway as it approached the runway. As the turn to the active drew close, C.R. jumped on the binders, much as he did when driving his E-type Jaguar. The nose tires skidded briefly as the C-141 arrived into position, ready for takeoff.

As MSgt. Max Torque called the "line up check" complete, the Master Manipulator was pushing the throttles to takeoff EPR. As indicated airspeed climbed toward 95 knots, the "Master Caution" and "Door Open" lights blinked on.

"REJECT!" screamed the Addled Aviator, as he yanked the throttles to idle and then into reverse thrust. "Sammy, get a call off to tower about our emergency!"

"Boss, we have a 'Door Open' light, not an emergency," replied the Long Suffering copilot. I'll ask them to hold our clearance open. Shouldn't we check the brake energy charts before we attempt another takeoff?"

"Pilot, loadmaster. Looks like your package marked 'fragile' that you tied down back here fell on the troop door handle. It must have been just enough to trip the main switch for the light," announced TSgt Ty Downs. "I'll secure it with the crew bags."

"Don't worry about the brake energy chart, Sergeant Torque. I was barely on them. This should be cool by the time we get back to number one again; it's all uphill so I won't even touch the brakes," remarked C.R. "If I taxi fast enough, we can still take off without getting a delay."

After what seemed the longest nine minutes of taxiing, the Starlifter was once again taking the active for departure, with time to spare before getting a delay. Not once had C.R. touched the brakes during taxi. Airspeed increased toward go



speed and all systems were normal. About the same time Sammy called "Go," a muffled bang and rumble emerged from the main gear area. The Rumble ceased as the C-141 lumbered into the sky. Before the Fieldgrade Fumbler could call for gear lift, Sammy pointed out an unsafe bogey.

"Right you are Sammy. Leave the gear down and ask for vectors for a box pattern. Approach will help us out of the way of other traffic. One we're safely in the right pattern, we can concentrate our efforts on fixing the gear problem. I'll fly while you and Sergeant Torque take care of the situation. Of course," added the Sultry Sultan, "I'll provide you with my vast wealth of systems knowledge. I have a checklist here someplace."

C.R. began rummaging in his soft patent leather book case for the checklist. The checklist was draped in his violet scarf, neatly folded under a well preserved cereal box. Some pages were stuck together with what appeared to be grape jelly. Peeling the pages, C.R. announced he was ready to

assist with the troubleshooting.

"What page are you on? Which breakers do you want me to check?" he asked.

"None, sir," replied Max over the interphone. "We need Sergeant Downs and the scanner to check both main landing gear areas before we start. We want to know if there's any damage before we go too far."

"Pilot, loadmaster. The scanner is on his way back to the right side and I'm taking the left. We'll have a verdict on damage shortly. It'll take a couple of minutes to get the access panels off so we can see out the inspection windows. I'll be off interphone for a short time."

For the Able Aeronaut, the next few minutes were agonizingly slow, as he read the index for the emergency checklist section, searching for the unsafe bogey checklist. His limited attention span wandered back to scanning outside just in time to see a red and white aircraft pass under the nose. A





quick, somewhat shaky call to ATC revealed they didn't have the aircraft on radar.

"Pilot, scanner. Looks like we blew one or two tires on the right side. No damage to the bogey or strut. Wind noise back here sounds funny, kind of like a flapping sound."

"Pilot, engineer. We still have safe indications on the gear and an unsafe bogey. Since there's no other damage, we can land once we're down to max landing weight."

"Okay. Start dumping fuel, engineer. Sammy, call command post. Tell them of our dire circumstances and that we're dumping fuel. I'll tell ATC to clear the airspace under us for the fuel dumping." The Ace of Aerospace was now in his element, giving orders and once again almost in control of his destiny. "Let me know as soon as we're down to landing weight, engineer."

As soon as the scanner was in position to monitor the fuel dumping, Max opened the dump valves and 90,000 pounds of JP-4 was on its way out the dump masts. Much to everyone's relief, both jettison valves closed when the jettisoning was complete. The Starlifter, now down to a reasonable landing weight, was vectored back to base.

The ILS approach was nearly flawless, much to the awe of the crew, until they realized the

autopilot was flying the plane, not C.R. When he took control at 200 feet, there was no doubt who was flying the aircraft.

The landing was a little rough, but C.R. stayed on centerline until coming to a complete stop. Fire trucks converged on the wounded Starlifter. IN the distance, maintenance trucks and a tug were approaching. There was no crew bus in sight—just the DO's staff car coming down the runway.

To everyone's amazement, Colonel Fang didn't head straight for the cockpit. Instead, he went with the DCM to look over the landing gear. A look of relief spread across the Pompous Pilot's face. He might escape a talectomy just this once.

"Major Terror," boomed the all-too-familiar voice of Colonel Fang, "you did a fine job. Probably a first for you. When I heard MAC 1313 was dumping fuel for an emergency return, I thought you might have another PTLC light like your 'emergency' last week. Glad to see you've gotten in the Dash-One for a change.

The Magic Major was struck speechless. Before he could mention his superior airmanship and systems knowledge, Colonel Fang was gone from the flight station. Sheepish grins and wagging heads filled the cockpit. Once again, only his faithful crew knew the real story.

QuickStoppers

LOW RIDER

Tricycles in the driveway, a last minute “discussion” with a frazzled wife and early-morning rush hour traffic were combining to make a San Francisco pilot late for his flight.

When he finally reached the front of the line at a 4-way stop near the airport, he waited impatiently for the red SUV on his right to cross the intersection. Giving a quick glance to the SUV and intending to cut off anyone else who might be thinking of going before him, he gunned his engine to cross just behind the red vehicle. Only 15 minutes to flight time! Then...

...CRUNCH!

Two hours later, he reached the airport — in a taxi. His car had been towed and a ticket for restless driving was tucked reluctantly in his jacket pocket. Gunning the engine had certainly shot his vehicle across the intersection! Right into the low tent trailer he had failed to notice behind the red SUV!



HEAD OVER HANDLEBAR

Cycling has become a popular American pastime. Bicycle tours of mountain trails and scenic areas provide a healthy, relaxing way to spend a weekend.

Jim and his wife were taking advantage of one such scenic trail near their home one beautiful fall weekend. Their ride began in gorgeous New England weather, but it soon began to sprinkle, then shower,



and then pour. They were soaked!

“Let’s get down to the lodge fast!” Jim called back to his wife — barely visible through the downpour behind him.

Jim began to descend a particularly steep section of the path which intersected another path at the bottom of the slope. He gathered speed, but began to apply his brakes when he noticed another bike on the intersecting path. Nothing. He applied them again. Nothing!

Yelling to get the other biker’s attention, he tried frantically to avoid the stony obstacles in his path. His bike continued to accelerate uncontrollably until his front tire hit a particularly sharp rock and he was sent head over handlebars into a puddle beside the road.

After gingerly checking his body for bumps and bruises, he checked the brakes on his bike. “That’s your problem,” said the biker who had been in his path a moment before. “Those are caliper brakes — standard on most new bikes! They lose most of their stopping power when they’re wet! Good thing for me that the rock hit you before I did!”

“And good thing for me,” said Jim, “that my head is tougher than my handlebars!”

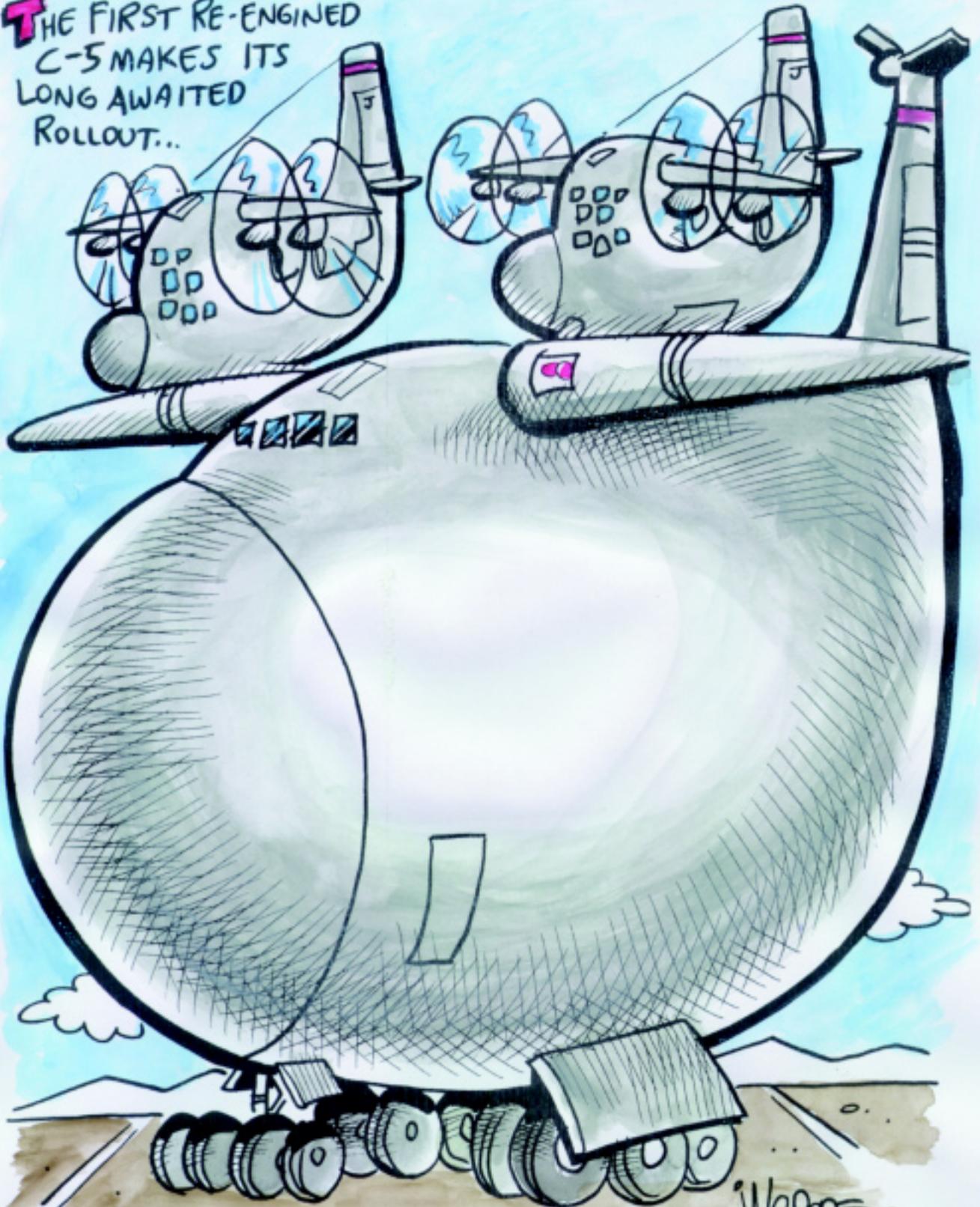
WHERE THE WIND COMES SWEEPING DOWN THE PLAINS

A 21-year old son of a helicopter pilot was driving a grain harvester across his grandfather’s winter wheat field to cut down the wheat stalks. The harvesting was going well until the driver’s cowboy hat was blown off by the wind and landed in front of the blades. Without thinking, the driver jumped down and ran in front of the tractor to collect his hat. The hat, however, was still being

blown about by the wind and the driver began to chase it. After a couple of minutes, he finally caught up with the hat. Unfortunately, the harvester caught up with the driver at approximately the same time. Local authorities were contacted by a neighbor who noticed the tractor crossing the highway without a driver.

POPE'S PUNS

THE FIRST RE-ENGINEED
C-5 MAKES ITS
LONG AWAITED
ROLLOUT...



Wepop
WESTOVER