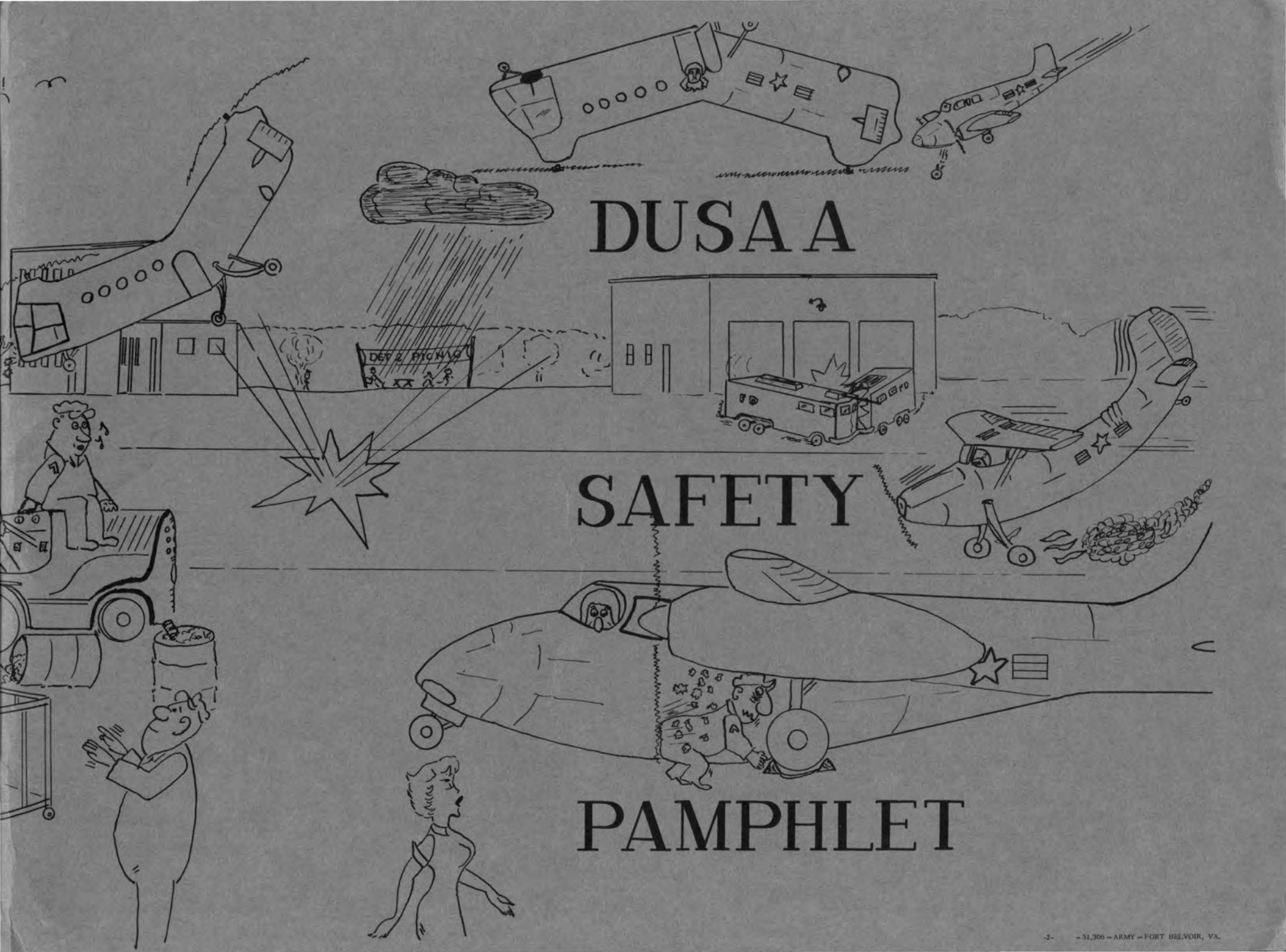
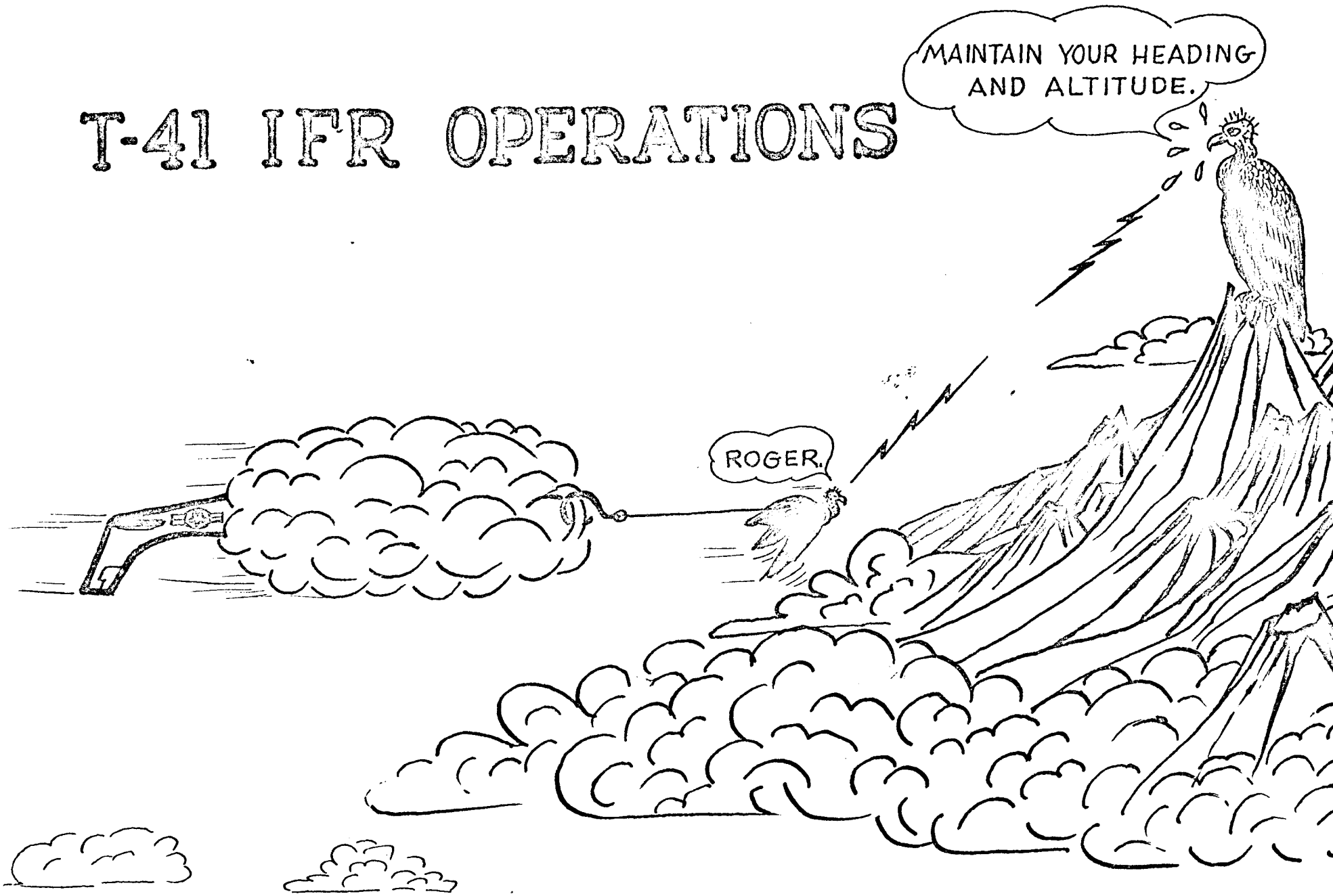


– 51,306 – ARMY – FORT BELVOIR, VA.

T-41 IFR OPERATIONS



Friendly Reminder

LEARN FROM THE MISTAKES OF OTHERS . . .

You won't live long enough to make them all yourself

Stop 'Playing Safe' . . . Work at it!

Freak Accident:

"There are no isolated cases.

The first failure constitutes a trend."

Are You Planning to Abort Your Takeoff?

If YOU are not, you should be. Every time you line up on the runway, add power, release the brakes and begin the takeoff roll you should have some definite plans concerning:

- Under what circumstances you will abort your takeoff.
- How you will execute the abort.

The rules governing actual abort procedures (once you decide to abort) are discussed in considerable detail in the Dash 10 manual for the aircraft involved.

Proper Briefing Can Avoid Many Problems

Know Your Field Layout

How Serious Is the Abort Problem?

When Is It Necessary to Abort a Takeoff?

Know what performance to expect; lack of knowledge can induce trouble, or obscure trouble, depending on the situation.

The phrase, *"Plan the flight, fly the plan,"* says it well. The entire flight should be planned in detail but no phase of the flight is more deserving of meticulous flight planning – and execution – than the critical takeoff phase. Finally, proper planning can only be based on a substantial knowledge by the pilot of his aircraft, his operating environment and Dash 10 emergency procedures. ◀

Professional longevity in ARMY aviation is not compatible with judgment founded upon approximation.

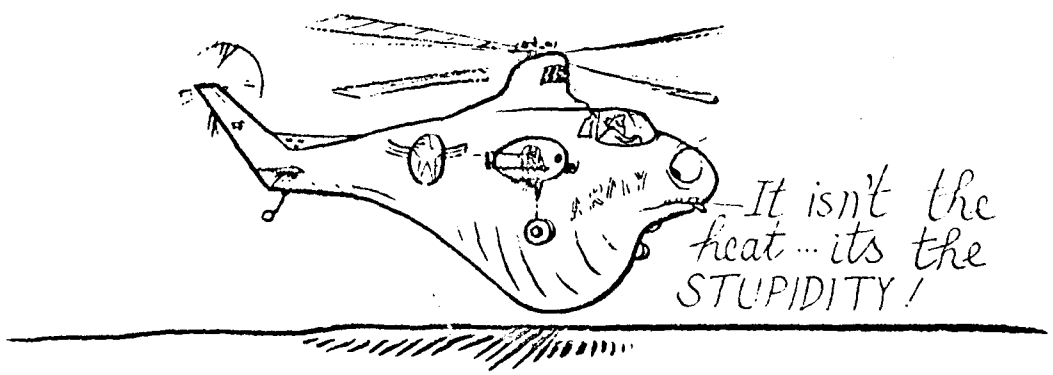
How can you compute DA from the cockpit while you are at some remote airstrip or landing zone? Using the following chart with information available from the cockpit, you can make a close approximation of the DA. The two arguments of entry to the chart are Pressure Altitude and Free Air Temperature plus 3° (the 3° correction compensates for moisture in the air). To obtain pressure altitude set 29.92 in the Kollsman window; free air temperature can be read directly from the indicator in the cockpit.

An example using the chart: with 29.92 set in the window you read 800 feet pressure altitude and the temperature gauge indicates 91°F. Your arguments of entry are 800 feet and 94°F (don't forget to add 3°F), and with a little interpolation, the DA is 3250 feet.

Density altitude is an important planning factor particularly in hot weather and at high elevations. Using the chart, DA can be approximated quickly and easily. TRY IT AND SEE!!!!

FREE AIR TEMPERATURE +3°F (°F/°C)

PRESSURE ALTITUDE	60/16	65/18	70/21	75/24	80/27	85/29	90/32	95/35	100/38	105/41
0	50	400	700	1050	1350	1650	2000	2300	2600	2900
500	700	1000	1350	1700	2000	2300	2600	2900	3200	3500
1000	1300	1600	1900	2200	2550	2850	3200	3500	3800	4100
1500	1900	2250	2600	2900	3200	3500	3800	4100	4400	4700
2000	2550	2900	3200	3500	3800	4150	4450	4750	5050	5350
2500	3200	3500	3800	4100	4400	4700	5000	5300	5600	5900
3000	3800	4100	4400	4700	5000	5300	5600	5900	6200	6500
3500	4400	4700	5050	5350	5650	5950	6200	6500	6800	7100
4000	5050	5350	5650	5950	6250	6600	6900	7200	7500	7750
4500	5600	5950	6250	6550	6850	7150	7400	7700	8000	8300
5000	6250	6600	6900	7200	7500	7800	8050	8350	8650	8950



notes from your flight surgeon

It's Gonna Get Hot!

Here's some hot weather advice from The Professional written for the men of the 1st Marine Air Wing. These guidelines are equally applicable to high temperature and humidity conditions in ConUS.

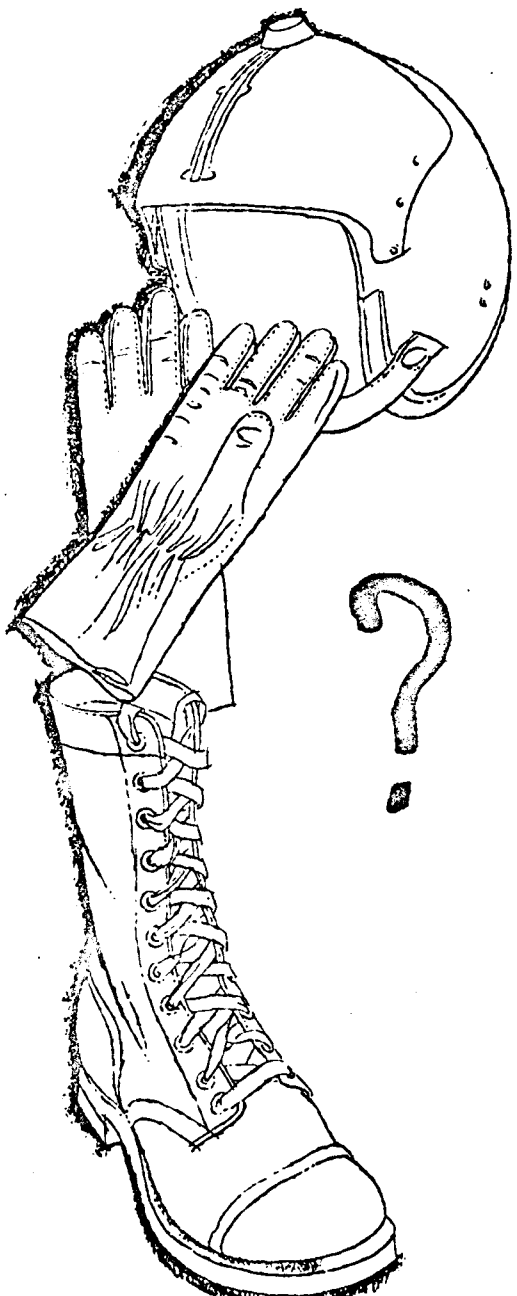
The human body contains a great deal of water and a considerable amount of salt. Sweating causes the body to lose these items and they must be replaced. The body cannot be weaned away from water or trained to do without salt. You have got to increase your intake of both to satisfy your body's requirements. Here are a few guidelines to help you keep a good salt and water balance during the summer and to avoid heat injury and exhaustion.

- *Drink water frequently and drink as much as you need. Small quantities of water taken frequently will satisfy your desire and will avoid that stuffed feeling that too much water taken at one time can cause.*
- *If you are sweating freely avoid cold drinks. They may taste great going down but will lie like a rock in your stomach. Cool drinks, not cold, will help avoid cramps and chills.*
- *Eat lightly. Go easy on sweets. Substitute water and fruit juices for soft drinks and milk occasionally.*
- *Take salt tablets if you can't satisfy your need for salt by using a greater amount on your food. Don't take too many all at once. Overdoses of salt tablets can cause nausea, diarrhea and vomiting. Space them out over the course of the day.*
- *Keep your headgear on in the sun and remember that a loose layer of clothing will actually keep out some of the sun's heat.*
- *If you feel sick or dizzy when heated, take a break. Let your body cool itself. Don't overdo things.*
- *If you stop sweating, get prompt medical aid.*

Your friendly flight surgeon will be delighted to chat with you about hot weather problems, salt tablets and your summertime drinking habits. Look him up!

The Professional

THESE THREE
DO YOU WEAR THEM??



AFTER an encounter with the tail rotor of a UH-34D, the wearer of the helmet shown in the accompanying photograph got up and walked away.

On landing approach, the port window of the helicopter had fallen out. In response to the pilot's request for someone to retrieve the window, the gunner ran aft. As he did so, he stepped in a puddle of water, lost his balance and fell into the tail rotor arc. The rotor struck his hard hat six times, penetrating to 1½" depth. The gunner—his only injuries a few minor cuts of the scalp—picked up the window and finished his job.

"Approach"

ACCIDENT AND INJURY PREVENTION

QUOTE WITHOUT COMMENT

This article was extracted from The MAC Flyer, January 1969.

The Safety Officer Is An Advisor.

The chief asset of a safety advisor is his ability to apply specific expertise to the entire operation objectively and impartially. He can "call 'em like he sees 'em!" because he is not a functional manager with a specific axe to grind. He, like the commander, is concerned with the "big picture." His proper role is to work in close harmony with all members of the staff in detecting and analyzing hazards and developing and applying effective preventive controls. He also serves to keep the commander informed of his organization's safety posture and to suggest managerial actions designed to improve it. He is, above all, a thoroughly trained, dedicated and competent person whose technical knowledge in the field of accident prevention far exceeds ordinary lay knowledge. When he speaks, others should listen. He may not always be right, but as with doctors or lawyers, his advice is ignored with peril.

All Accidents Reflect Management Deficiencies.

If we accept the idea that it is possible for a manager to use his resources safely and effectively, then we must accept the corollary view that each accident reflects some deficiency in management. Managers have the responsibility to prevent accidents; they also have the authority to take whatever measures are necessary to accomplish this objective. Since we also believe that all accidents are preventable, it then follows that the managers are the people who control the situation. The only reason we continue to have accidents is that some managers are less able to achieve 100% safety effectiveness than others. Sometimes they lack knowledge, sometimes skill or incentive. But whatever the reason, most continually poor accident pictures are improved by a change in managers, unless of course, the new manager is as inept as the former one. And that, too, is a managerial lapse, but at a higher level.

Accident Prevention Councils Need Command Leadership.

Some of our units have given up on accident prevention councils as unproductive, uninspired and unneeded. They have blamed the council itself, calling it a useless anachronism. Their ire was misdirected, as was their council. No element of the command safety program is going to succeed unless the commander personally backs it. Lip service won't do. Leadership has to be personal, dynamic and positive. We know, because most of our councils are run like that and they get outstanding results. There's just no substitute for good leadership. Know thyself.

Responsibility Must Be Accompanied By Authority.

Another safety fallacy that was born years ago was the idea that accident prevention was the business of the safety officer. Commanders and functional managers looked solely to him for answers to their growing accident rates. The desired improvement did not come about until it was recognized that the safety officer had neither the responsibility nor the authority to control accident-producing situations. Only the commander and the supervisor had the necessary control. The safety officer's job was purely advisory. And that's the way it should be.

The Safety Survey Is Most Effective When Used To Detect Managerial Deficiencies.

This follows from Point above. Another of our past errors was using the safety survey to inspect for compliance with regulations. We were nit pickers, often blind to the real causes of accidents. We poked around in corners looking for oily rags when we should have been examining the supervisor's attitude toward the storage of dangerous materials. Now we know better. We visit an organization to help them, not by just pointing out their mistakes, but by showing how to avoid them in the future. Instead of merely counting the number of unsafe practices and conditions, we offer the accumulated wisdom of the team members, including that gained through visiting other units, in setting up management procedures which will avoid them in the first place. The effect is a good deal more positive and beneficial to all concerned. Now, when the surveyed commander says, "We're glad to have you here!", he means it.

Have You Left Anything BEHIND

FOD - (Foreign Object Damage), that dirty word which causes so much trouble and expense!

Naturally, the man most often fingered as the culprit is the mechanic. However, all who are involved in working in and around aircraft must be concerned with FOD.

Not until every man feels a personal obligation to eliminate any possible source of FOD do we have the problem licked.

One thing is for sure. No FOD program works by itself! Education and reeducation must be a constant working tool of those who are responsible for FOD programs.

Does your FOD program work?

TOOL TIPS

USE OF TOOLS MAY VARY BUT SAFETY, GOOD CARE AND STOWAGE OF TOOLS DO NOT.

SELECTION OF TOOLS

Most tools are designed for specific uses. Care should be used in the selection of the right tool for a particular job.

• Pliers should not be used as a wrench. They are intended primarily for holding round bars, wires or small pipes. When pliers are used for tightening or loosening nuts or bolts, they not only burr the surfaces, but the gripping teeth of the plier jaws are damaged.

• Do not use wrenches as hammers. Do not hammer their flat surfaces like an anvil. Do not use makeshift extensions on wrench handles to obtain more leverage; use only the extensions which are specifically designed for a wrench. For best results, the mechanic should choose a wrench which fits the nut or other work exactly. A loose wrench is almost certain to slip whenever strong pressure is applied. This sudden slippage may cause you to lose balance and may cause injury.

• When choosing a screwdriver for a given job, select one with a blade which fits well, both in depth and width, into the slot on the screw head. This keeps the screwdriver blade from slipping and either ruining the head of the screw or damaging the tip of the screwdriver; Pliers and wrenches should never be used as an aid in turning an ordinary screwdriver. The average screwdriver cannot withstand such twisting. Either the screw head will burr, the blade will chip or the shank will twist in the handle.

• When using a hammer, select the proper type for the work being done, paying particular attention to the material of which the hammer is made. A plastic or rawhide hammer for heavy work will damage the hammer quickly just as the use of a steel hammer on soft metal will damage the material of the work.

• Select the correct type and size of chisels. It is important to use a chisel big enough. For effective work the chisel must also be sharp.

• Files must be chosen carefully for the work they must do. In choosing a file, several factors must be taken into consideration: the degree of hardness and peculiarities of the material, the shape of the work, location of the surface to be filed, quantity of stock to be removed, and the accuracy or smoothness desired.

• To select a correct hacksaw blade for any job, remember that at least three teeth should be kept in contact with the work at all times. Thin work requires a fine tooth blade, tilted on the cut to increase the length of the kerf.

• Never use a hammer which has a loose head, because the head is apt to fly off and cause injury to yourself or others.

• Never use a hammer with a chipped face. Once chipped, the face is almost certain to chip again. When a hammer head chips, flying steel fragments may cause serious injury to anyone standing nearby.

• Never hold work in the hand while tightening or loosening a screw. If the blade slips, there is a chance you may stick the screwdriver into your hand, causing a puncture.

• Never use a tool with a mushroom head; insure that all cold chisels, chisel bars, cutters, or other stock tools with chipped, cracked, or mushroomed heads are properly dressed.

• Never subject wrenches to excessive side strain.

• When chipping with a chisel or other tool, always wear goggles to protect your eyes from flying chips of metal. If others are working nearby, see that they are similarly protected.

• When using an adjustable wrench, set it so that the movable jaw faces in the direction in which the handle is turned.

• When working in confined spaces, insure that there is adequate clearance between the wrench and yourself; take care that the grip will not endanger yourself.

• Always pull a wrench toward yourself; never push it away, since if the tool slips or breaks, it is easier to brace against a backward pull than against a sudden lunge forward.

• Always keep tools clean and free of excess oil so they will not slip. In cleaning tools, use grease solvent or kerosene.

MAINTENANCE TROOPS . . . A clean shop is not always an efficient shop, but an efficient shop is always a clean shop!

Safety Panel Told of Shock Hazard in Power Tools

By Morton Mintz
Washington Post Staff Writer

LOS ANGELES, June 19—Many of the power tools bought by 5 million consumers a year present "unnecessary and unreasonable hazards," an independent safety engineer told the National Commission on Product Safety today.

The witness, George A. Peters, based his charge on a study, made for the Commission, of typical power tools and accessories that he bought in a tour of retail outlets here.

The Commission's concern with the industry, which has annual sales of $500 million, is intense because of four major points that were developed at today's hearing in City Hall:

• The Department of Health, Education and Welfare, in a new estimate, says that power tool injuries number between 100,000 to 150,000 a year. Saws are most often involved. Drills rank second.

• A large but undetermined share of the injuries is caused by deterioration of parts and wiring that, coupled with inadequate and unreliable grounding, exposes the user to electric shock.

• The primary means of protection against improper grounding, the cord with a third wire to ground, has proved to be a general failure, commonly because the third prong on the plug is snipped off by users so that they can plug tools into handy two-hole receptacles.

• A simple, inexpensive shock preventive—widely used for years in Europe—is provided with only 5 to 10 per cent of the power tools made in this country.

The preventive is double insulation, which without any grounding at all protects the user by shielding the parts of the tool he touches from contact with parts that have a shock-producing potential.

Costs 60 Cents

E. L. Tabat, manager of the power tool division of the Rockwell Manufacturing Company, testified that it costs his firm only 60 cents more for materials to make a double-insulated drill than to make a noninsulated model. The company makes only double-insulated tools.

Safety engineer Peters, however, said that safety-conscious consumers frequently get a financial shock when they seek double-insulated tools.

He displayed a $7.96 Sears, Roebuck Model 1106 drill that has the seal of Underwriters Laboratories but lacks double insulation. The Sears drill that is double-insulated and promoted as "virtually shockproof" costs $44.99, he said.

The consultant urged Federal legislation to make safety features such as double-insulation mandatory.

John A. Proven, executive manager of the Power Tool Institute Inc., whose members account for 85 per cent of the market, said that double-insulation "cannot be represented as the answer to all problems," in part because the insulation might become damaged in use. "We are working on the efficiency of both systems," he said.

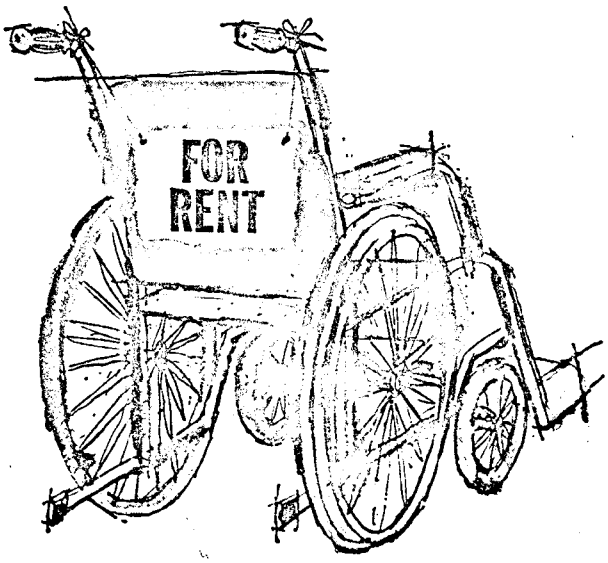
Hazard to Eyes

Peters said that a hazard to the eyes from flying fragments is created by the lack of guards on grinding wheels.

His examples included a Black & Decker four-inch wheel brush and a Superior Tool Co. model PH-1W grinder-polisher. Another hazard to the eyes cited by Peters is the lack of an adequate warning that safety glasses or face shields should be used. He displayed a Stanley Tools flexible sanding attachment lacking such a warning.

Another witness, lawyer Denny R. Jones, testified that needless injuries to swimmers are being caused by pool builders who fail to provide protections as simple as clearly visible depth markings.

(Reprinted from the Washington Post of 20 June 1969)



LET'S KEEP IT THAT WAY!

When this chair is occupied, someone's failed.
It's like dropping a pebble in the water, the rippling effects
of a costly employee accident
affect everybody — on the job as well as in the home.

PERSONAL RESPONSIBILITY

Aircraft taxi and ground movement accidents always seem to be the result of personal error. The only answer to this expensive problem is for everyone involved in an aircraft movement to accept a personal responsibility for getting the bird to its new location in one piece.

Recent accidents have been caused by:

- Lack of wing walkers
- Aircraft parked too close together
- Aircraft being towed or taxied too rapidly to allow wing walkers time to judge the clearance between wing tips
- Pilots failing to stop quickly enough in response to the wing walkers' signals, particularly when the wing tip is moving thru an arc.

Aircraft taxiing and towing is an air crew/ground crew problem. Do something about solving it.

HALF A JOB. . . A SURE WAY TO A MESS

The Flight Crew got clearance to fly back home with the landing gear downlock safety pins installed after encountering gear trouble at another base. A severe vibration started during takeoff, and the nose suddenly dropped to the runway. The aircraft skidded to a stop and everyone dismounted to see what was going on.

It seems the ground crew had disconnected the torque arm scissors while towing the aircraft around. . . and forgot to hook them back up again. The pilot pulled a rather hasty preflight and missed this little oversight, too. Life Sciences figured the pilot was fatigued and had a case of gethomeitis; but that's operation's business. . . our business is maintenance, and it's pretty poor maintenance when you do half a job.

— Maintenance

FATAL ACCIDENT ON RAMP

An employee standing on a ramp awaiting the arrival of a trip in misty, rainy weather was struck from behind and fatally injured by a tow tractor. The vehicle was backing out from its assigned parking spot.

This horrible tragedy strikes home with maximum force the absolute fact that ramps are congested and laden with disaster for the preoccupied, careless, fatigued and those who drop their vigilance for even a split second. We must be alert constantly under all conditions of weather and light; our lives depend on it.

UNREPORTED DAMAGE

Every time a pilot blasts off into the blue he demonstrates his trust and confidence in the men and the system which have combined to provide him with an aircraft as free of defects as is humanly possible, considering the time and resources available. This trust and confidence has been amply proven over the years to be well founded.

A recent incident has served to damage this concept. A mechanic opened the LOX compartment door on an aircraft in preparation for LOX servicing – and the door came off in his hands. The hinge was broken and the door showed traces of yellow paint. In the opinion of those investigating this incident, a piece of yellow equipment had struck the door and broken the hinge. The door had then been replaced on the aircraft, probably by the operator of the yellow equipment, *and the damage was not reported.*

That human error could be the basis for such damage is tolerable, although not to be condoned. That an individual associated with aviation maintenance could fail to report such damage, even though minor, is intolerable.

MECH.

NOSE DOOR MURPHY

On gear retraction and extension during a flight the crew heard a loud noise from the nosewheel area.

The nosewheel door actuating rod, which is disconnected after every flight, had been done up incorrectly by an experienced member of the start crew. This man was unable to explain how the forked end of the rod had somehow been installed to one side (see photo). On cycling, the pip pin – now inserted too far – caught a structural member, breaking it. Had this member not broken there might have been a nosewheel – up landing.

As our experience of human error expands we become increasingly convinced that the ultimate solution to this sort of mistake lies with the design engineer. Mistake-making is a built-in feature of homo sapiens – no matter how reluctantly we admit it.

Flight Comment.

While jumping from the port cargo door of a UH-2A, an airmen lost his balance and fell to the ground. Getting up, he walked to the front of the plane where he paused to look at his watch on his left hand. It was then that he saw that most of his fourth finger was missing.

The flight surgeon reporting this case describes it as a "classical ring injury." The man wore his wedding ring loose because of an enlarged joint. As he lost his balance while trying to jump, the ring caught on the latch edge of the door. He hung momentarily by his ring end finger before the finger broke off.

Reprint from: GRUMMAN AIRCRAFT
POOP SHEET
AUG 1968

Windshield improvement

To reduce deep face and head cuts in accidents, American Motors Corporation will introduce a radically engineered new windshield on some of its 1970 models.

The customary glass sandwich with the plastic laminate in the middle will feature a change to tempered glass on the driver's side. Tempered glass breaks into granular pieces instead of the jagged slivers typical of traditional windshield glass. The conventional outside layer is being retained to prevent the all-over crazing that blocks visibility when tempered glass is broken by impact.

Production limitations will allow the new windshield's use on only the AMX and Javelin models for 1970. As further supplies become available in one to two years, the other American Motors models will be equipped with the new glass. Other automobile manufacturers have the design under consideration.

What's in a name?

Old oil drums, once consigned to lowly retirement as trash burners or diving raft floats, now have a new use and an impressive new name.

The U. S. Bureau of Public Roads has found they reduce fatalities when strapped together as buffers on highway obstructions to cushion the impact of crashing autos. In their new role the drums are called "impact attenuation devices."

Breathe easy

Deep breathing exercises before swimming can get you into trouble, warns Dr. James R. Webster, Jr., Northwestern University Medical School physician.

If you try to increase your underwater endurance before swimming by taking 10 or 12 deep breaths, you could black out under water and drown.

Inhaling deeply causes an imbalance in the carbon dioxide-oxygen level in the blood. Oxygen flow to the brain decreases and the victim may become unconscious without warning and be unable to surface for air.

Tight as a drum?

The picture shows what happened to a rusty old 55-gallon oil drum, used as a trash burner, when three spray starch and hair spray aerosol cans exploded inside it.

Roland Griffin of the U.S. Soil Conservation Service, who supplied the picture, says that each explosion sent a shower of rust and steel fragments against the side of a garage 20 feet away. One of the cans, ripped from end to end, was found 10 feet from the drum. Luckily, the homeowner was inside his garage.

The picture points up two vital safety lessons:

- Never incinerate pressure cans.
- Don't continue to use a trash burner after it has become weak from rust and unable to withstand the explosion of an accidentally incinerated pressure can, bottle or other package that can explode.

Traffic Safety

MEMORIAL DAY

May 30, the summer's first real holiday, is a day set aside to honor our war dead.

But no one honors the people killed on the highway. And, there are nearly *twice as many*—dead without a cause.

KILLED IN WARS
Revolutionary through Korean
MORE THAN 600,000

KILLED IN TRAFFIC
Since 1903
MORE THAN 1,500,000

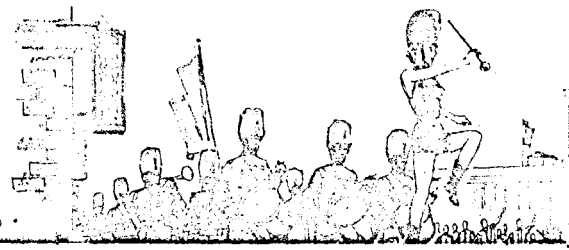
INDEPENDENCE DAY

The 4th of July. Our country's birthday. A proud holiday. *Or is it?*

The American Revolution took the lives of 4,435 men. Since 1947, the year the National Safety Council began recording holiday deaths, nearly 10,000 people have died in 4th of July traffic accidents.

LABOR DAY

On this day we honor the working man. We pay tribute to our country's real strength.



Since 1947, more than 11,000 people have celebrated Labor Day by getting killed in traffic accidents. An ironic tribute!

BOATING SAFETY BASICS

1. Know your boat, what it can do and what it can't do, how it will handle in all kinds of weather. Knowing load capacity is very important. The boat should have positive buoyancy sufficient to support the passenger capacity when swamped or capsized. Also, don't overpower your boat. Follow the capacity and horsepower rating that appears on a permanent plate fixed to your boat.

2. Load your boat properly, making sure that the weight is properly distributed. On small craft, standing up, shifting weight, and sitting on the bow or gunwale can be dangerous.

3. Leave a "cruise plan" with a friend or relative before you depart on a boating outing. Include the following information—(a) where you intend to cruise; (b) description of your boat; (c) communications equipment you have available; (d) list of people accompanying you; (e) estimated time of return; (f) alternate plans in case of bad weather or an emergency; and (g) instructions on how to notify the Coast Guard, local police or other officials if you haven't returned or called in by the estimated time.

4. Life vests or preservers should be worn by all occupants when boating conditions are hazardous, and by children and non-swimmers at all times. Federal law requires every recreational boater to have on board one Coast Guard approved lifesaving device for each person aboard or skiing. Have it readily available.

In addition to all safety equipment required by law (the minimum modest requirements including lifesaving devices, proper lights and a fire extinguisher beginning with outboards under 16 feet, Class A, closed construction), some desirable extras should be carried—a good first aid kit, paddle or oars, distress flares, a pump or bailer, anchor and line, boathook, a transistor radio, drinking water and extra fuel.

5. Keep a good lookout. Failure to do so is the cause of most collisions. There should be a second person aboard to act as an observer when towing a skier.

6. Operate at safe speeds. Watch your wake. You are responsible for damage caused by it to other boats. Give swimmers, skiers and divers a wide berth.

7. Know and obey local, state and federal boating laws. There is such an array of state laws that every responsible boat owner should get a copy of the boating law of his own state and that of every neighboring state in which he may operate.

State Boating Laws booklets (four in all) are available at $1.00 a copy from the Outboard Boating Club of America (address at left). Ask for the one that covers areas in which you'll be boating: North-East; North-Central; South; or West.

8. Respect the weather. Listen to marine forecasts and heed weather warnings. Weather service information is available through your local Environmental Science Services Administration Weather Bureau office. Ask about small craft nautical charts and publications they provide, which are free or sold at nominal cost.

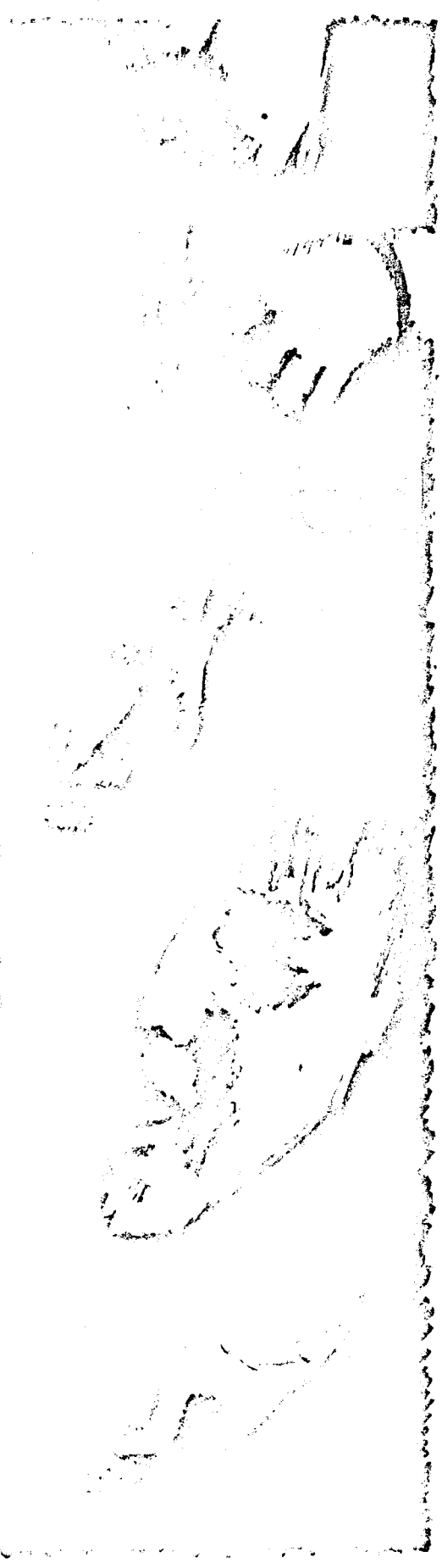
9. Be familiar with emergency signals and procedures, and familiarize your passengers with them. In most cases when a boat capsizes, the occupants should stay with the boat. Using good judgment and avoiding panic would prevent or minimize the serious consequences of a boat accident.

10. Avoid fires and explosions by following these steps: (a) observe all safety precautions in handling fuels; (b) have a safe fuel system installation and maintain it; (c) have a good ventilation system to conduct fresh air into fuel and engine compartments and to remove gases from the bilges to the open atmosphere.

The Coast Guard cites fires and explosions as the leading cause of property damage and the second-highest producer of injuries. Despite the fact that a fire extinguisher is not required on Class A outboards (under 16 feet) of open construction, it is recommended that any boat with an engine carry at least one.

11. Keep your boat neat and in prime operating condition. Check safety equipment frequently and carry spare parts.

12. Never operate a boat while intoxicated.



by Jane Malone

IN EARLY 1960 a Chicago police officer was called to investigate unusual "drunken" behavior of a south side family of six. He found that the oldest of the children, a seventh grader, had introduced the family to the practice of soaking a rag with cleaning fluid and inhaling the vapors. The result was intoxication.

that can be fatal

Since that incident, nearly a decade ago, the dangerous practice of sniffing the hazardous vapors of many substances has become frighteningly prevalent.

The practice is widespread, not limited to certain areas or isolated segments of the population. It takes place in all types of communities from ghetto alleys to suburban recreation rooms. It is indulged in by young people from 12 to the 20's—"nice" kids and chronic juvenile offenders. Some do it alone. Group gatherings in relatively public places like bowling alleys are popular. Many congregate in out-of-the-way places, from tenement rooftops to shadowy parks, and sniff at substances that to some have brought death. Some have continued sniffing into their adult years and suffered irreparable brain damage.

Most of them sniff glue. In Chicago three high school sophomores poured rubber cement into a plastic bag and began to inhale. One boy fell backwards to the floor and died a half hour later.

In Los Angeles a 13-year-old collapsed and died while walking along a street during his lunch hour sniffing model airplane glue.

The sniffers take a tube of glue, usually the kind used on model airplanes, squeeze it into a handkerchief or bag and breathe the vapors. The result is similar to alcoholic intoxication.

Just what happens to the glue sniffer? The effects can vary from one individual to another, but according to information from the American Academy of Pediatrics and the American Medical Association, the results of sniffing generally follow this pattern:

There is a short-lived feeling of exhilaration, euphoria and excitement. Then there is a drunken loss of muscular coordination. Speech is slurred. Mild hallucinations may occur and vision become blurred. Usually, nausea and depression develop. These symptoms last 30 to 45 minutes.

Then the sniffer becomes drowsy and may fall unconscious. One user described the feeling: "I felt very light, like floating in the breeze. I saw two of everything. I had ringing in my ears like a firecracker going off, then I blacked out."

One boy's glue tube turned into an ice cream cone, another's desk became a baby carriage and another thought he was "stronger and more intelligent than anyone in the world."

Habitual glue sniffers can develop serious emotional problems. Their habits become careless and they lose interest in their former activities.

There is a general loss of motivation and a rejection of responsibility. The problem can advance to the point of complete mental deterioration. Physically, the sniffers suffer weight loss and tire easily. The user often smells of glue, since the vapors permeate clothing and are hard to remove.

Serious physiological damage can occur to the brain, kidneys, liver and bone marrow, causing respiratory or heart failure and death, due to the solvents, plasticizers and other chemicals contained in the drying components of glue.

The American Medical Association reports that although physical addiction does not appear to result from glue sniffing, psychological dependence on the sensations it produces may develop. At first the user may only need a few whiffs to produce the desired effects, but habitual users have been known to take as many as five tubes of glue at one sniffing session.

A safety concern

Accidents and injuries are an indirect result of glue sniffing. Many tipsy young glue sniffers are picked up by police while staggering around in traffic.

In New York City several youths held a glue sniffing party on the roof of a tenement building. One 13-year-old, under the delusion he was Superman, dashed across the roof and leaped off the edge. He fell to his death five stories below.

A California teen-ager walked onto a railroad track and stood stubbornly with his fists raised at an oncoming train. The train screeched to a stop and the boy was only slightly hurt. He had been sniffing glue. Several weeks later, he did the same thing and the train was forced to stop once more.

Another California teen-ager under the influence of glue tried to burn his family's house down.

Serious traffic accidents can occur as a consequence of glue sniffing when a youth under the influence of the vapors, or while experiencing hallucinations, is driving. It is common for glue sniffers to be found in a coma while sitting in their cars with the engine running. How many lives they have endangered while driving is anybody's guess.

In one case, a youth attacked a woman in a parking lot while she was behind the wheel of her car. He beat her severely, threw her to the ground, jumped into the driver's seat, roared off and crashed into three parked cars before he stopped. Later he admitted to glue sniffing.

The plastic bags often used by sniffers have themselves contributed to fatalities when the individual suffocates after passing out with his head in the bag.

Prevention a problem

The increase in glue sniffing is alarming. In 1964 arrests in Chicago numbered 481. By 1967 the number of offenders had risen to 737. In Denver, Colorado, arrests for glue sniffing increased from 30 to 134 in one year. In New York there was a 300 per cent rise in glue sniffing in a year.

Why try to get drunk on glue instead of alcohol? Simply because glue is cheaper and easier to get than liquor. It is available at drug stores and hobby shops for 10 cents a tube.

Many cities have passed ordinances restricting the sale of certain types of glues. Young people may be forbidden to buy glue "without the written permission of the parents or guardian." Or sale of large amounts of glue to a single person may be prohibited. However, such laws, and those providing fines for using glue for the purpose of intoxication, are not easy to enforce.

One solution would be the manufacture of harmless glue made from solvents that would not be intoxicating. Several companies are said to be attempting to develop such a glue.

But unfortunately, the problem does not end with glue. In recent years experimenting youngsters have found kicks in a variety of other dangerous substances.

A boy in Washington, D.C., was caught sniffing a fast-drying marking pen behind his school book in class. In another case, youths ignited a powder used for the relief of asthma and inhaled the fumes to get "high."

The latest rage is inhaling the contents of aerosol cans—everything from hair spray to insect repellant to cleaning solvent. At least 36 deaths in the last two years have been caused by the sniffing of aerosol propellant gases.

In a statement on the problem, University of Rochester pharmacologist Dr. Harold C. Hodge said that the solvent vapors from a spray can are much more dangerous because they are more concentrated than those of glue and therefore more potent.

Dr. Hodge also warned that heart fibrillation could occur on the first whiff or the tenth, and the possibility of death is always present.

Enforcing any restrictions on the sale of spray products would be even more difficult than with glue. So enforcement, almost of necessity, must be in the home.

Signs of trouble

Chicago police suggest that parents be on the lookout for signs of glue sniffing. One check is for the odor of glue in the youth's room after he has come in and gone to sleep. Like alcohol, glue has a very distinctive odor. Also be on the watch for changes in behavior that characterize glue sniffing.

The best safeguard against all of this sniffing is to educate young people with solid facts. Many communities have recognized the problem and have launched programs to teach their youth that the experiences involved in those few quick whiffs are not worth the tragic consequences that could result. □

Follow These Rules, Aviators, If You Want to Arrive Safely

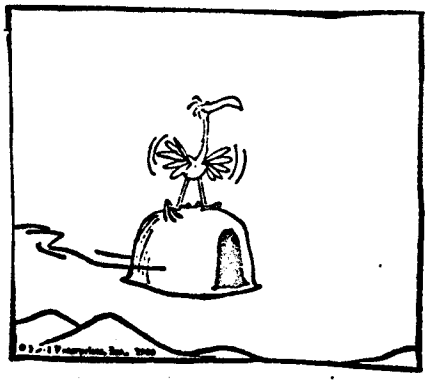
AS a service to pilots, APPROACH reprints the following list of flight safety rules, which originally appeared in the U.S. Air Service Newsletter.

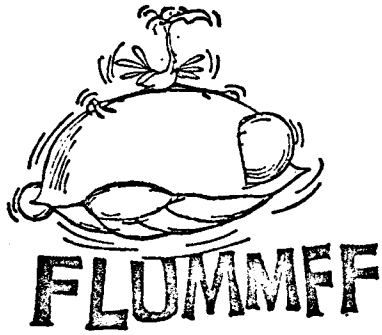
1. Don't take the machine into the air unless you are satisfied it will fly.
2. Never leave the ground with the motor leaking.
3. Don't turn sharply when taxiing. Instead of turning short, have someone lift the tail around.
4. In taking off, look at the ground and the air.
5. Never get out of a machine with the motor running until the pilot relieving you can reach the engine controls.
6. Pilots should carry hankies in a handy position to wipe off goggles.
7. Riding on the steps, wings or tail of a machine is prohibited.
8. In case the engine fails on takeoff, land straight ahead regardless of obstacles.
9. No machine must taxi faster than a man can walk.
10. Do not trust altitude instruments.
11. Learn to gage altitude, especially on landing.
12. If you see another machine near you, get out of its way.
13. No two cadets should ever ride together in the same machine.
14. Never run the motor so that blast will blow on other machines.
15. Before you begin a landing glide, see that no machines are under you.
16. Hedge-hopping will not be tolerated.
17. No spins on back or tail slides will be indulged in as they unnecessarily strain the machine.
18. If flying against the wind, and you wish to turn and fly with the wind, don't make a sharp turn near the ground. You might crash.
19. Motors have been known to stop during a long glide. If the pilot wishes to use the motor for landing, he should open the throttle.
20. Don't attempt to force machines onto the ground with more than flying speed. The result is bouncing and ricocheting.
21. Pilots will not wear spurs while flying.
22. Do not use aeronautical gasoline in cars and motorcycles.
23. You must not take off or land closer than 50 ft to the hangar.
24. Never take a machine into the air until you are familiar with its controls and instruments.
25. If an emergency occurs while flying, land as soon as possible.

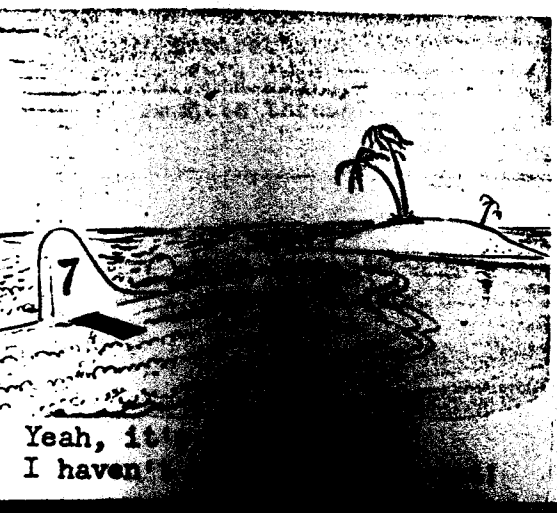
We forgot to mention that this particular newsletter was dated 2 Jan 1920.

"It isn't that I object to visual safety aids, but . . ."

"Break it up, Norton! You know better than to do your sparking around gasoline."







"There! That's the color I want."

IMPROVISING WITHOUT PLANNING

The American Soldier has always been noted for his ability to accomplish thru the use of improvising. Whether it be tools, or methods, the ever engenious soldier plods on often leaving the thought of the future behind. Often the item if it be a tool, is just fine for his use, but what if it is left behind and someone comes along and uses it?

Joe Doe sees a modified sling in his shop and has need of one, he says,"Ha! this will work, nice wide web straps, nice 1/2 inch metal hook-up rings and heavy duty snap clasp hooks". But after applying the load, one of the 1/2 inch metal rings parted at the joining point, consequently down came the load. Aweak ring had been installed with a stronger one.

The creator of this sling probably knew that the different rings would not matter in his situation, but he did not think anyone would overload it.

Improvise if you need to, but if you do not need the item again, destroy it, or mark the capabilities on it legibly. A method should not be passed On unless you know all the details of the operation and know your method would apply in that situation.

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SURVIVABILITY PROGNOSIS (QUESTIONABLE)

While taxiing for take-off on a night flight in a T41B, it was noted that the oil filler cover on the cowl appeared loose.

The co-pilot unbuckled his seat belt and shoulder harness and with his parachute still strapped on, got out of the aircraft and started around the rear of the aircraft to check the security of the oil filler cover. As he approached the rear of the aircraft, he felt something behind him, he looked around and saw his parachute canopy was streaming out behind him with the chute still in the aircraft. The "D" ring still snugly in the holder had not moved.

Apparently the pins on the cables connected to the "D" ring cables had worked loose and as the co-pilot turned in his seat to exit the aircraft the spring loaded pilot chute shot between the pilots and co-pilots seats.

If the co-pilot had been exiting the aircraft at altitude after an inflight emergency requiring bailout rather than on the ground, he probably would have remained attached to the aircraft all the way to the ground.

While parachutes are inspected and repacked periodically by qualified personnel, this does not replace the individual pilots responsibility to check his parachute throughly before each flight.

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The above comments were taken from actual experiences and observations of the personnel at Davison U.S. Army Airfield.

NOTES FROM THE SAFETY OFFICER

How many pilots check ALL communications and navigation equipment on every flight ? The check list calls for it, but some pilots feel this applies only to instrument and stan/eval checks.

ALL communications and navigation equipment must be checked throughly before EVERY flight commensurate with airfield facilities. Be prepared to implement an alternate course of action when necessary in the event of communication or navigation equipment failure during flight. Do not become a STATISTIC.

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During the next several months, there will be a great amount of construction work taking place at the airfield. This will require an extra measure of SAFETY AWARENESS on everyone's part.

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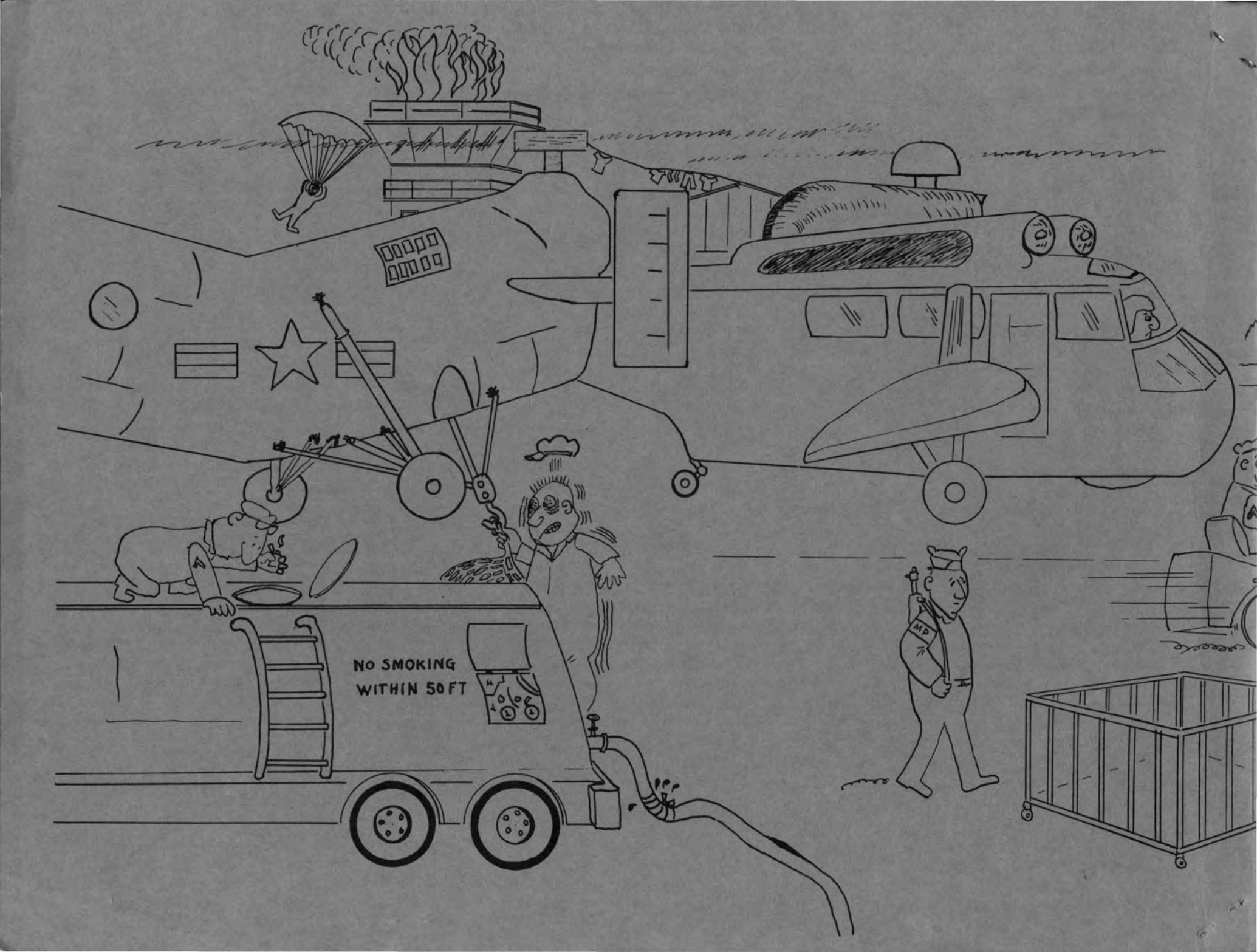
We would like for you, the READERS to send us pictures, clippings from magazines, incidents, suggestions or your own experiences, that would enhance the Safety Program.

Be sure to identify your material with your name and unit. Credit will be given to the unit and person sending the items. Anonymous contributions will be accepted.


NO SMOKING
WITHIN 50 FT
MP