ARMY GROUND RISK-MANAGEMENT INFORMATION

Countermeasure

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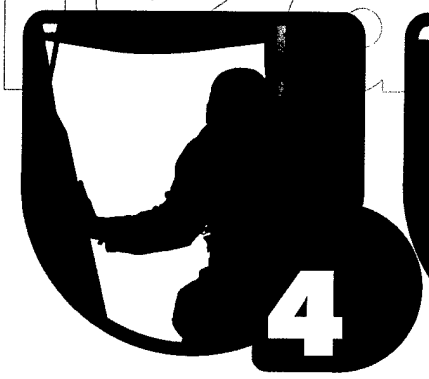
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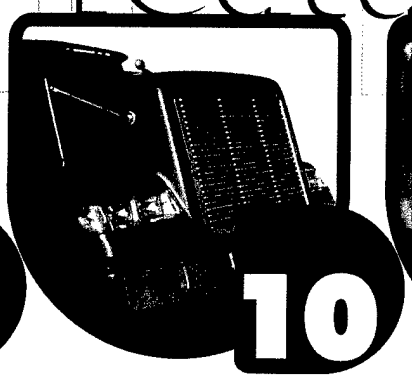
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on the web
http://safety.army.mil

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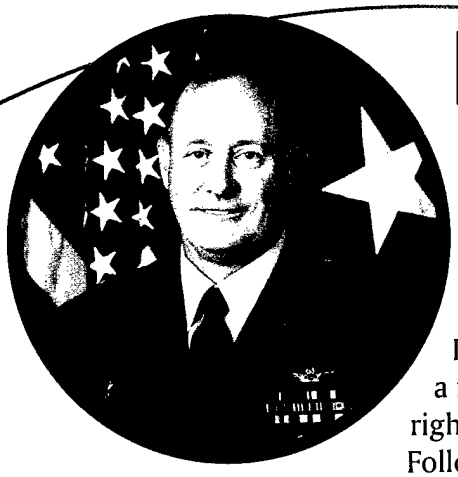

DASAF'S CORNER

From the Director of Army Safety

Enjoying Summer Activities–Safely

July 4th,1776, marked one of the greatest beginnings in history: an experiment in democracy that has stood the test for more than 225 years. With the signing of the Declaration of Independence, 13 American colonies formed a nation founded on the belief that every individual has the right to "life, liberty, and the pursuit of happiness."

Following the signing of the Declaration of Independence, John Adams wrote to his wife: "I am apt to believe that this day will be celebrated by succeeding generations as the great anniversary festival. It ought to be commemorated as the day of deliverance, by solemn acts of devotion to God Almighty. It ought to be solemnized with pomp and parade, with shows, games, sports, guns, bells, bonfires, and illuminations, from one end of this continent to the other, from this time forward forevermore."

By the early 1800s, the tradition of parades, picnics, and fireworks was established as the way to celebrate America's independence. Unfortunately, many of these and other summer outdoor activities are not risk free.

Fireworks displays; swimming, boating, and other sporting events; backyard barbeques; and particularly traveling with family and friends can be high-risk activities without proper risk management. Accidents resulting in serious injury and death too often mar Independence Day celebrations and summer fun when hazards are not properly identified and controlled.

The Army recently lost three soldiers in an off-duty boating accident, and another soldier died when he fell down a cliff in the backyard of a residence he was visiting. While swimming and boating and other outdoor activities continue to take soldiers lives each summer, POV accidents remain the number one killer, with fatalities almost 21 percent higher than last year.

To help us combat this killer, five new "Drive to Arrive" POV accident prevention videos and a revised POV Risk Management Toolbox are now available on the Army Safety Center's website at **http://safety.army.mil**. These short video clips are great dialogue starters on some of the hazards associated with operating a vehicle. And the toolbox provides commanders with an array of risk management POV accident prevention tools.

It's critical that commanders and NCOs talk to soldiers frequently about how hazards such as fatigue, speed, and alcohol are risk multipliers. More importantly, we have to make sure soldiers understand that control measures such as seatbelts, child safety seats, personal flotation devices, helmets, etc. can greatly reduce the possibility of accidents and injuries. We each have a responsibility to instill in soldiers a keen sense of awareness of the tragic consequences of failing to effectively manage risks in both their on- and off-duty activities.

As we celebrate our independence and enjoy a variety of summer activities, I urge each of you—soldiers, civilians, and family members—to pause and reflect on the real meaning and value of freedom. I personally thank you for all that you do in defense of America's freedom.

Let's all strive to make celebrations and summer activities as accident free as possible. ❀

Train Hard, Be Safe!

BG James E. Simmons

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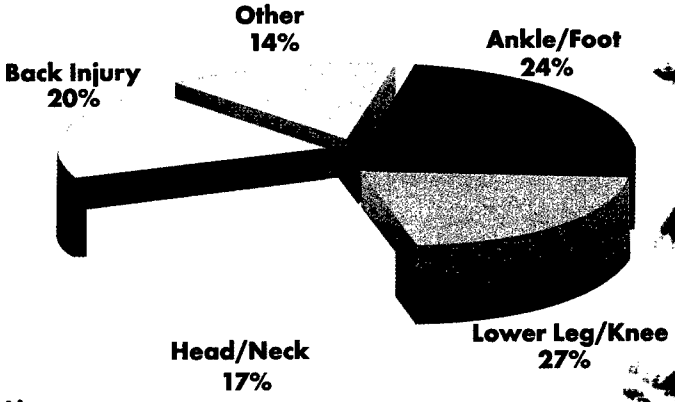
FY01 was a great year for our Airborne troops throughout the Army. During FY01 there was only 1 fatality associated with Airborne operation across the Army. But, once again the most injury causing portion of Airborne Operations during FY 01 and the up to 3rd QTR FY02, is Parachute Landing Falls (PLF).

During FY 2001 there were thousands of tactical parachute jumps made across the Army. Also in FY01 there were 395 parachute related accidents reported to the USASC. Of those 395 parachute accidents, 1 resulted in the loss of a fellow Jumpmaster when he was extracted by his MIRPS while performing his duties. The majority of the injuries are still from paratroopers failing to perform a proper "Parachute Landing Fall" (PLF). Other causation factors are improper exits, tree landings, Drop Zone hazards, lost/stolen air, and static line injuries. Most of the injuries sustained were lower leg/knee damage, and ankle/foot fractures.

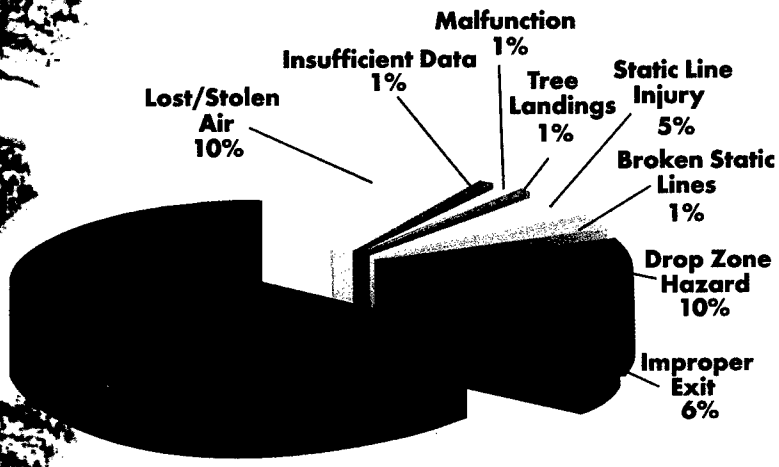
The Airborne community has responded to the rash of Jumpmaster extractions, (the last one being fatal, July 2001), by following the guidance set forth from the 1/507th Parachute Infantry Regiment (PIR), which mandated all Jumpmasters follow the sequence of the Outside Air Safety Check as prescribed in FM 57-220, specifically for Right Door operations.

"Lower Alice Pack, Prepare to Land!"

During FY 2001 there were thousands of tactical parachute jumps made across the Army. Of those, there were 395 accidents reported to the USASC. Of those 395 parachute accidents, 1 resulted in the loss of a fellow Airborne Trooper when he was extracted by his MIRPS while performing Jumpmaster duties.



FY01 Tactical Parachuting Injuries



FY01 Tactical Parachuting Incident Cause Factors

The majority of the injuries are still from paratroopers failing to perform a proper "Parachute Landing Fall" (PLF). Other causation factors are improper exits, tree landings, Drop Zone hazards, lost/stolen air, and static line injuries. Most of the injuries sustained were lower leg/knee damage, and ankle/foot fractures

The bad news for the community is the escalation of injuries reported from PLFs. During FY00 the total percent of PLF injuries reported was 40 percent. During FY02 that percent rose to 65 percent of the accidents reported to the USASC, a 25 percent increase.

During my past two years at the United States Army Safety Center (USASC), I have seen more than I have ever wanted to of soldiers getting hurt while conducting training and operational missions. The over riding factor has been indiscipline on the part of the soldier(s) involved in the accident - that is, that they knew the standard and for some reason chose not to follow it. I am certain—after the lessons I've learned while at the USASC - that Leader presence at the critical point in any operation reduces accidents.

I am changing stations this summer and would like to take this opportunity to thank all of the soldiers, Department of the Army Civilians, and fellow NCOs that have helped me in my mission here at the USASC. I'll see you in the Assembly Area. RLTW!

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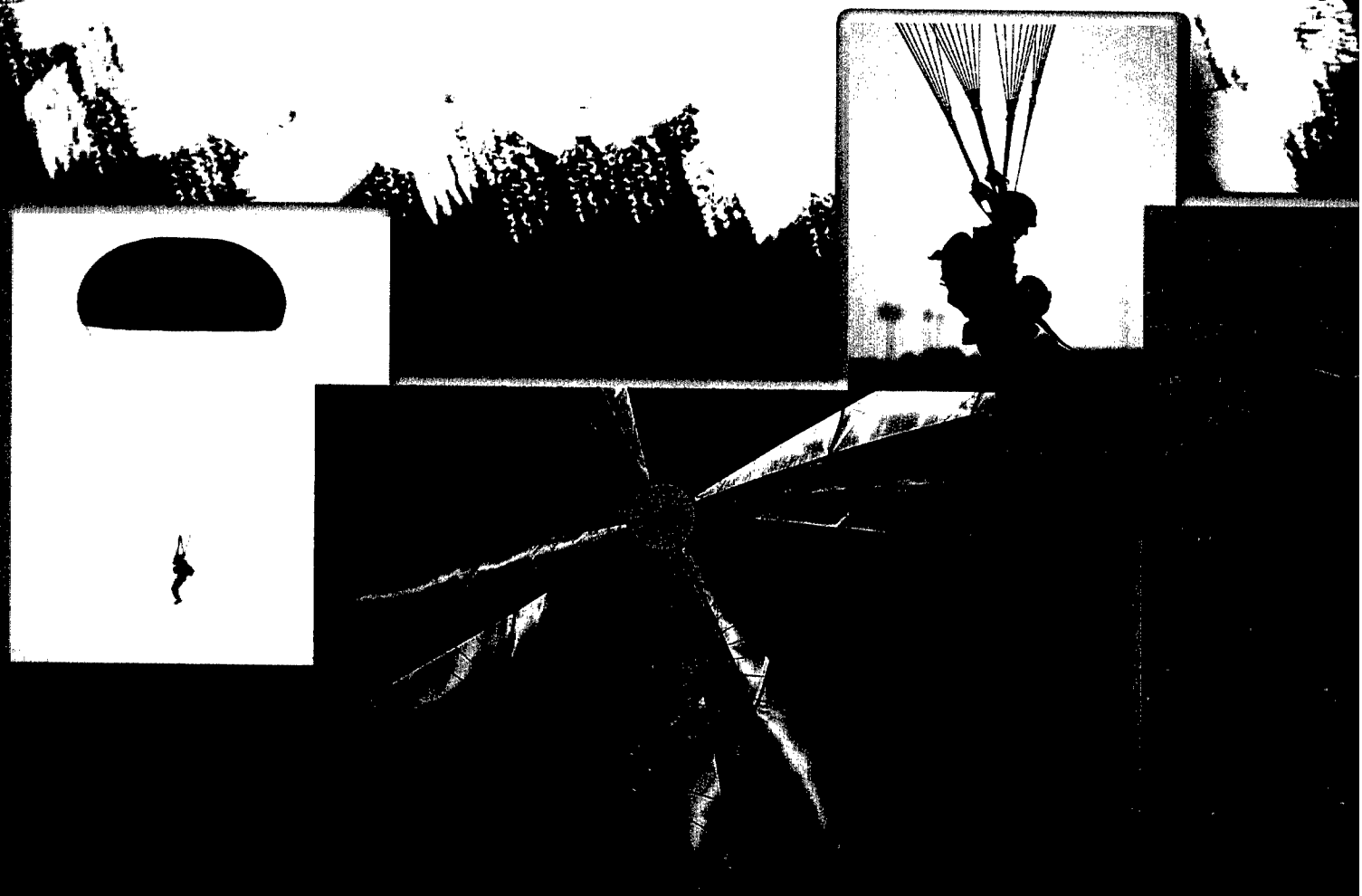


Checklist For Safe Jumps

While there are relatively few parachute accidents, those that do happen generally are fatal. FM 57-220, Basic Parachuting Techniques and Training, provides further guidance for safe parachute operations. In addition, commanders and other leaders can use the following checklist to manage the risks inherent in parachute operations.

- Have conditions on the drop zone (DZ) been reviewed?
- Have actions been rehearsed that are to be conducted on the DZ?
- Are obstacles on and around the DZ marked?
- Have parachute landing falls been reviewed?
- Have emergency landing procedures been reviewed?
- Are corrective lenses worn by personnel who require them?
- Are loads limited to jumper's capability? (Excess weight will increase the probability of a weak exit.)
- Are soldiers trained on 1-second interval and correct exit procedures?
- Have towed-parachutist procedures, equipment tiedowns, and accidental reserve activations been emphasized?
- Have reserve parachute activation procedures been reviewed for the new MIRPS?
- For night jumps, have all jumpers gone through the five points of performance? (Place special emphasis on getting into the fifth point ASAP; it is sometimes difficult to determine altitude at night.)
- Are only red lights used for 30 minutes before and during night jumps? (Use of white lights may degrade jumpers' night vision.)
- Are night halo jumps rehearsed during daylight when the situation permits?
- Is an experienced buddy assigned to assist inexperienced jumpers?
- Do jumpmasters know and identify the correct release point?
- Are door bundles used for extra equipment and ammunition?
- Has crossloading plan been reviewed?
- Have aircraft crash drills been conducted?
- Has drop zone been verified as current and authorized?
- Are all jumpmasters current and qualified?

PACK for PERFORMANCE

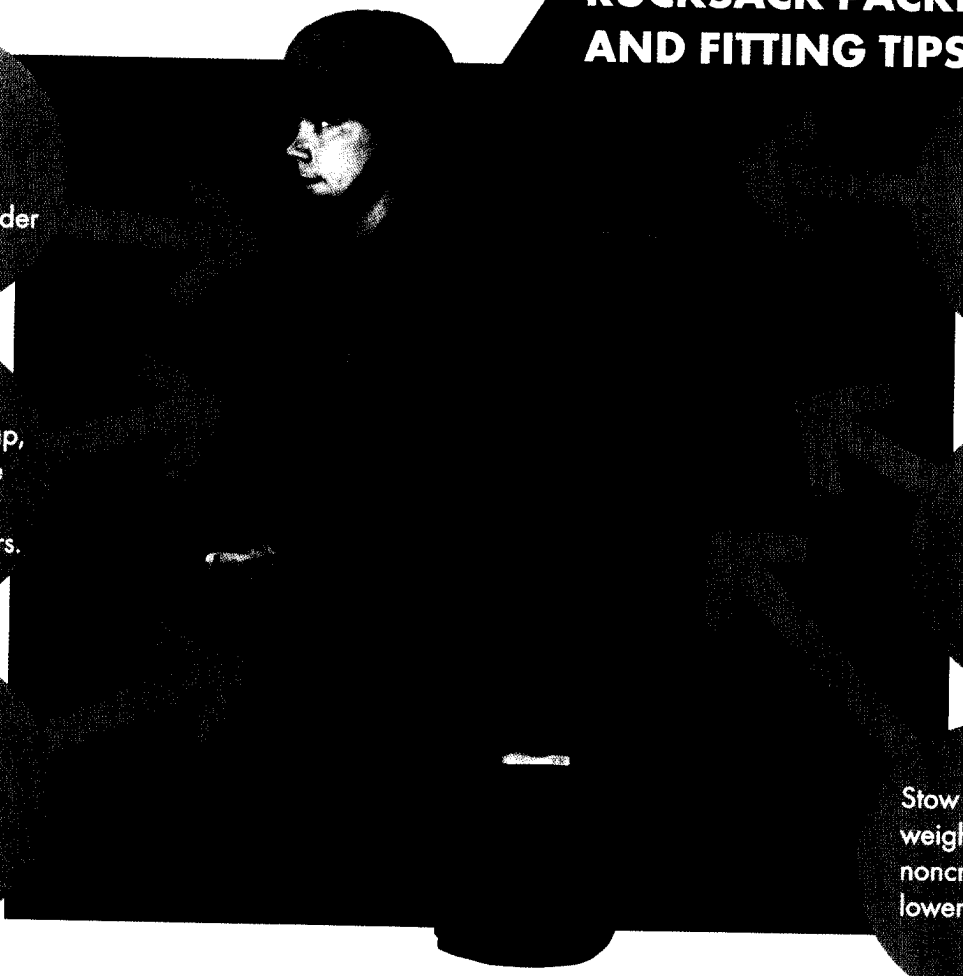
Maximize performance during road marches by ensuring your troops know how to correctly pack their rucksacks. The Center for Health Promotion and Preventive Medicine has developed a new pamphlet that provides guidance for rucksack packing and fitting tips.

The Army has two rucksacks. The ALICE (All-purpose, lightweight, individual carrying equipment) pack has been around a long time and is used by most soldiers. The ALICE pack is featured in the new brochure. The new MOLLE (Modular lightweight load-carrying equipment) pack is currently being used by a few special units in the Army, and will reach wider distribution in the future.

The tips outlined in the brochure are applicable to most any backpack type (even your weekend hiking pack). The goal is to reduce the number of avoidable injuries during road marches. Correct packing and proper fitting of the rucksacks will allow maximum performance and decrease injuries.

Prepared by the USACHPPM Ergonomics Program.Based on research conducted by USARIEM.
Endorsed by the DoD Ergonomics Working Group. http://chppm-www.apgea.army.mil/ergowg/default.htm

RUCKSACK PACKING AND FITTING TIPS



Have another soldier hold your pack up as you tighten the front shoulder straps.

If equipped with a chest strap, use it to take the weight off of your shoulders.

Wear your rucksack waist-strap so it distributes weight to your hips.

Pack heavy and mission essential items as high as possible in your rucksack.

Tighten two vertical straps on the back of your pack to bring the load higher on the frame.

Stow light weight and noncritical items lower in your pack.

Every Drive Counts

What do jumping out of an aircraft and driving a vehicle have in common? Just like *every jump counts, every drive counts.* This is the central message in an unconventional safety film produced by the U. S. Army Safety Center in conjunction with the Airborne School.

"First, I have to convince them they ***are*** going to jump out of a perfectly good airplane. Second, I have to convince them they ***are not*** invincible—especially when driving a car, truck, or motorcycle." This job belongs to the "black hats," the trainers at the Airborne school at Fort Benning, Georgia.

And they do it well. Safety is so ingrained it's like breathing. And young soldiers listen, because when the wind is whipping through the door of a C-130, safety is their best friend.

But weekends are a different story, and safety is often left behind in favor of fun, especially behind the wheel of a car.

In the safety film, "Every Drive Counts," the U. S. Army Safety Center offers a new perspective on off-duty traffic safety aimed directly at young soldiers. The MTV-style movie has a sound track with Grammy-award winning music and a clear safety message delivered during orientation by the Command Sergeant Major—

Question one – what are the hazards?
Question two – what can I do about them?
Question three – am I disciplined enough to make the right choice at the right time?

Your success is going to be based on your ability to make the right decision when confronted with hazards—on- and off-duty. The choice and the challenge are yours.

Due for release in time for Labor Day safety presentations, the video will be available at installation safety offices and local Training Service Centers. When released, it will be advertised on the website http://safety.army.mil, where you can place an online order for your own copy.

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"Car hits tractor-trailer; 2 men die" was the headline for a local newspaper story describing the deaths of two Sailors. According to police investigators, the Sailor driving the car had been drinking, and neither he nor his passenger was wearing seat belts.

The tragedy occurred as their car was traveling northbound at a high rate of speed. The driver lost control and swerved into the southbound lane, where the car struck a guardrail, then slammed into the tractor-trailer.

Similar tales are repeated many times across the nation's highways. Tractor-trailers, those giants of the roadway we so frequently curse, either openly or under our breath, pose an equally big problem for all of us. Based on their numbers on the road and the amount they travel, large trucks (including tractor-trailers, single-unit trucks, and some cargo vans weighing more than 10,000 pounds) account for more than their share of highway deaths. Tractor-trailers have higher fatal crash rates per mile than passenger vehicles.

Occupant deaths in large trucks number about 700 annually, compared to about 4,000 who die each year in passenger-vehicle collisions with large trucks. This amounts to more than one-fifth of all passenger-vehicle occupant deaths in multiple-vehicle crashes. The main problem is the vulnerability of people traveling in smaller vehicles. Trucks often weigh 20 to 30 times as much as passenger cars.

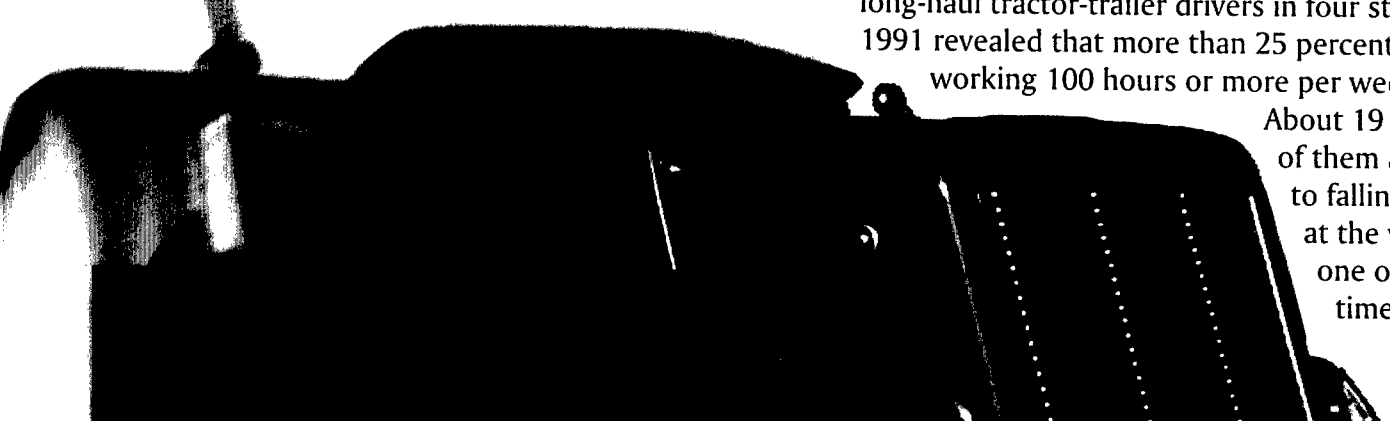
Truck-braking capability is a safety problem. Loaded tractor-trailers take 20 to 40 percent farther than cars to stop, and the discrepancy is worse when trailers are empty or truckers are running bob-tailed (tractor only).

A sample of trucks inspected in 1996 resulted in 29 percent of them being ordered off the road because of serious defects. More than half these defects were in the brakes. Aggravating this problem is the poor maintenance practices of some truck companies.

New large trucks must have automatic brake adjusters and visible brake-adjustment indicators. Anti-lock brakes, required on new tractors since 1997 and new trailers since 1998, also have helped. These devices improve driver control of trucks during emergency stops and reduce the likelihood of tractor-trailers jackknifing.

Another problem with large trucks is defects in steering equipment, which are found in 21 percent of the crashes involving trucks.

Other issues involve the drivers of large trucks, who spend up to 16 hours a day on the road, even though the Federal Motor Carrier Safety Regulations (FMCSR) call for no more than 10. Some drivers also spend up to 70 hours on the road in five days when the FMCSR limits them to 70 hours in eight consecutive days. A survey of long-haul tractor-trailer drivers in four states in 1991 revealed that more than 25 percent were working 100 hours or more per week. About 19 percent of them admitted to falling asleep at the wheel one or more times during



the preceding month. Other studies show drivers are much more likely to crash after long hours behind the wheel.

What can be done to reduce these violations of the hours-of-service rules? Onboard computers reduce the opportunities for violating the rules because they automatically record when a truck is driven and its speed. However, current regulations allow drivers to use written logbooks of their hours, which truck drivers call "comic books" because they are so easily falsified.

Here are some facts based on data from the National Highway Traffic Safety Administration:

- 5,362 people died in large-truck crashes in 1999. Fourteen percent of these deaths were truck occupants, 78 percent were people in cars or other passenger vehicles, and eight percent were pedestrians, bicyclists or motorcyclists.
- Ninety-four percent of people killed in two-vehicle crashes involving a passenger car and a large truck in 1999 were occupants of the passenger vehicles.
- Since 1979, when truck-crash deaths were at an all-time high, they have declined 19 percent overall (47 percent among tractor-trailer occupants and eight percent among passenger-vehicle occupants).
- Large trucks accounted for three percent of registered vehicles and seven percent of miles driven in 1998. They also accounted for nine percent of all vehicles involved in fatal crashes and four percent of all vehicles involved in injury and property-damage-only crashes in 1998.
- Eighty-four percent of fatal, large-truck crashes in 1999 involved two or more vehicles. This compares with 62 percent of fatal passenger-vehicle crashes.
- Almost 30 percent of all large-truck drivers involved in fatal crashes in 1999 had at least one prior speeding conviction, compared to just under 20 percent of the passenger-car drivers involved in fatal crashes.
- Most of the 1999 fatal crashes involving large trucks occurred in rural areas (68 percent), during the daytime (67 percent), and on weekdays (79 percent). During the week, 74 percent of the crashes occurred during the daytime (6 a.m. to 5:59 p.m.). On weekends, 62 percent occurred at night (6 p.m. to 5:59 a.m.).

There are some precautions you should observe to avoid having a run-in with a big truck. Here's a short list:

Passing. When passing a truck, don't linger beside it in the No Zone (blind spot), and pay attention to the truck's signal lights for a warning that the driver is going to change lanes. Remember, it takes longer to pass a large vehicle (at 50 mph, about 26 seconds or twice as long it takes to pass a vehicle at the same speed), so maintain a consistent speed. After passing the truck, don't pull in front of it and slow down. Maintain your speed, and be sure you can see the cab of the truck in your rearview mirror before pulling in front of it.

Cutting in Front of Trucks. Because trucks take longer than other vehicles to stop, you never should cut in front of one. Always allow enough distance when turning onto a roadway in front of a truck to get your vehicle up to traveling speed.

Following Too Closely. Trucks have deep blind spots directly behind them. Don't tailgate in this No Zone. The truck driver can't see you, and your own view of other vehicles is reduced severely. Following any vehicle too closely greatly increases the chance of a rear-end collision. Remember the four-second rule. Leave enough room between yourself and the car or truck in front of you to stop if they suddenly stop. If someone pulls into your four-second zone, back off again, and realize you know more than they do. It's OK to get somewhere a couple of seconds later than the person in front of you.

Wide Turns. Stay behind the lines at stop lights and stop signs. These lines are put there for a reason--so vehicles will stay far enough back in intersections to give trucks the room they need to make wide turns. Truck drivers have to swing wide to keep the trailer from hitting telephone or light poles, signs and other objects on the side of the road. Don't try to cut between a truck and the curb or shoulder. If you do, the truck driver can't see you and will proceed with the turn. You and your car likely will end up under the trailer. Also, if you're stopped behind a truck at an intersection, especially on a hill, leave enough room in case the truck rolls back a little before it starts moving.

POC: Ken Testorff, Naval Safety Center, *Ashore Magazine*

USAREC Accident Numbers Going Down

The U.S. Army Recruiting Command (USAREC) requires recruiters to spend a significant amount of time behind the wheel. Last year, recruiters drove 8,700 government-owned vehicles (GOV) more than 169 million miles. (Some may refer to these as General Services Administration [GSA] vehicles.) Every 7 hours, a USAREC soldier or civilian is involved in a GOV-related accident. With the increasing number of vehicles on America's highways and a more mobile society, a recruiter's chance of having an accident is greater now than ever before.

Every day, recruiters respond to our nation's call to provide Army strength. And every day, they are exposed to hazards in uncertain and complex environments on our nation's roadways. This is done with the full knowledge that there are inherent risks associated with any military operation, and recruiting is no exception. The nature of our profession will not allow for either complacency or a cavalier acceptance of risk.

In FY01 USAREC had 1,268 GOV accidents, compared to 1,775 GOV accidents in FY00. That is a decrease of 29 percent – or 507 accidents **that did not happen**. This reduction is a direct result of command emphasis and the integration of risk management into training and field mission execution.

The numbers tell the story for FY01. The significance of this decline is heightened by the fact that USAREC benefited from a 12-year low in reported GOV injuries (38). The Recruiting Command also experienced a decrease in fatalities, with two fatalities during the year compared to three the previous year. The accident summaries that cite speed, fatigue, and alcohol over and over again are vivid testaments to the fact that there are no new causes, just new victims--year after year.

Consequently, monetary losses also decreased. GOV damages cost this command $2.6 million in FY01 as compared to 2.9 million in FY00. That's a decrease of $231,000, and from early indications, FY02 GOV damage costs will be lower than FY01 totals. These losses do not account for medical expenses, administrative costs, and victims' claims against the government. Fortunately, we are able to recover some funds from private insurance companies when the other driver causes the accident. However, if the recruiter is found negligent during the Report of Survey process, up to 1 month's base pay may be charged against the individual in an attempt to recover lost funds.

Congratulations to the Jackson Recruiting Battalion for an exceptional year in GOV safety. Last year, while our recruiting battalions averaged 31 accidents at a cost of more than $51,611 per battalion, Jackson Battalion spent $35,290 for GOV accident repairs. The battalion experienced a total of 10 GOV accidents during the entire fiscal year, with 5 of those being recordable (over $2,000) and 2 being hit while unattended in parking areas. The amazing statistic is that the Jackson Battalion had zero GOV accidents during the fourth quarter of FY01. Outstanding!

The above statistic shows that all commanders, leaders, and recruiters must continue to stress the potential for accidental loss and its impact on their mission success. Personal injuries contribute to lost recruiting man-hours. Vehicle shortages due to accidents hamper face-to-face prospecting, interviewing, and other mission operations. Damage costs can lead to increased budget constraints.

The unit safety program is an essential element in preventing accidents that can result in deaths, injuries, damaged or destroyed equipment, and loss of mission capability. To ensure the force is protected, commanders and unit safety personnel and other unit leaders must implement the safety program at the unit level.

A safety culture can be a valuable mission multiplier because safety conserves critical mission resources (people/time/money). We all must develop a higher degree of awareness regarding accidents and their impact on successful recruiting operations.

POC: Mickey G. Gattis, Safety Manager, USAREC, Fort Knox, KY DSN 536-0736 (502-626-0736), mickey.gattis@usarec.army.mil

Get Your Cold Weather Equipment NOW

Don't wait until the last minute. Start thinking about it now before it gets cold to prepare for the winter months ahead. Are you prepared? Do you have the proper equipment on hand? Are you trained to use the equipment?

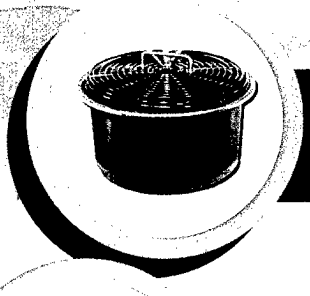
Improper operation of space heaters is normally the start of big problems. Proper operation begins by identifying a soldier to operate the heater, followed by heater-specific training that results in licensing the soldier.

AR 600-55, *The Army Driver and Operator Standardization Program*, provides guidance on selecting, training, and licensing heater operators. Unit personnel should use the appropriate technical manual for heaters to develop lesson plans for training. A hands-on performance evaluation is the best way to determine the skill level before licensing.

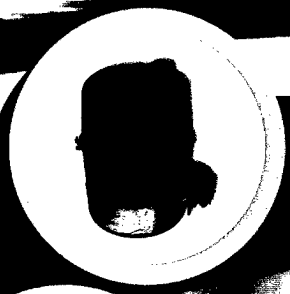
For additional information:
www.sbccom.army.mil/products/index.htm

POC: MSG Shane Curtis, Aviation Systems Division, DSN 558-9859 (334-255-9859), shane.curtis@safetycenter.army.mil

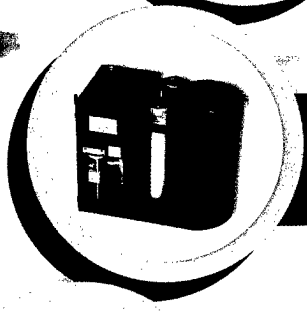
The following are the most common types of heaters that are used today.



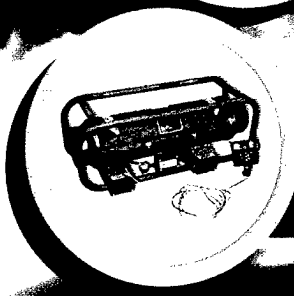
- **Thermoelectric Fan (TEF), NSN 4520-01-457-2790**



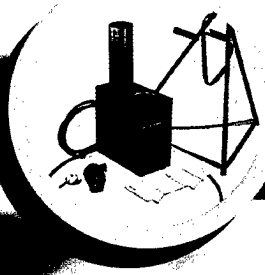
- **H-45 Space Heater (pot belly), NSN 4520-01-329-3451**



- **Space Heater Small (SHS), NSN 4520-01-478-9207**



- **Space Heater Convective (SHC), NSN 4520-01-431-8927**



- **Space Heater Arctic (SHA), NSN 4520-01-444-2375**

Hurricanes

The 2002 hurricane season began on June 1st. This year, experts have predicted that 11 named storms will develop, with six of those becoming hurricanes and two "major" hurricanes with winds greater than 111 mph. This year marks the tenth anniversary of Hurricane Andrew, the costliest storm in history. Hurricane Andrew ravaged the United States coast from Louisiana to Florida and caused damages totaling some $40 billion. What impact could the hurricane season have on Army operations? Possibly significant, especially when considering storms such as Hurricane Andrew. The United States Army was heavily involved in Hurricane Andrew rescue and recovery operations, deploying military and civilian personnel to assist with and direct such operations as clean-up, providing food and shelter, and ensuring the safety of the personnel involved.

What Is A Hurricane?

Hurricanes and tropical storms are cyclones with tropical origins. When the winds of a tropical storm (winds 39 to 73 miles per hour) reach a constant speed of 74 miles per hour or more, it is called a hurricane. Hurricane winds blow in a large spiral around a relatively calm center known as the "eye". The "eye" is generally 20 to 30 miles wide and the storm may have a diameter of 400 miles across. As the hurricane approaches, the skies will begin to darken and winds will grow in strength. A hurricane can bring torrential rains, high winds, and storm surge as it nears land. A single hurricane can last for more than two weeks over open waters and can run a path across the entire length of the eastern seaboard. The torrential rains often cause flooding and sometimes trigger landslides. In addition, hurricanes can spawn tornadoes, which add to the destructiveness of the storm.

Knowledge and preparation are key in surviving a hurricane and in minimizing the damage that can result from one of these storms. What can you do to ensure that you are adequately prepared for hurricane season?

Perception of Risk

Evacuation attempts are often hampered because 80 to 90 percent of the population now living in hurricane-prone areas have never experienced the core of a "major" hurricane. Many of these people have been through weaker storms. The result is a false impression of a major hurricane's damage potential. This can lead to complacency and delayed actions resulting in injuries and loss of lives. If the area you are in receives evacuation orders, ***do it!***

Stay Informed

NOAA Weather Radio (NWR) is the prime alerting and critical information delivery

system of the National Weather Service (NWS). NWR broadcasts warnings, watches, forecasts and other hazard information 24 hours a day.

Make sure your family has a weather radio–and good batteries. Many weather radios are equipped with a special alarm tone feature that sounds an alert giving you immediate information about a life-threatening situation. Routine weather radio programming is interrupted during tropical cyclone threats to send out the special tone that activates weather radios in the listening area. The NWS encourages people to buy a weather radio equipped with the Specific Area Message Encoder (SAME) feature. This feature automatically alerts you when important tropical cyclone information is issued for your area.

The NWS NOAA Weather Wire Service provides reliable and timely warnings. NWS has been improved and now makes limited graphic images available through a standard computer.

Emergency Managers Weather Information Network

The Emergency Managers Weather Information Network (EMWIN) offers an economical way to receive all products available on NWWS, plus graphical forecasts and select satellite data. For details, go to: **iwin.nws.noaa.gov/emwin/index.htm.**

Internet Resources

- National Weather Service
  www.nws.noaa.gov
- National Hurricane Center
  www.nhc.noaa.gov
- Central Pacific Hurricane Center
  www.nws.noaa.gov/pr.hnl/cphc/pages/cphc.shtml

Links to local NWS Offices

- NWS Eastern Region
  www.erh.noaa.gov
- NWS Southern Region
  www.srh.noaa.gov
- NWS Pacific Region
  www.nws.noaa.gov/pr

Other Emergency Information Sites

- FEMA
  www.fema.gov
- American Red Cross
  www.redcross.org
- U.S. Geological Survey
  www.usgs.hog/hurricanes

WHAT TO LISTEN FOR

HURRICANE/TROPICAL STORM WATCH: Hurricane/tropical storm conditions are possible in the specified area of the **Watch**, usually within 36 hours. During a **Watch**, prepare your home and review your plan for evacuation in case a Hurricane/Tropical Storm Warning is issued.

HURRICANE/TROPICAL STORM WARNING: Hurricane/tropical storm conditions are expected in the specified area of the **Warning**, usually within 24 hours. Complete storm preparations and leave the threatened area if directed by local officials.

SHORT TERM WATCHES AND WARNINGS: These warnings provide detailed information on specific hurricane threats, such as floods and tornadoes.

FLOOD WATCH: This product informs the public and cooperating agencies of *possible* flooding. If you are in a **Watch** area, check flood action plans, keep informed and be ready to act if a warning is issued or you see flooding.

FLOOD/FLASH FLOOD WARNING: A flood/flash flood **Warning** is issued for specific communities, streams or areas where flooding is imminent or in progress. Persons in the warning area should take precautions IMMEDIATELY!

Are you ready?

Before the Hurricane Season

NWS sponsors a *Hurricane Awareness Week* before each hurricane season. For dates and activities, listen to NOAA Weather Radio and check NWS Web sites and local media. If you live in a hurricane prone area:

- Know the hurricane risks in your area, e.g., determine whether you live in a potential flood zone.
- Learn safe routes inland.
- Find out where official shelters are located.
- Develop a family hurricane action plan.
- Review working condition of emergency equipment, such as flashlights and battery-powered radios.
- Ensure you have enough non-perishable food and water supplies on hand.
- Trim trees and shrubbery.
- Buy plywood or shutters to protect doors and windows.
- Clear loose and clogged rain gutters and downspouts.
- Determine where to move your boat in an emergency.
- Check policies to see if you have flood and wind insurance
- Know your community safety plan.

Before the Storm

When in a Watch Area...

- Frequently listen to radio, TV or NOAA Weather Radio for official bulletins of the storm's
- Fuel and service family vehicles.
- Inspect and secure mobile home tie downs.
- Bring in light-weight objects such as garbage cans, garden tools, toys and lawn furniture.
- Prepare to cover all windows and doors with shutters or other shielding materials.
- Check batteries and stock up on canned food, first-aid supplies, drinking water and medications
- Have extra cash on hand

Plan to Leave if you...

- Live in a mobile home. They are unsafe in high winds, no matter how well fastened to the ground.
- Live on the coastline, an offshore island, or near a river or a flood plain.
- Live in a high-rise building. Hurricane winds are stronger at higher elevations.

During the Storm

When in a Warning Area

- Listen closely to radio, TV or NOAA Weather Radio for official bulletins.
- Complete preparation activities, such as putting up storm shutters, storing loose objects, etc.
- If evacuating, leave early (if possible, in daylight). Stay with friends or relatives, stay at a low-rise inland hotel/motel, or go to a predesignated public shelter outside a flood zone.
- Move to a safe area before you are cut off by flood water.
- Fill bathtub and large containers with water for sanitary purposes.

- Follow instructions issued by local officials. **Leave immediately if told to do so!**
- Leave Mobile Homes.
- Notify neighbors and a family member outside of the warned area of your evacuation plans.
- Take pets with you. Leaving pets behind is likely to result in their being injured, lost or killed.
- Turn off propane tanks.
- Unplug small appliances.

If Staying In a Home...

Only stay in a home if you have NOT been ordered to leave. Stay inside a well constructed building. Examine the building and decide what you will do if winds become strong enough to produce deadly missiles and structural failure.

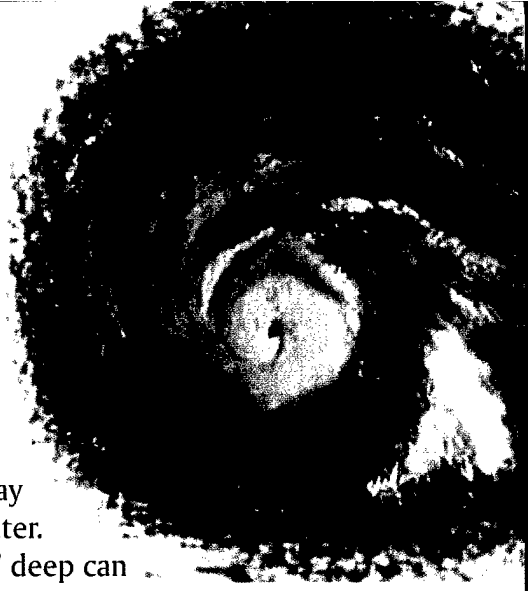
- Turn refrigerator to its coldest setting and keep door closed.
- Turn off utilities if told to do so by authorities.

In Strong Winds...

- Stay away from windows and doors even if they are covered. Take refuge in a small interior room, closet, or hallway.
- In a multiple-story building, go to the first floor or second floors and stay in interior rooms away from windows.
- Close all interior doors. Secure and brace external doors.
- In a two-story house, go to an interior first-floor room, such as a bathroom or closet.
- Lie on the floor under a table or another sturdy object.

After the Storm

- Listen to the radio, TV or NOAA Weather Radio.
- Keep abreast of road conditions through the media. Wait until an area is declared safe before entering.
- If someone needs to be rescued, call professionals with the right equipment to help. Many people have been killed or injured trying to rescue others in flooded areas.
- Do NOT attempt to drive across flowing water. As little as 6" of water may cause you to lose control of your vehicle – 2 feet of water will carry most cars away.
- If you see water flowing across a roadway, TURN AROUND AND GO ANOTHER WAY. Many people have been killed or injured driving through flooded roadways or around barricades. Stay away from moving water. Moving water even 6" deep can sweep you away.



- Do not allow children, especially under the age 13, to play in flooded areas. They often drown or are injured in areas appearing safe.
- Use the telephone only for emergency calls.
- Stay away from standing water. It may be electrically charged from underground or downed power lines.
- Have professionals check gas, water and electric lines and appliances for damage.
- Use a flashlight for emergency lighting. Never use candles and other open flames indoors.
- Use tap water for drinking and cooking only when local officials say it is safe to do so.

What To Bring To A Shelter

- First-aid kit
- Flashlight (one per person)
- Prescription medicines
- Extra batteries
- Baby food and diapers
- Blankets or sleeping bags
- Cards, games, books
- Identification
- Toiletries
- Valuable papers (insurance)
- Battery-powered radio
- Credit card or cash

Taken from The American Red Cross guide, *Hurricanes...Unleashing Nature's Fury.*
Next month, we will provide information on the Family Disaster Plan for hurricane season and what to do to protect Army property and equipment.

HEAT INDEX

Actual Air Temperature (Fahrenheit) *What it Is*

Apparent Air temperature (Fahrenheit) *What it Feels Like*

Relative Humidity %	70	75	80	85	90	95	100	105	110	115	120
0	64	69	73	78	83	87	91	95	99	103	
10	65	70	75	80	85	90	95	100	105		
20	66	72	77	82	87	93	99	105			
30	67	73	78	84	90	96	104				
40	68	74	79	86	93	101					
50	69	75	81	88	96	107					
60	70	76	82	90	100						
70	70	77	85	93							
80	71	78	86	97							
90	71	79	88	102							
100	72	80	91								

You know that when you go out to train, one of the first things you do is check to see what the heat category is so that you can schedule work-rest cycles, and monitor the water intake of your soldiers. Unfortunately, it is the weekend, you have a lot of yard work planned, and you don't have a Wet Bulb Globe Thermometer or a preventive medicine section handy. Seeing as how your spouse isn't going to let you off the hook for not using a WBGT to calculate the heat category, here is a heat index chart that will help you do those chores more safely.

Just find the real temperature across the top, then go down the rows to match with the relative humidity – this is what the temperature seems to be. If the temperature is in the green, you are fairly safe from heat injury, but you still need to plan for rest, drink water or Gatorade™ like drinks (sorry, beer doesn't count), and take precautions against sunburn, particularly at the temperatures close to yellow.

If the temperature is in the yellow, heatstroke, heat cramps, and heat exhaustion are possible, especially with hard or prolonged work. If the temperature is in the orange, it is very likely that without proper rest and water consumption you will wind up with heat exhaustion, heat cramps, or heatstroke.

If the temperature is in the red, heatstroke is an extreme danger, and putting off what you had planned till it is cooler is the safest option – if your spouse complains, quote us, or any of the excellent information provided by CHPPM at http://chppm-www.apgea.army.mil/heat/.

Personnel Injury

Class A

■ SM Collapsed while completing the "run" portion of his APFT as part of the resident portion of the USASMA Course. SM was transported to hospital where he expired.

Class B

■ SM's index finger on right hand was severed at the first joint while SM was conducting vehicle maintenance on an M978 HEMTT. SM was working in the engine compartment when the driver engaged the engine.

POV

Class A

■ A service member was operating her POV when she was involved in a multi-vehicle traffic accident. SM lost control of her vehicle while proceeding on the Autobahn, struck one civilian vehicle, proceeded off the road, became airborne, and crossed the opposing lane of traffic, striking a second civilian vehicle – the 2 occupants of which both sustained fatal injuries. The SM also sustained fatal injuries.

■ A civilian in TDY status received fatal injuries when her POV ran off of the road. As the operator was attempting to correct, the vehicle overturned, rolling 3 times. The civilian was pronounced DOA at the local medical facility.

AMV

Class A

■ HMMWV was struck from the rear by another vehicle. One of several passengers riding in the bed was thrown from the rear of the vehicle upon impact and was subsequently struck by an oncoming vehicle in the lane of traffic.

■ Crew was conducting tactical vehicle operations when the HMMWV overturned. The crewmember occupying the turret position sustained fatal injuries when he was ejected from the vehicle.

■ A KATUSA was operating a TMP vehicle (1998 Hyundai) on a routine mission when he lost control and struck a metal support beam on the side of the roadway. The KATUSA sustained fatal injuries; a Department of the Army civilian passenger sustained injuries.

■ One service member was fatally injured when the AMV (M1025 HMMWV) in which he was traveling was involved in a traffic accident while accessing the Autobahn. The HMMWV was cut off by a civilian vehicle, which the HMMWV then struck prior to proceeding over the guardrail and overturning. At least one other SM occupant was injured. All 3 SM occupants were utilizing seatbelts and wearing Kevlar helmets.

ACV

Class A

■ Driver of M1A2 tank reported NBC filter fire during vehicle operation following gunnery training. Driver suffered smoke inhalation and 2nd-3rd degree burns and was air-evaced to the local medical facility where he was pronounced DOA. Additional SM's sustained varied injuries (burns/smoke inhalation) during attempts to extract the driver.

Class B

■ During the firing of an M1A2 tank, the round (120mmTPT round) detonated while still in the gun tube. Result was damage to the tip portion of the gun tube and MRF. Round lot has been identified. Misfire inspection was initiated.

Other

Class A

■ A service member was operating a civilian aircraft on a recreational flight when the private aircraft crashed due to unknown reasons. SM received fatal injuries.

Class B

■ An explosion occurred during the remote-controlled mixing of approximately 140 lbs of a nitroglycerin/nitrocellulose-base propellant paste. The 3 operators positioned in the control room sustained temporary hearing loss. Damage was contained within the bay in which the explosion occurred.

■ Driver of a small emplacement excavator lost control of the vehicle and crossed the median, striking a civilian vehicle head on, spun and was hit by two vehicles. One driver was seriously injured and lost a finger.

SAFETY ALERT

Subject: Water Safety Trend

The Army is well into the season of water activities, and early indications are that this is likely to be a bad year. Soldiers are drowning at more than double the normal rate, and the hottest months are just beginning. At present, 10 fatalities have occurred. Commanders and senior NCOs can only control this trend by reaching into the off-duty behavior of their soldiers, teaching and enforcing the requirements for safe swimming, boating and use of flotation gear.

This year's drownings were triggered by several activities, but the most frequent cause was small boat accidents. In these seven cases, the soldiers did not plan to enter the water at all, but went overboard from a fishing boat or similar watercraft. Reports on hand only sometimes indicate that life jackets were in use. The other drownings involved SCUBA and swimming in both a pool and open water.

By looking at accident statistics from the last 10 years, a pattern of drowning situations can be determined. In that time, 141 incidents occurred, some involving more than one fatality. The most significant fact is that only 1 death occurred at a pool with Army lifeguards present, while unguarded pools were the scene in 9 cases. By far the most dangerous environment is the open water or shoreline. Lake and river recreation produced 41% of the drowning incidents, while ocean swimming fatalities produced another 16%. Military training operations accounted for 11% of the drownings, however, another 9% drowned subsequent to vehicle accidents. Many times the victim did not intend to enter the water, but managed to either drive or fall in.

Consistent factors in Army drownings include overconfidence in swimming ability, alcohol involvement, and breakdown of the buddy system. In recreational settings, these failures sometimes work together, setting a soldier up for a tragedy. Often the victim was not alone, but no one was able to control the situation or complete a rescue.

Command water safety programs should be targeted on these threats. Requirements for operational risk management, individual training, use of personal flotation devices, and responsible alcohol use must be emphasized. The water recreation areas in your command area of operation should be evaluated using a risk management approach to determine if off-limits prohibitions are warranted. Above all, leaders must recognize their responsibility for the readiness of their soldiers, both on and off duty, and implement controls to mitigate risk and prevent soldier injury or death...The Army's mission depends on it.

JAMES E. SIMMONS
Brigadier General, USA
Director of Army Safety

U.S. ARMY SAFETY CENTER